

MICHIGAN STATE

UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

Course Goals

- Build a Significant Software System
- Work in a Team Environment
- Learn New Tools and Environments
- Build and Administer Systems
- Develop Communication Skills
- Develop Interview Talking Points
- Consider Issues of Ethics and Professionalism



Course Goals

- Teams of Students
- Build Significant Software System
 - Design
 - Develop
 - Debug
 - Document
 - Deliver
- For Corporate Clients
- In 15 (Short) Weeks



Project Deliverables

- Project Plan Document & Presentation
- Alpha Presentation
- Beta Presentation
- Project Software & Documentation
- Project Video
- Design Day

See [Major Milestones](#).



All-Hands Meetings

- MW, 3:00-4:20 p.m., 1279 Anthony Hall
- Presentations By
 - Professor
 - Teams
 - Status Reports
 - Formal Presentations
 - Project Plan
 - Alpha
 - Beta
 - Project Videos
 - Guest Speakers



All-Hands Meetings

- 08/30: Capstone Overview
- 09/04: (Labor Day, No Meeting)
- 09/06: Project Plan
- 09/11: Risks and Prototypes
- 09/13: Team [Status Report Presentations](#)
- 09/18: Team [Project Plan Presentations](#)
- 09/20: Team [Project Plan Presentations](#)
- 09/25: Team [Project Plan Presentations](#)
- 09/27: Team [Project Plan Presentations](#)
- 10/02: Resume Writing and Interviewing
- 10/04: Career Gallery
- 10/09: Schedule and Teamwork
- 10/11: Creating and Giving Presentations
- 10/16: Team [Alpha Presentations](#)
- 10/18: Team [Alpha Presentations](#)
- 10/23: Team [Alpha Presentations](#)
- 10/25: Team [Alpha Presentations](#)
- 10/30: [Design Day](#) and the [Project Videos](#)
- 11/01: Camtasia Demo
- 11/06: Intellectual Property
- 11/08: Ethics and Professionalism
- 11/13: Team [Beta Presentations](#)
- 11/15: Team [Beta Presentations](#)
- 11/20: Team [Beta Presentations](#)
- 11/22: Team Status Reports
- 11/27: Team [Beta Presentations](#)
- 11/29: Team Status Reports
- 12/04: [Project Videos](#)
- 12/06: [Project Videos](#) and All Deliverables
- 12/07: [Design Day Setup](#)
- 12/08: [Design Day](#)
- 12/11: [Project Videos](#)

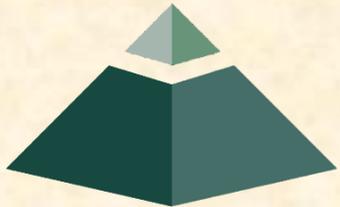


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The Capstone Experience

Team Amazon

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

amazon





All



Back to School

Sponsored by Lysol

Departments

Your Amazon.com

Today's Deals

Gift Cards & Registry

Sell

Help

Hello. Sign in

Your Account

Try Prime

Lists



Cart

PLAY ALL OF YOUR MUSIC. JUST ASK.



PANDORA



echo \$179⁹⁹



Welcome

Sign in for the best experience

Popular departments



The dress shop



xfinity

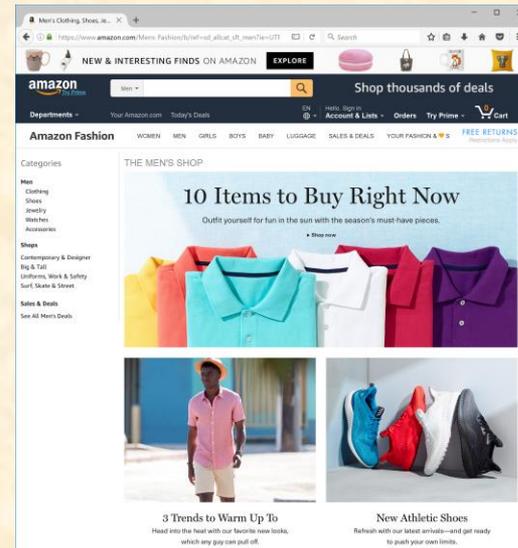
XFINITY Home

A total home security and automation solution

Team Amazon Project Overview

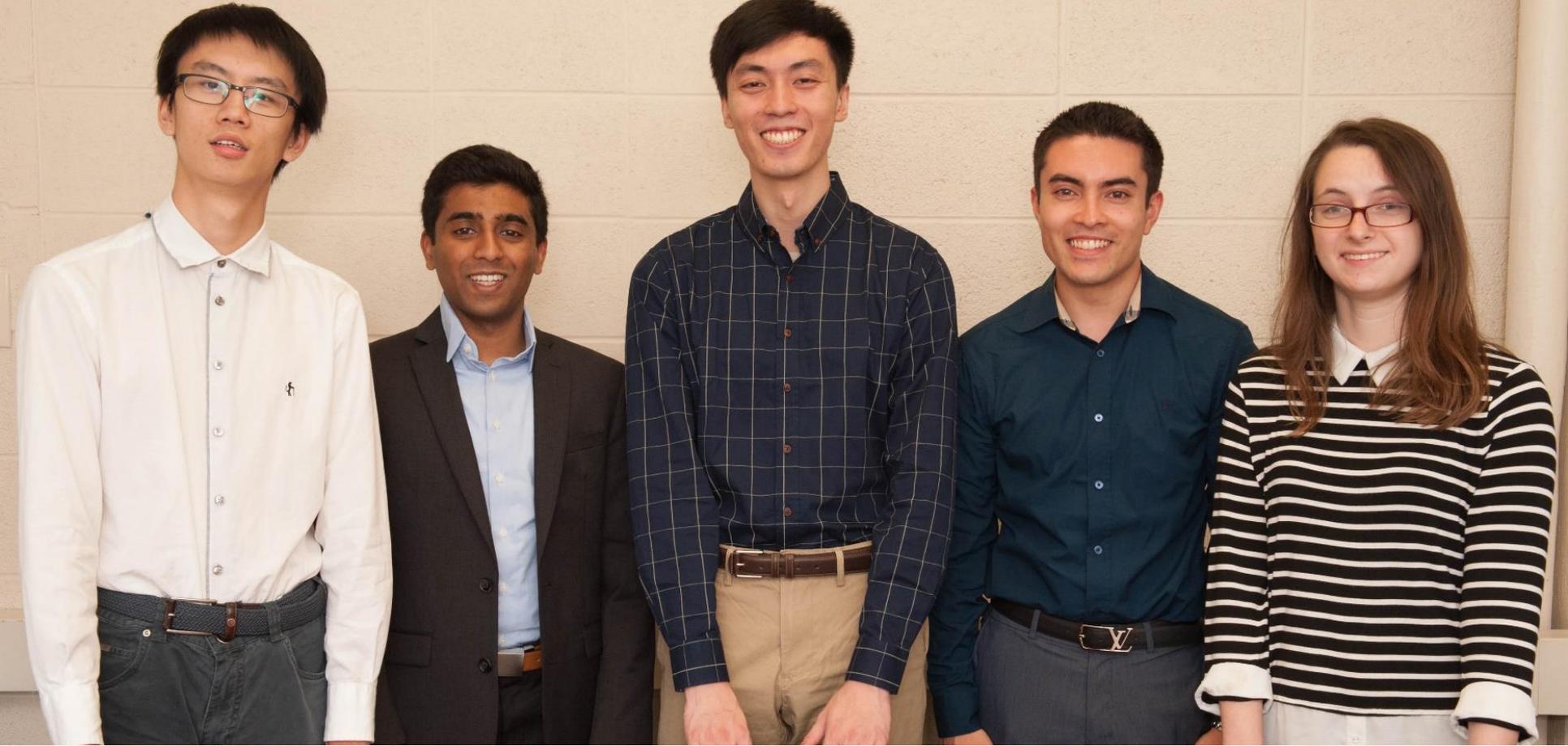
Faia: Fashion Artificial Intelligence Assistant

- Functionalities
 - Create Innovative Fashion Shopping Experience
 - With Virtual Personal Stylist
- Features
 - Create and Manage Shopper Profile
 - Interact with Faia via Texting
 - Give Personalized Fashion Recommendations
 - Leverage AI to Learn and Adapt to Shopper Preferences
 - Provide “Save for Later” and “Add to Cart”
 - Integrate with Prime Wardrobe
- Technologies
 - Amazon Web Services (AWS)
 - Compute Services
 - Database Services
 - Machine Learning
 - Amazon Lex
 - Amazon Product Advertising API
 - Amazon Simple Notification Services (SNS)
 - Twilio APIs



amazon

Seattle, Washington
Detroit, Michigan



Team Amazon

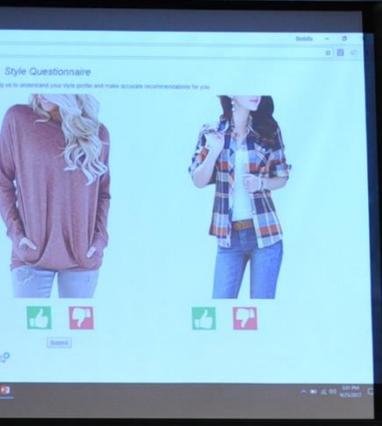
Zizhen Wang, Nikhil Ramu, David He, Dominic Zottolo, Danielle Schugars

Team Amazon Project Plan Presentation

e.

Screen Mockup

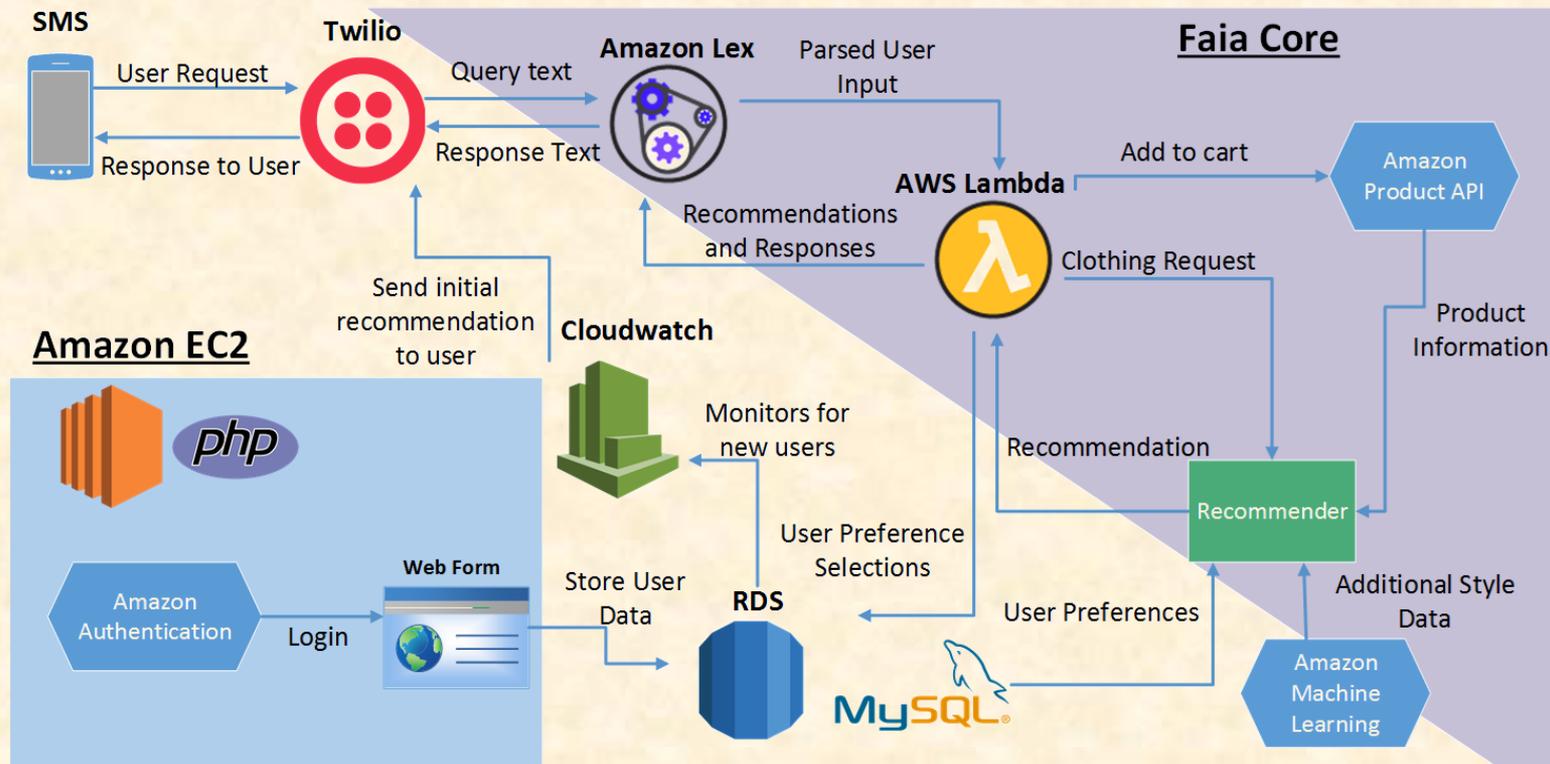


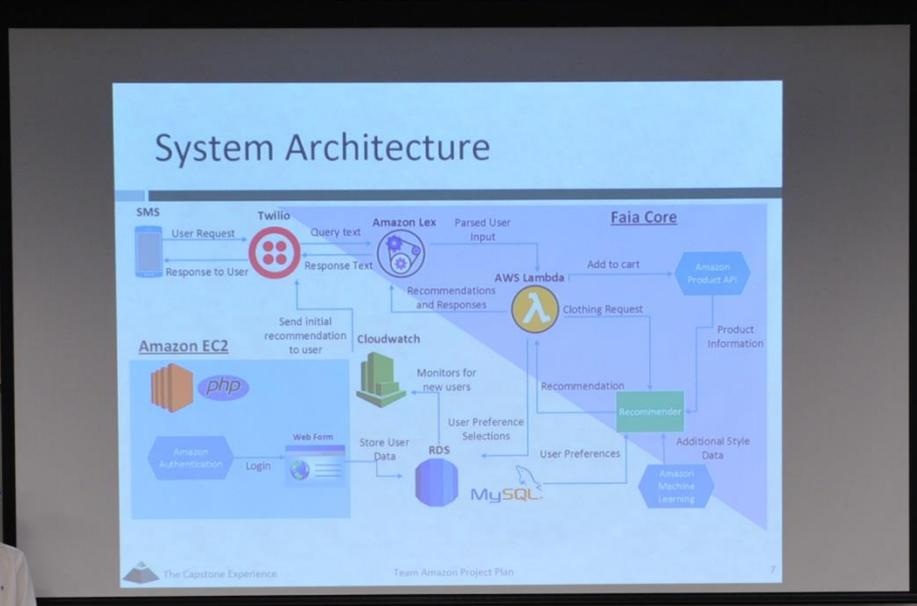
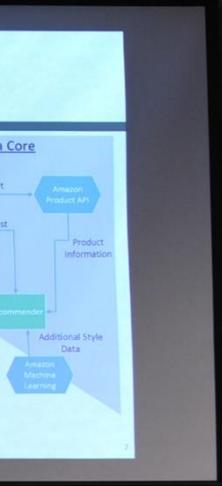


Team Amazon Project Plan Presentation

Team Amazon Project Plan Presentation

Architecture Diagram





Team Amazon Project Plan Presentation

Team Amazon Project Plan Presentation

e.

Screen Mockup



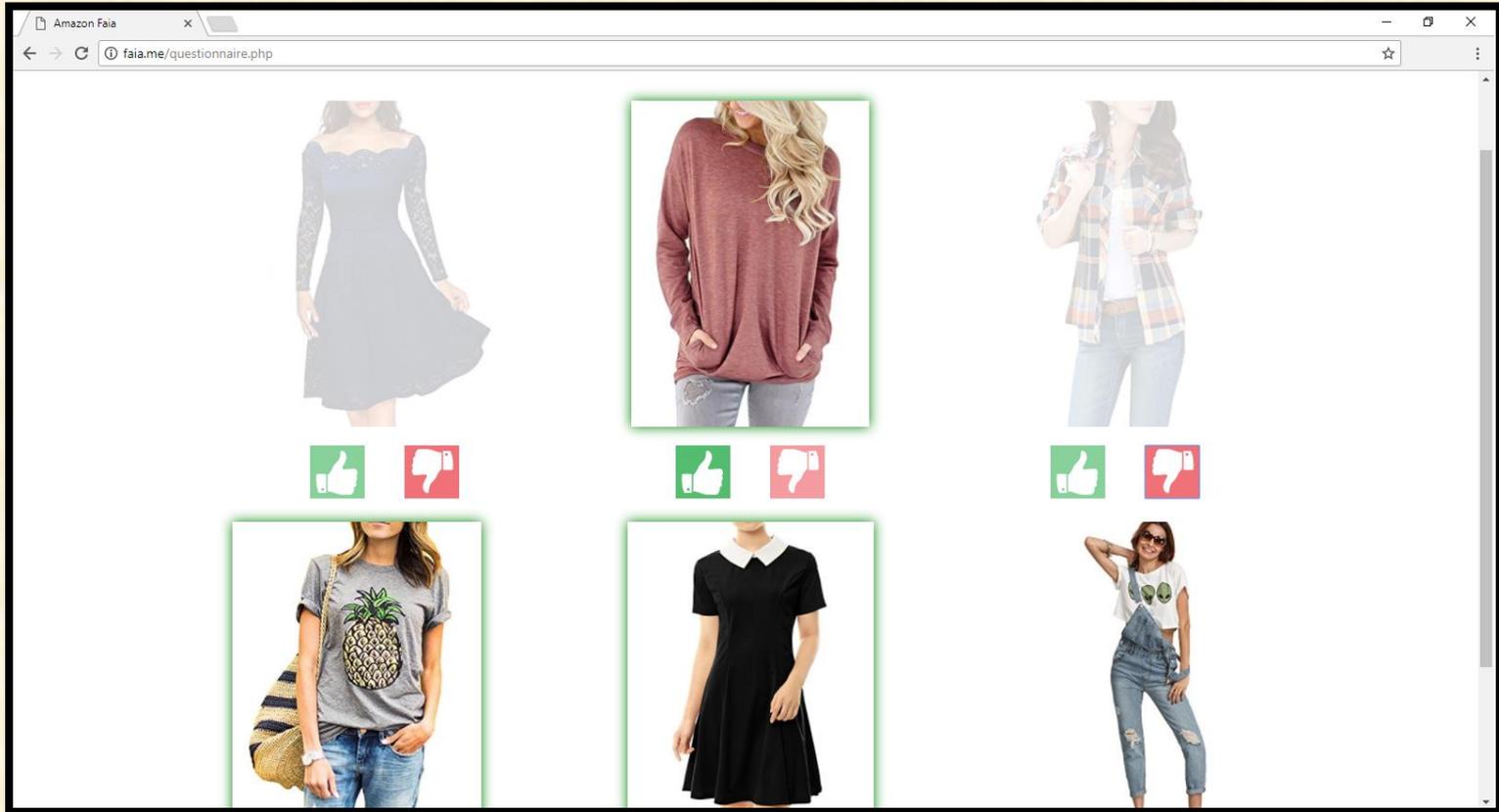


Team Amazon Alpha Presentation

Team Amazon Alpha Presentation

e.

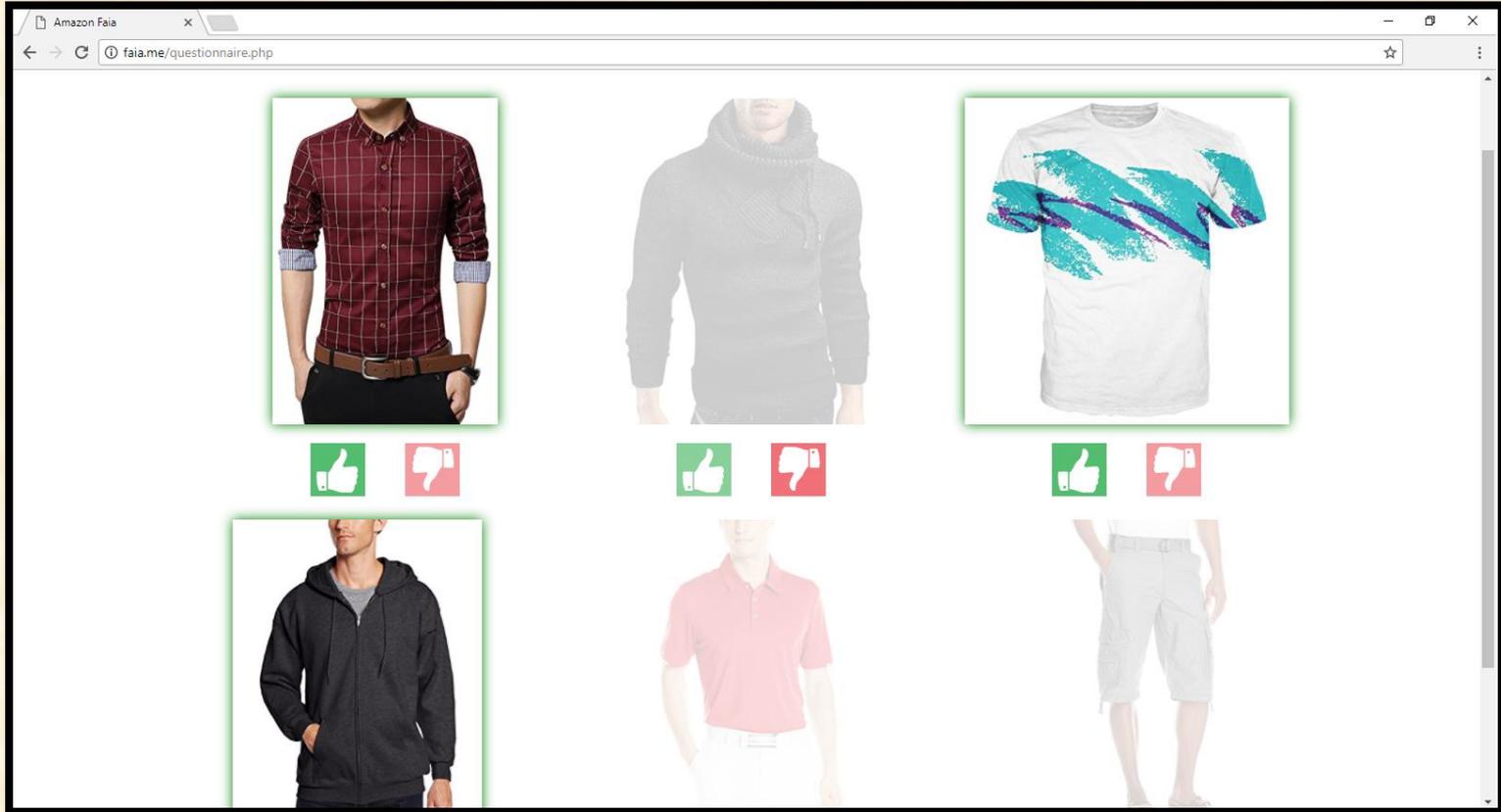
Web Form: Questionnaire (Women)



Team Amazon Alpha Presentation

e.

Web Form: Questionnaire (Men)

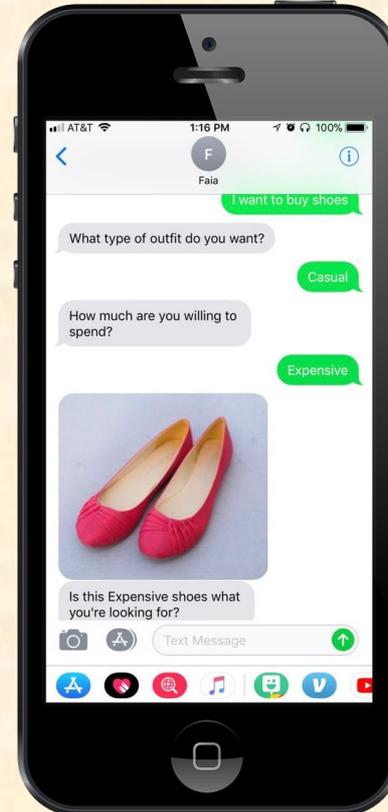
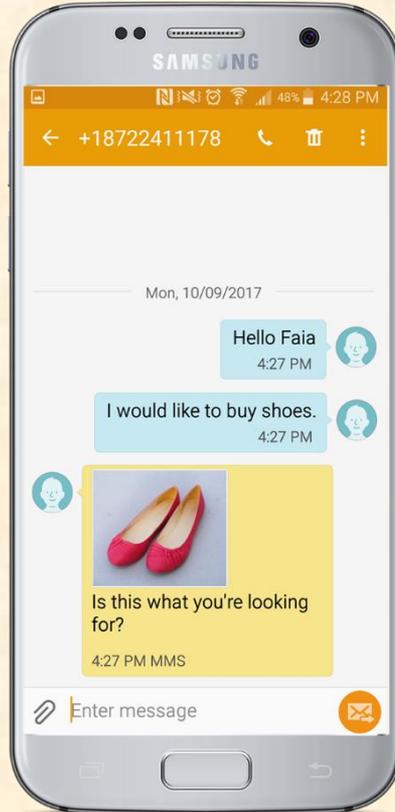


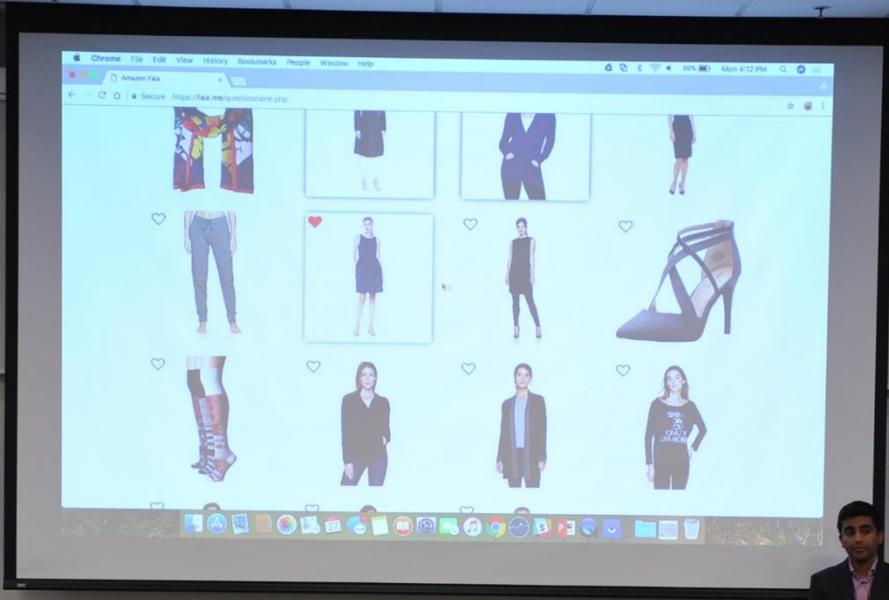


Team Amazon Alpha Presentation

Team Amazon Alpha Presentation

Texting Interaction





Team Amazon Beta Presentation

Team Amazon Beta Presentation

e.

Questionnaire: Initial Style

Amazon Faba
faba.me/questionnaire.php

Style Questionnaire

Please rate the following styles. This will help us to understand your personal style profile and make accurate recommendations for you.
(You must like at least one of these styles!)



Tailored Traditionalist

Like	Neutral	Dislike
------	---------	---------



King of R&R

Like	Neutral	Dislike
------	---------	---------

Type here to search
10:24 PM 11/13/2017

Team Amazon Beta Presentation

e.

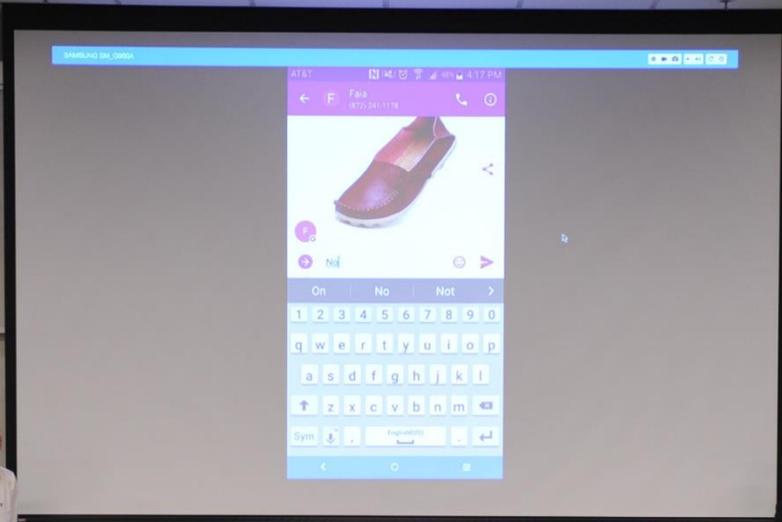
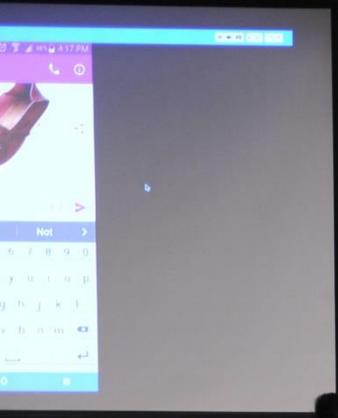
Questionnaire: Specific Clothing

The screenshot shows a web browser window with the title "Style Questionnaire" and the URL "fala.me/questionnaire.php". The page contains a grid of ten clothing items for selection. The items are arranged in two rows of five. The first row includes a grey blazer, a black and white striped sweater, a plaid shirt, a black jacket, and grey pants. The second row includes a grey zip-up jacket, a maroon t-shirt, white pants, a neon green long-sleeve shirt, and a blue hoodie with "CHAMPION" written on it. A "Submit" button is located at the bottom center of the grid. The browser's address bar shows "fala.me/questionnaire.php" and the Windows taskbar at the bottom displays the time as 10:42 PM on 11/13/2017.

Style Questionnaire

Please click all the items that you like. This will help us to even further pin down your style.

Submit

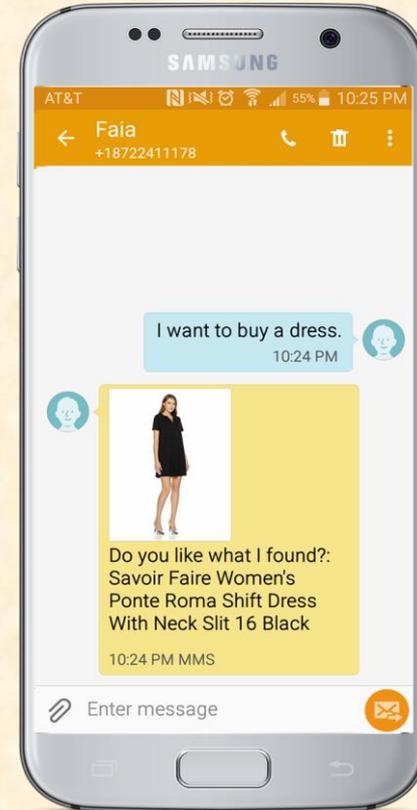
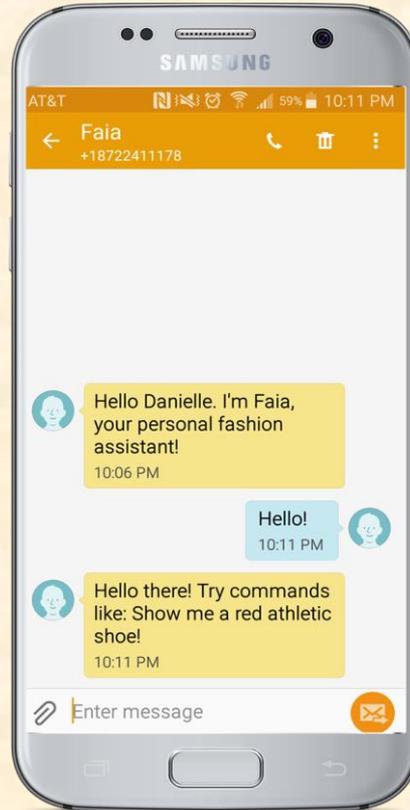
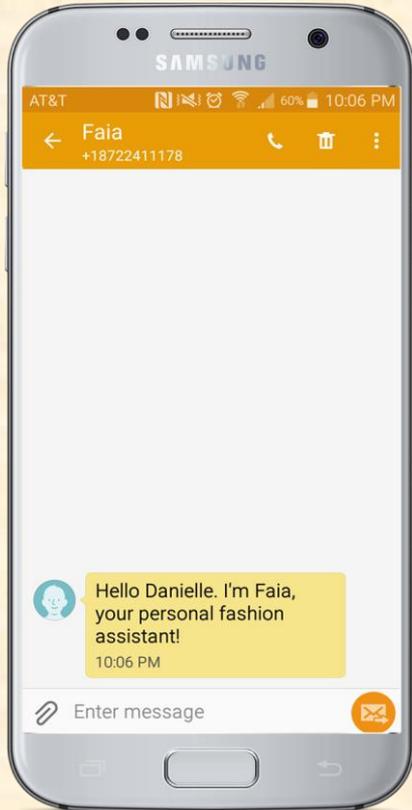


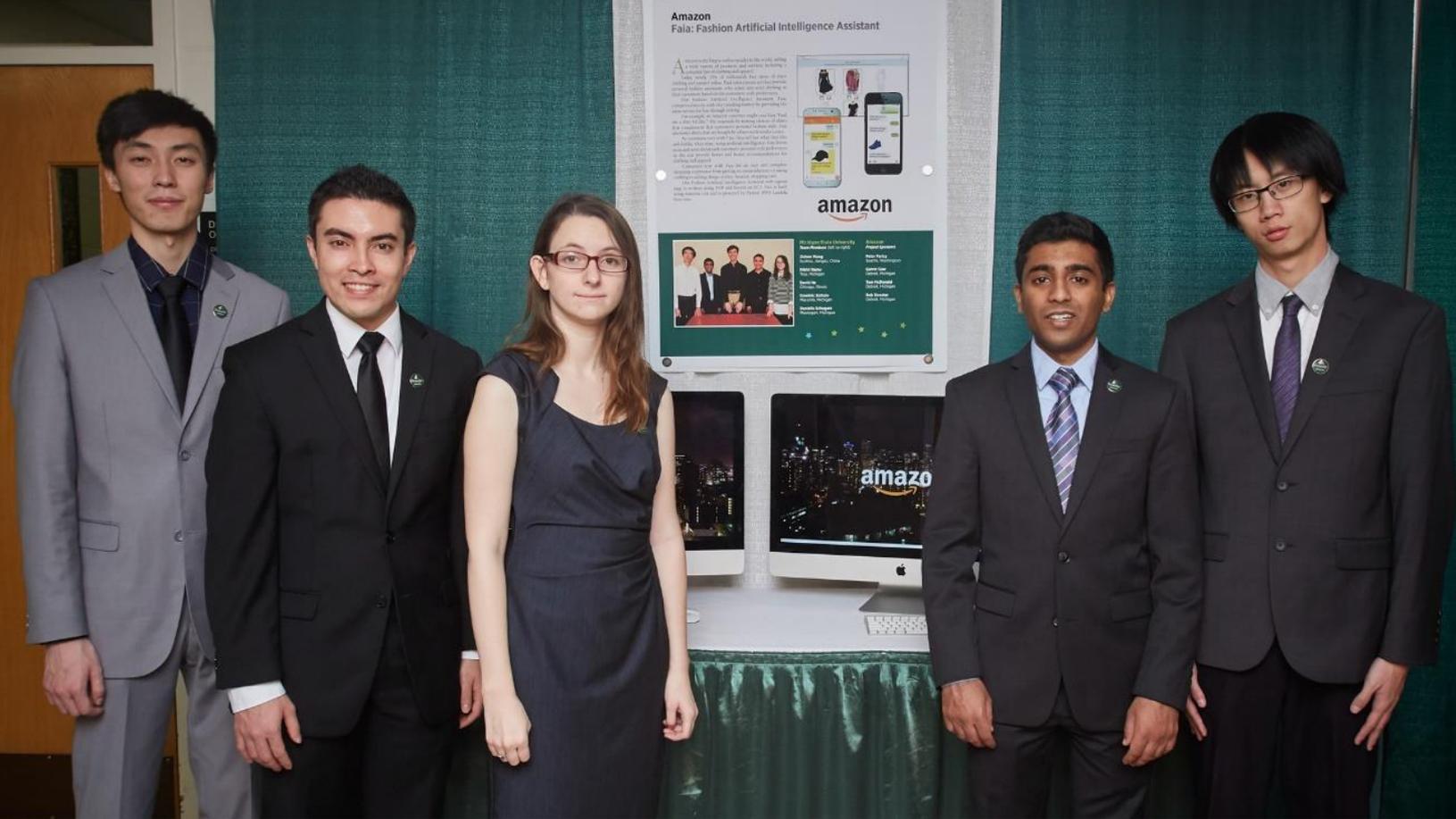
Team Amazon Beta Presentation

Team Amazon Beta Presentation

e.

SMS Interaction





Amazon Fala: Fashion Artificial Intelligence Assistant

Amazon has been successful in the past using a mix of neural and other machine learning models to recommend products to its customers. Today, nearly 70% of Amazon's sales are driven by product recommendations. Amazon's recommendation system uses a combination of collaborative filtering, content-based filtering, and other techniques to recommend products to its customers. The system is constantly updated with the latest information to provide the most relevant recommendations to its customers.



amazon



- Our Project Team Members:
- Project Manager: [Name]
 - Product Designer: [Name]
 - Software Engineer: [Name]
 - Marketing Specialist: [Name]
 - Business Development: [Name]
 - Operations Manager: [Name]
 - Quality Assurance: [Name]
 - Customer Support: [Name]

Team Amazon Design Day

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The Capstone Experience

Team Auto-Owners

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

Auto-Owners

INSURANCE

LIFE • HOME • CAR • BUSINESS



Customer Center | Find a Career with Us

PRODUCTS ABOUT US CUSTOMER CLAIMS

Enter a Keyword 🔍

✓ FIND A LOCAL AGENCY



Enter a Zip Code

FIND AN AGENT

search by address

➤ CUSTOMER LOG IN

Highest in Customer Satisfaction

"Highest in Customer Satisfaction with the Auto Insurance Claims Experience according to J.D. Power**"

Click for more information

LIFE



Life insurance, annuities, long term care and disability income protection are all products you will rely on many years into the future.

HOME



Regardless of which homeowners insurance fits your specific needs, Auto-Owners products are among the best in the industry.

CAR



"No Problem"[®] claims service with numerous claims offices serving our policyholders.

BUSINESS



We insure a variety of businesses, both large and small. Insurance is available to meet the specific needs of most businesses.



Team Auto-Owners

Fred Lee, Matt Drazin, Kenneth Stewart, Kevin Nickolai, Brian Wong

Team Auto-Owners Project Plan Presentation

e.

Screen Mockup

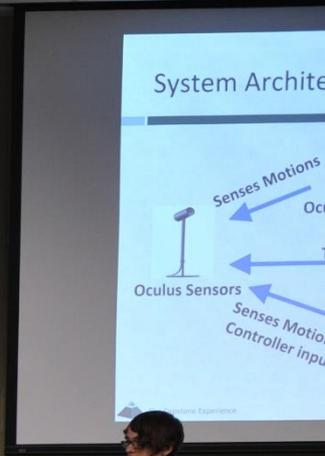
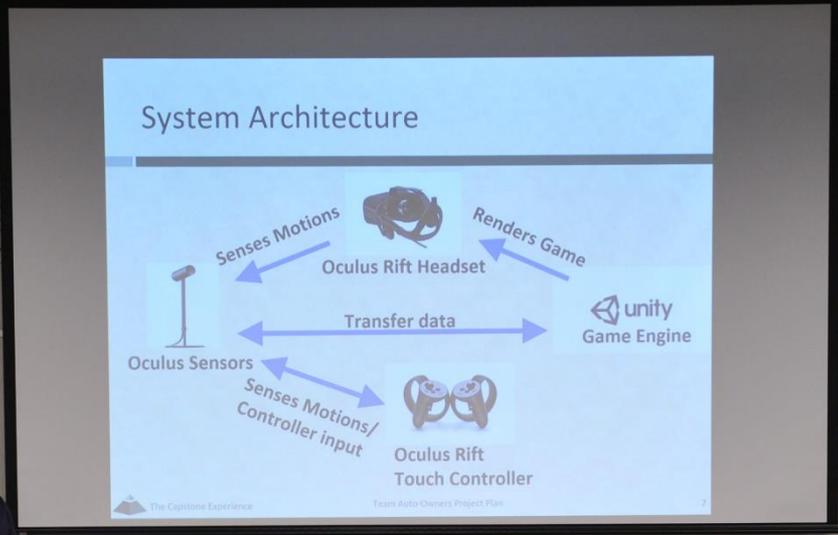
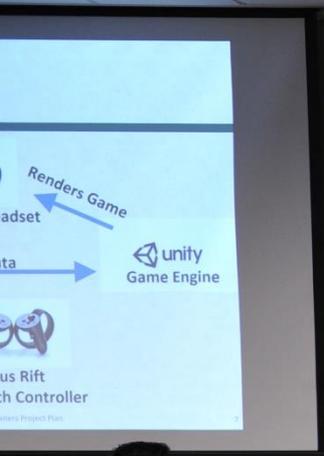
Auto-Owners
INSURANCE

Easy

Medium

Hard

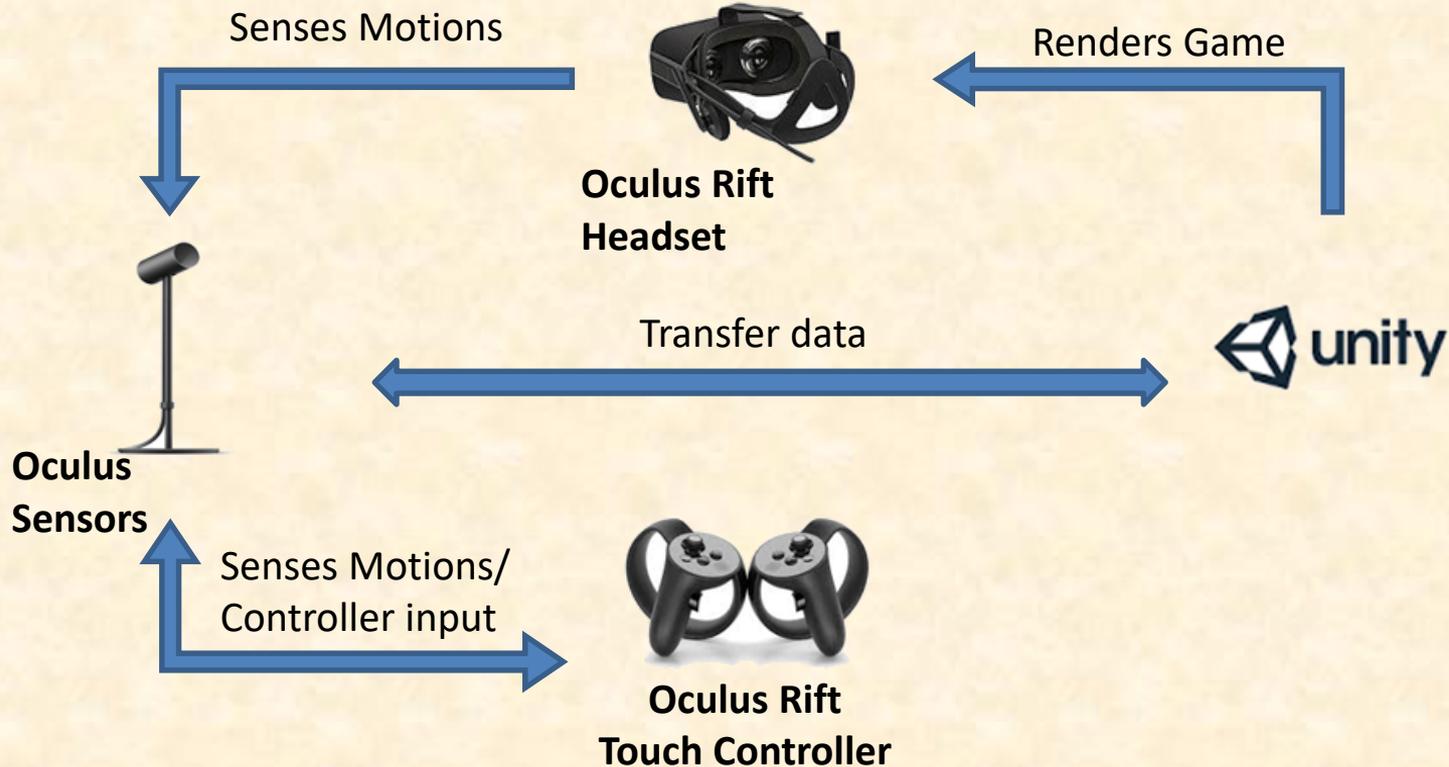




Team Auto-Owners Project Plan Presentation

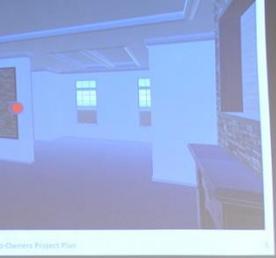
Team Auto-Owners Project Plan Presentation

Architecture Diagram



game UI

Time Remaining: 1:23



Screen Mockup: In-game UI

Score: 200

Time Remaining: 1:23

Hints: 3

The Custom Experience

Team Auto-Owners, Project Plan

Screen Mocku

Score: 200

Hints: 3

Project Experience

Map:
- Pub
- Relat
- ...

Map:
- ...

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Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

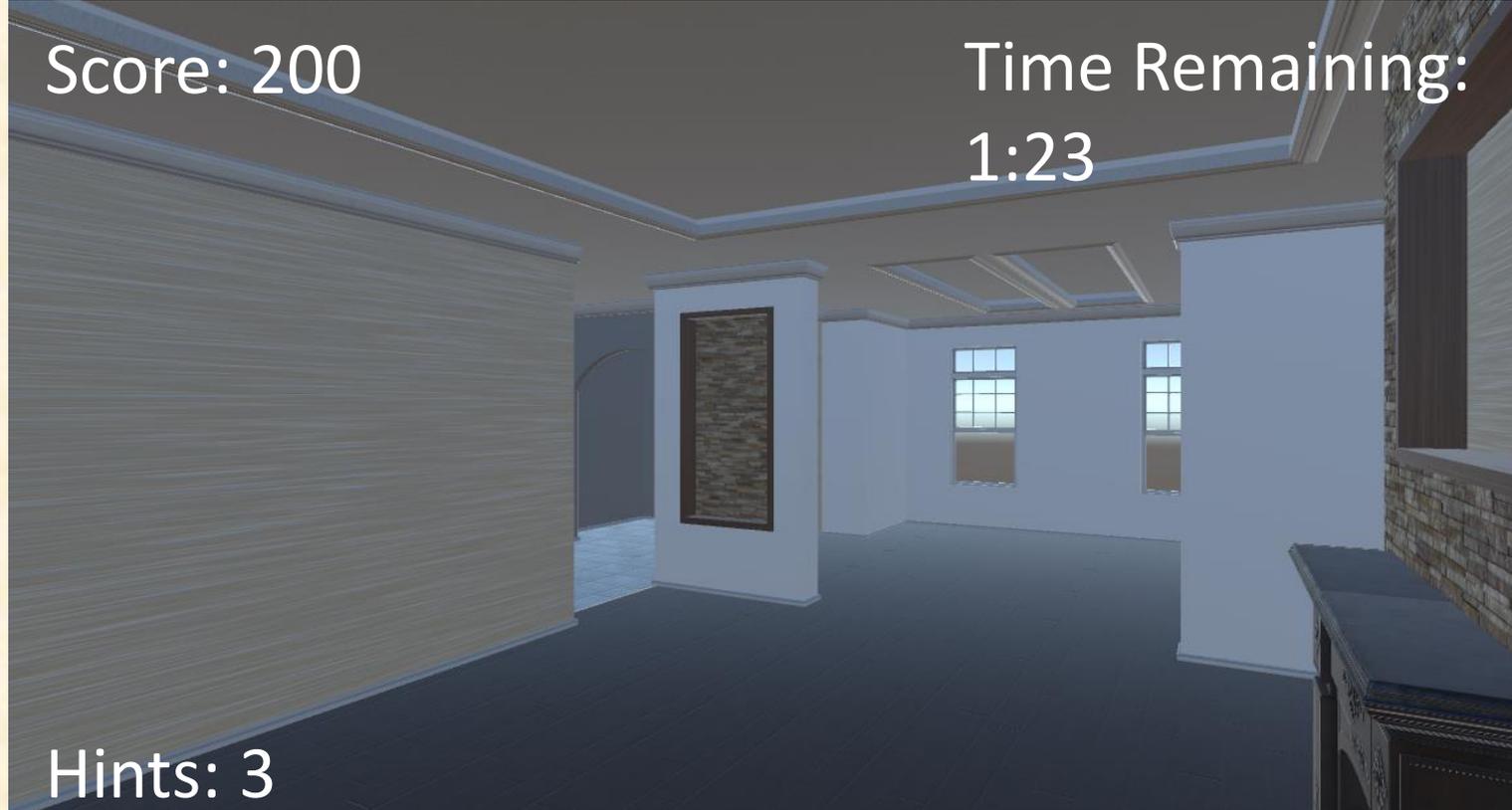
e.

Screen Mockup

Score: 200

Time Remaining:
1:23

Hints: 3





Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

e.

Scene View



The Capstone Experience



Team Auto-Owners Alpha Presentation

e.

Gameplay



The Capstone Experience





Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

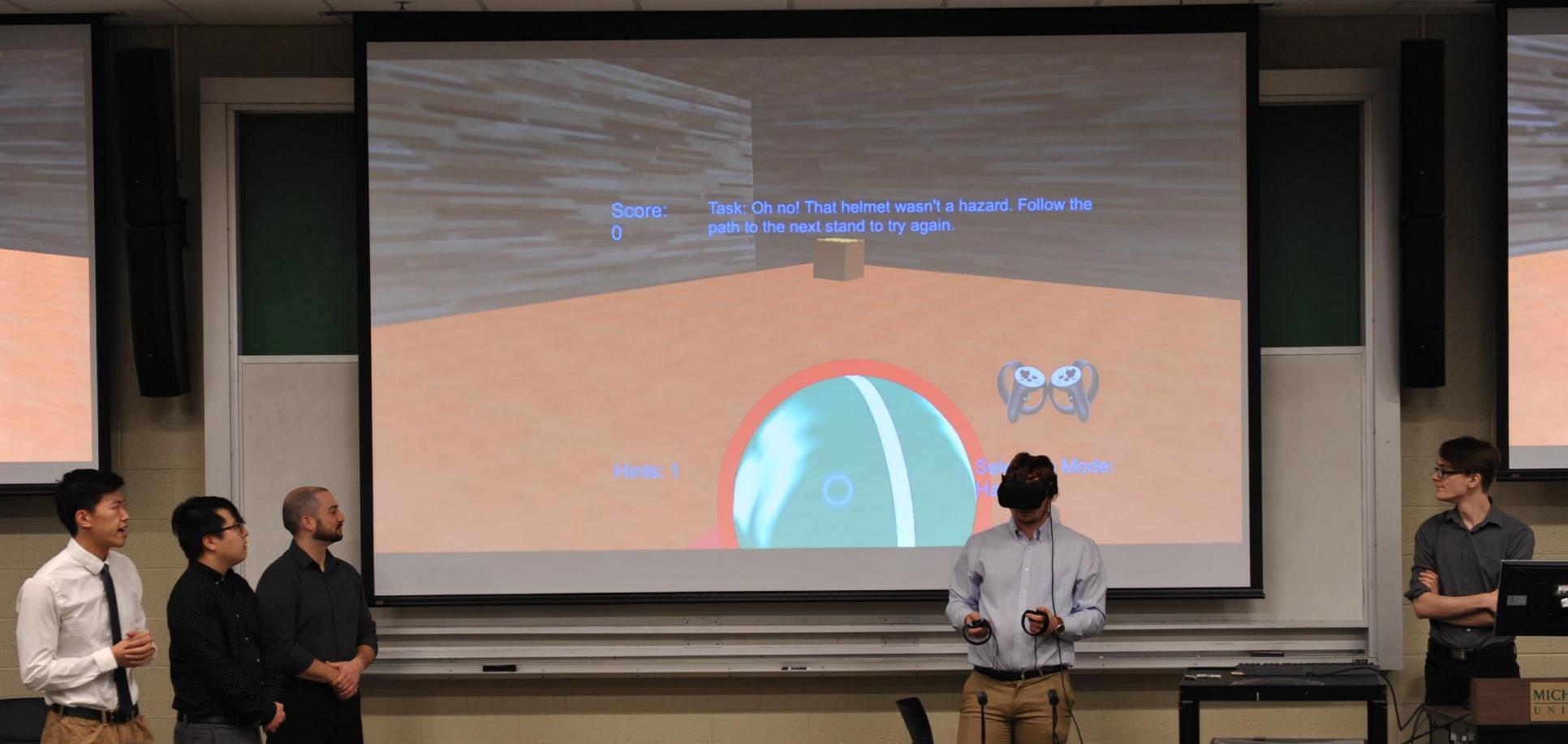
e.

Gameplay



The Capstone Experience





Score:
0

Task: Oh no! That helmet wasn't a hazard. Follow the path to the next stand to try again.

Hints: 1



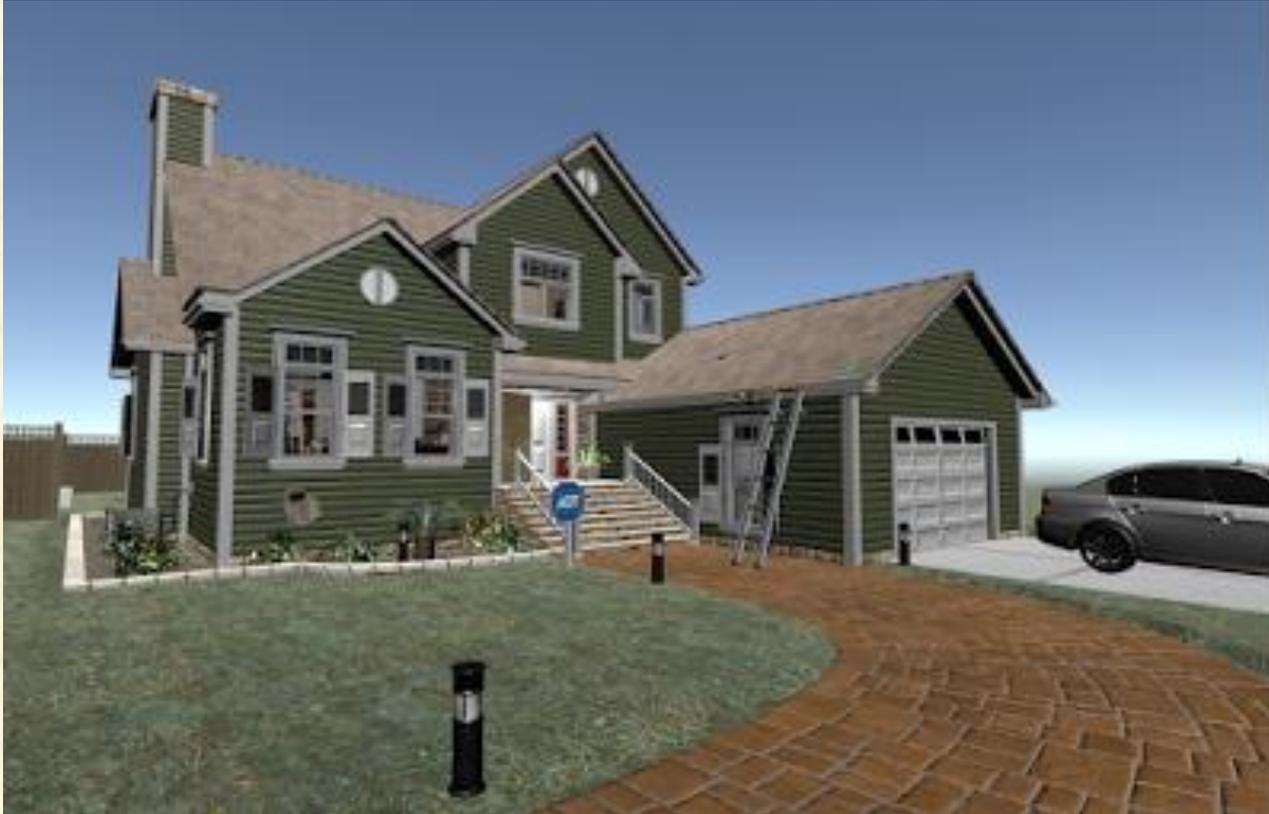
Select Mode:

Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

e.

Scene View



The Capstone Experience



Team Auto-Owners Beta Presentation

e.

Game House View



The Capstone Experience



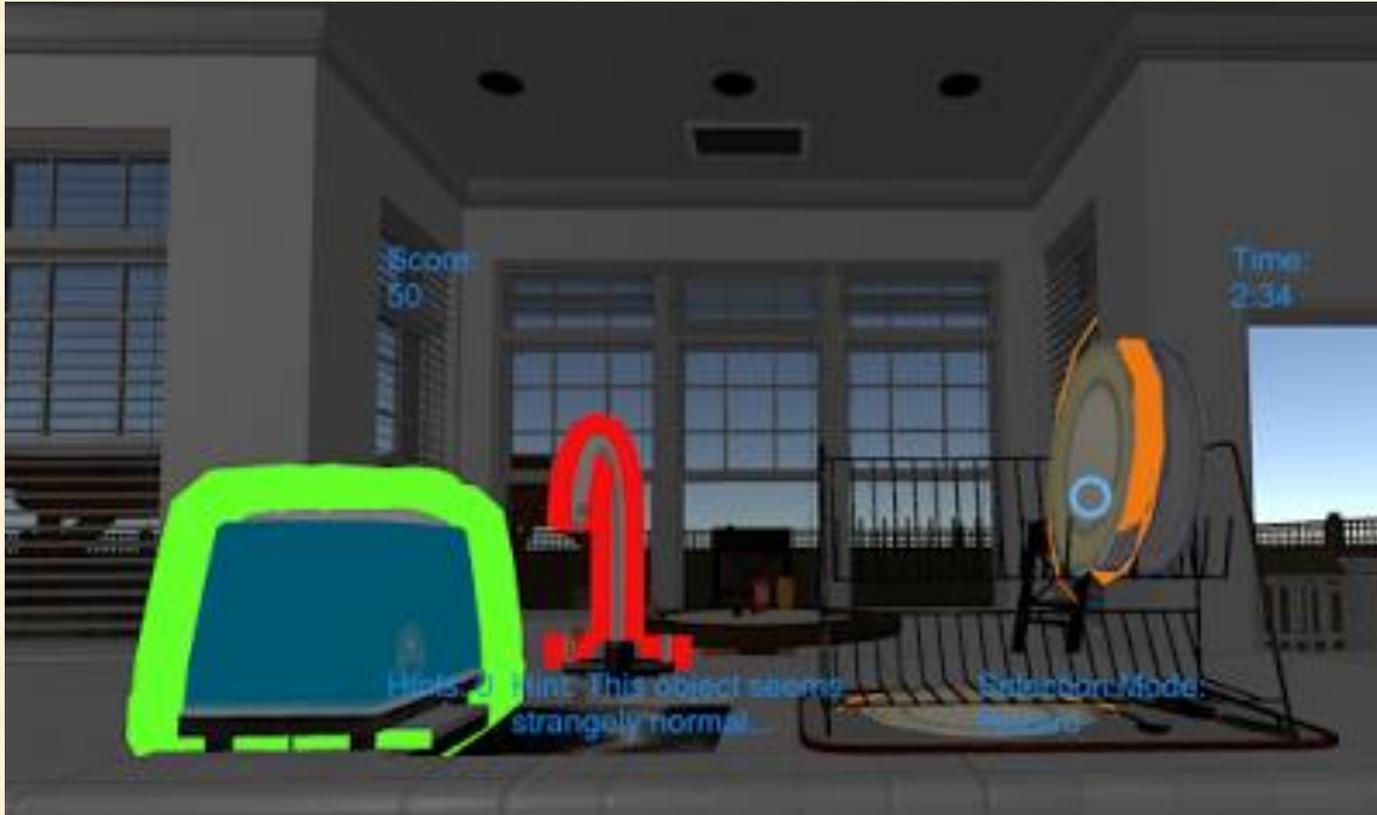


Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

e.

Game Interactions



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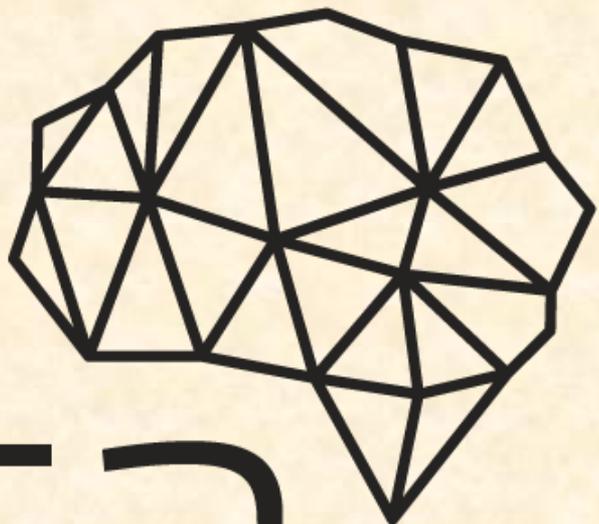
The Capstone Experience

Team Avata

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



Avata

INTELLIGENCE





[Applications](#) ▾

[Products](#) ▾

[About](#) ▾

[News](#)

[Contact Us](#)



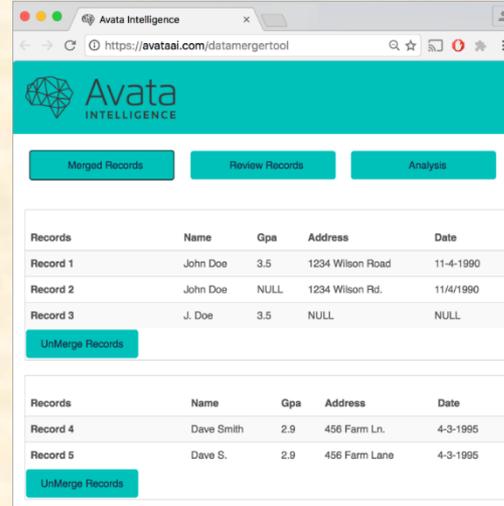
Advance Your Tomorrow with Data-Driven AI

Avata Intelligence's solutions show organizations exactly when, where, and how to minimize risk, allocate

Team Avata Project Overview

Security Analytics Suite: Configuration Setup Tool

- Functionalities
 - Transform and Ingest Various Data Formats
 - Into Ava for Public Safety Solution
 - To Reduce Customer Acquisition Cost and Time
- Features
 - Design and Build Interactive User Interface
 - Provide Way to Map User's Taxonomy to Avata's Taxonomy
 - Use ReactJS for Mapping User Interface
 - Draw on Map
 - Capture Date and Time Ranges
 - Create Hierarchical Ontologies
 - Support JSON, SQL and MySQL Configurations
- Technologies
 - React JS
 - Java 8
 - Spring Boot framework
 - Hibernate Framework
 - JSON, SQL and MySQL
 - ArcGIS Mapping Tools
 - RESTful Web Services



The screenshot shows a web browser window with the URL <https://avataai.com/datamergertool>. The page header features the Avata Intelligence logo and three buttons: "Merged Records", "Review Records", and "Analysis". Below the header, there are two data tables. The first table has columns for "Records", "Name", "Gpa", "Address", and "Date", and contains three records. Below this table is a "UnMerge Records" button. The second table has the same columns and contains two records, also with a "UnMerge Records" button below it.

Records	Name	Gpa	Address	Date
Record 1	John Doe	3.5	1234 Wilson Road	11-4-1990
Record 2	John Doe	NULL	1234 Wilson Rd.	11/4/1990
Record 3	J. Doe	3.5	NULL	NULL

Records	Name	Gpa	Address	Date
Record 4	Dave Smith	2.9	456 Farm Ln.	4-3-1995
Record 5	Dave S.	2.9	456 Farm Lane	4-3-1995





Team Avata

Zack Lumley, Ashley Gagnon, Chantz Johnson, Meenu Sundararaju, Sean Edwards

Team Avata Project Plan Presentation

e.

Screen Mockup

Client Configuration Tool

← → ↻

☰ Client Information Setup Avata Intelligence

User Roles

Role 1 Role 2

Modules

Module 1 Module 2

Shifts

User Display

<input type="text" value="Shift Name"/>	<input type="text" value="Start Time"/>	<input type="text" value="End Time"/>
<input type="text" value="Shift Name"/>	<input type="text" value="Start Time"/>	<input type="text" value="End Time"/>

Reports

 Use same as above

Deployments

 Use same as above

MsSQL MySQL



Information Setup

Partial screenshot of the Information Setup form showing input fields for user roles and modules.

Screen Mockup: Information Setup

Full screenshot of the Client Configuration Tool screen mockup for Information Setup. The form includes sections for Client Information, User Roles, Modules, Shifts, Reports, and Miscellaneous, with various input fields and checkboxes.

Client Configuration Tool

Client Information Setup

Client Name

User Roles

Role 1 Role 2

Modules

Module 1 Module 2

Shifts

User Drabity

Shift name Start Year End Year

Shift name Start Year End Year

+ Add Shift

Reports

+ Add Shift Use same as above

+ Add Shift Use same as above

Miscellaneous

Medical Hygiene

Export User Roles Export ACL Export Shifts

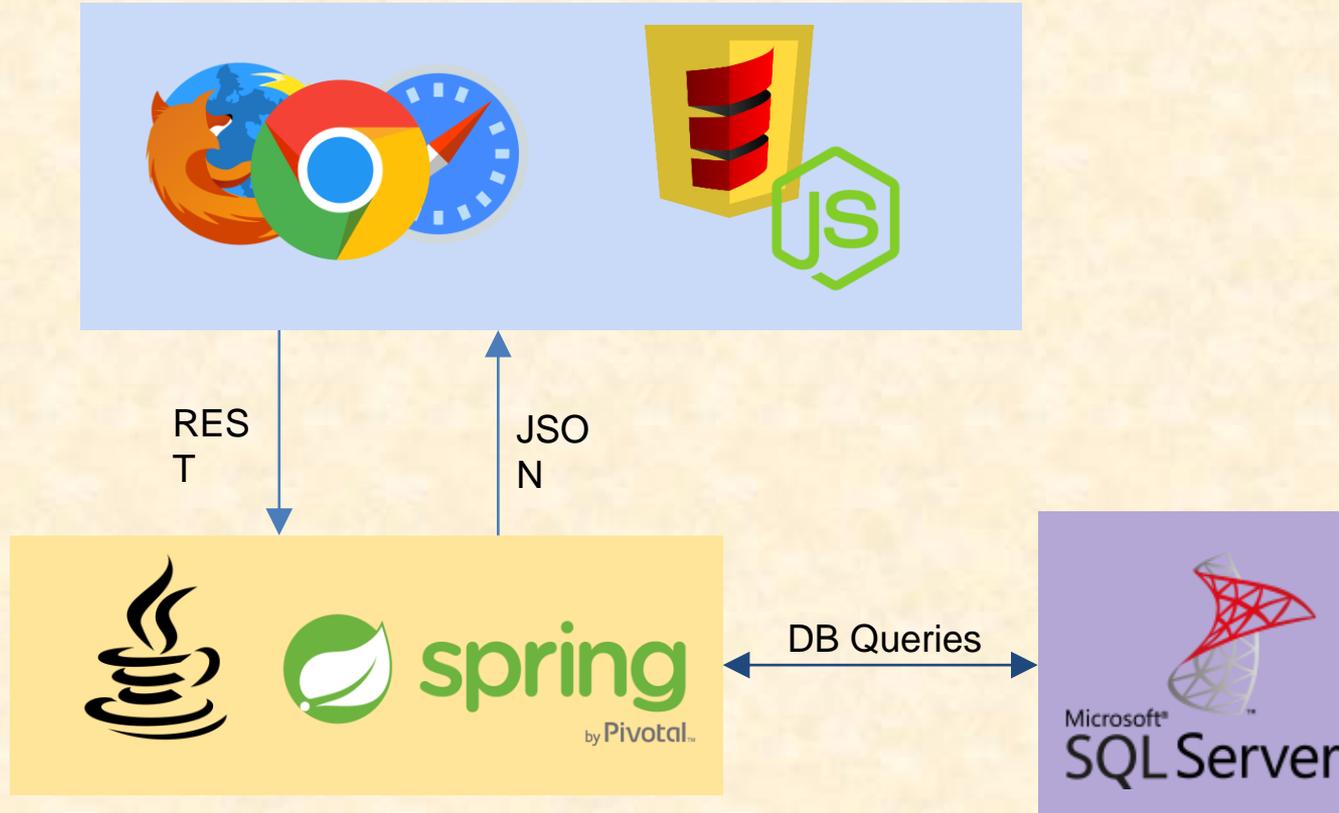
The Capstone Experience

Team Avata: Project Plan Presentation

Team Avata Project Plan Presentation

Team Avata Project Plan Presentation

Architecture Diagram



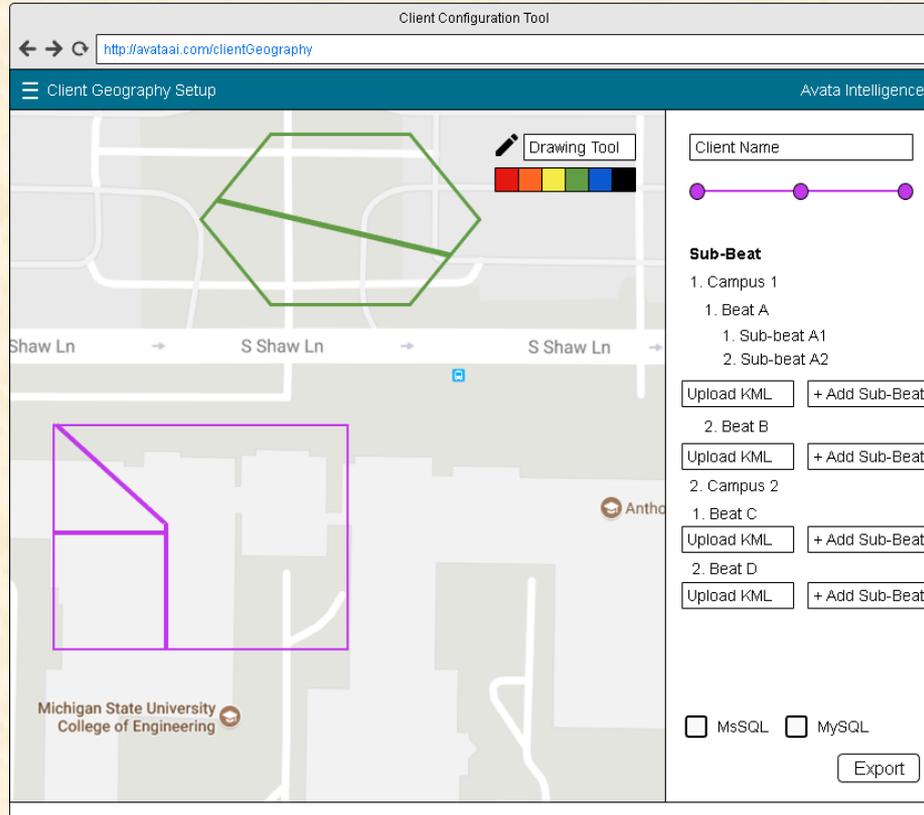


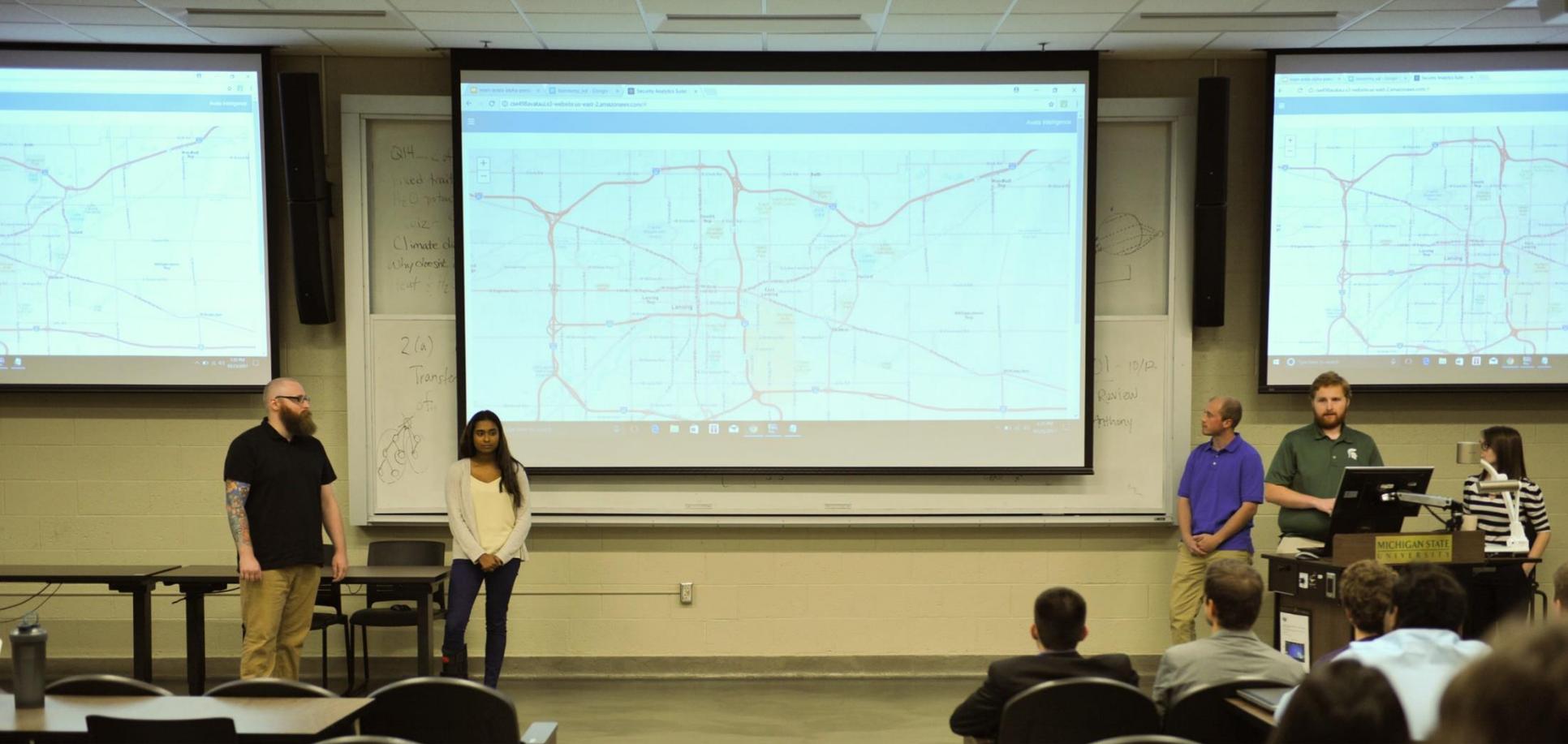
Team Avata Project Plan Presentation

Team Avata Project Plan Presentation

e.

Screen Mockup





Q14
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1/2
Climate ch
Why doesn't
leaf: the

2(a)
Transfer
of



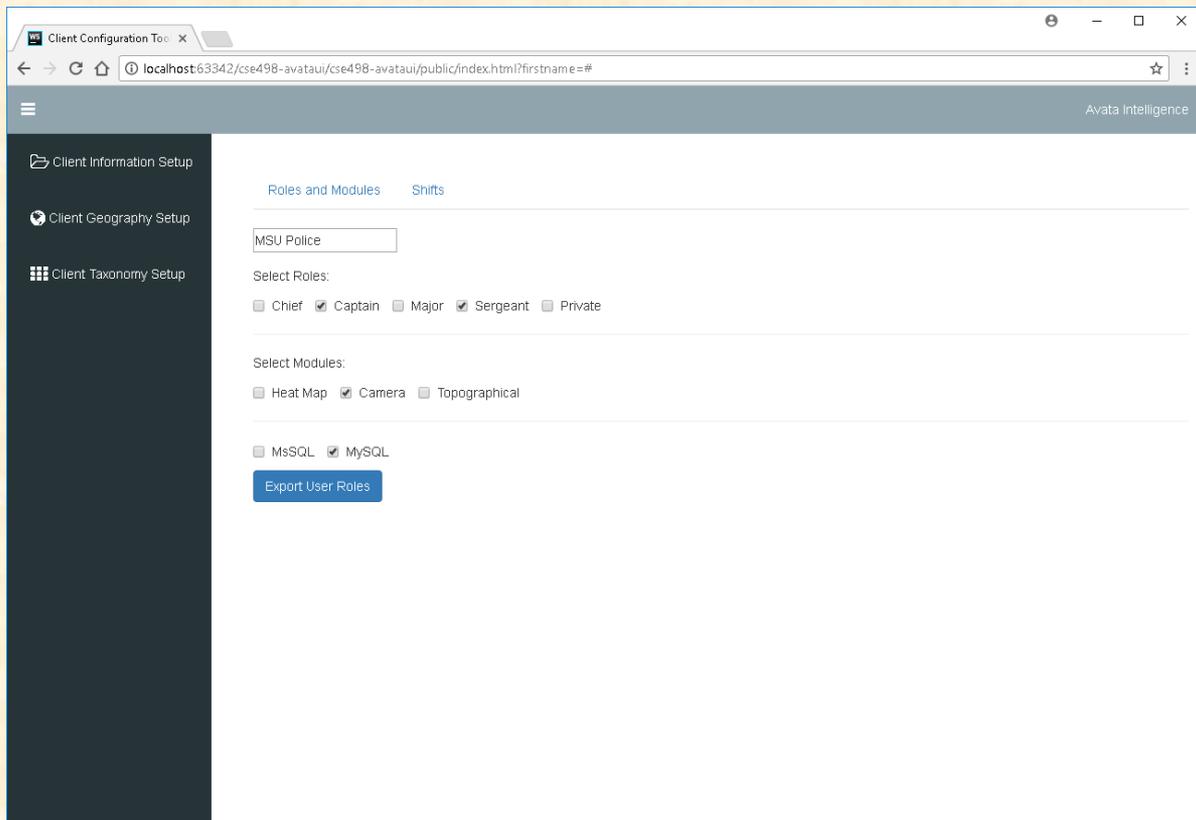
11-10/P
Review
Priority

Team Avata Alpha Presentation

Team Avata Alpha Presentation

e.

Information Setup: Roles & Modules



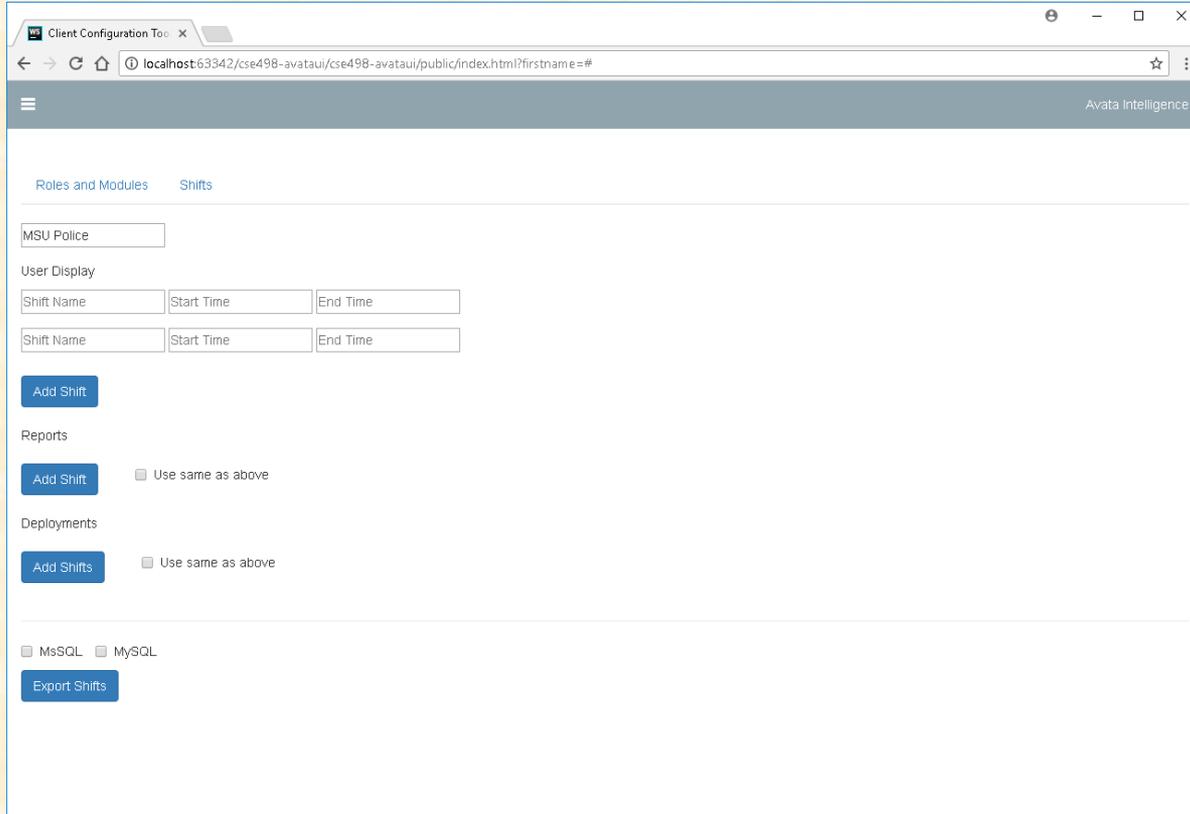
The screenshot displays a web browser window with the address bar showing a localhost URL. The page title is "Client Configuration Tool" and the browser tab is "Client Configuration Tool". The URL is "localhost:63342/cse498-avataui/cse498-avataui/public/index.html?firstname=#". The page content is titled "Avata Intelligence" and shows a sidebar with three menu items: "Client Information Setup", "Client Geography Setup", and "Client Taxonomy Setup". The main content area is titled "Roles and Modules" and "Shifts". It features a text input field containing "MSU Police". Below this, there are two sections: "Select Roles:" and "Select Modules:". The "Select Roles:" section has five radio buttons: "Chief", "Captain", "Major", "Sergeant", and "Private". The "Select Modules:" section has three radio buttons: "Heat Map", "Camera", and "Topographical". At the bottom, there are two radio buttons: "MsSQL" and "MySQL". A blue button labeled "Export User Roles" is located at the bottom of the form.



Team Avata Alpha Presentation

e.

Information Setup: Shifts



The screenshot shows a web browser window with the URL `localhost:63342/cse498-avataui/cse498-avataui/public/index.html?firstname=#`. The page title is "Client Configuration Tool" and the logo "Avata Intelligence" is in the top right. The main content area is titled "Roles and Modules" and "Shifts".

Under "Roles and Modules", there is a text input field containing "MSU Police".

Under "User Display", there are two rows of input fields. Each row has a "Shift Name" field followed by "Start Time" and "End Time" fields.

Below the input fields, there is a blue "Add Shift" button.

Under "Reports", there is a blue "Add Shift" button and a checkbox labeled "Use same as above".

Under "Deployments", there is a blue "Add Shifts" button and a checkbox labeled "Use same as above".

At the bottom, there are two checkboxes: "MsSQL" and "MySQL". Below them is a blue "Export Shifts" button.



What's left to do?

- Finish UI
 - Buttons
 - Sidebars
- Encapsulate front-end data in format that back-end can consume
- Export MsSQL/MySQL file
- Implement front-end validation for polygon overlapping
- Finish data hierarchy
 - Geography
 - Taxonomy

The Capstone Experience

Team Avata Alpha Presentation

What's left to

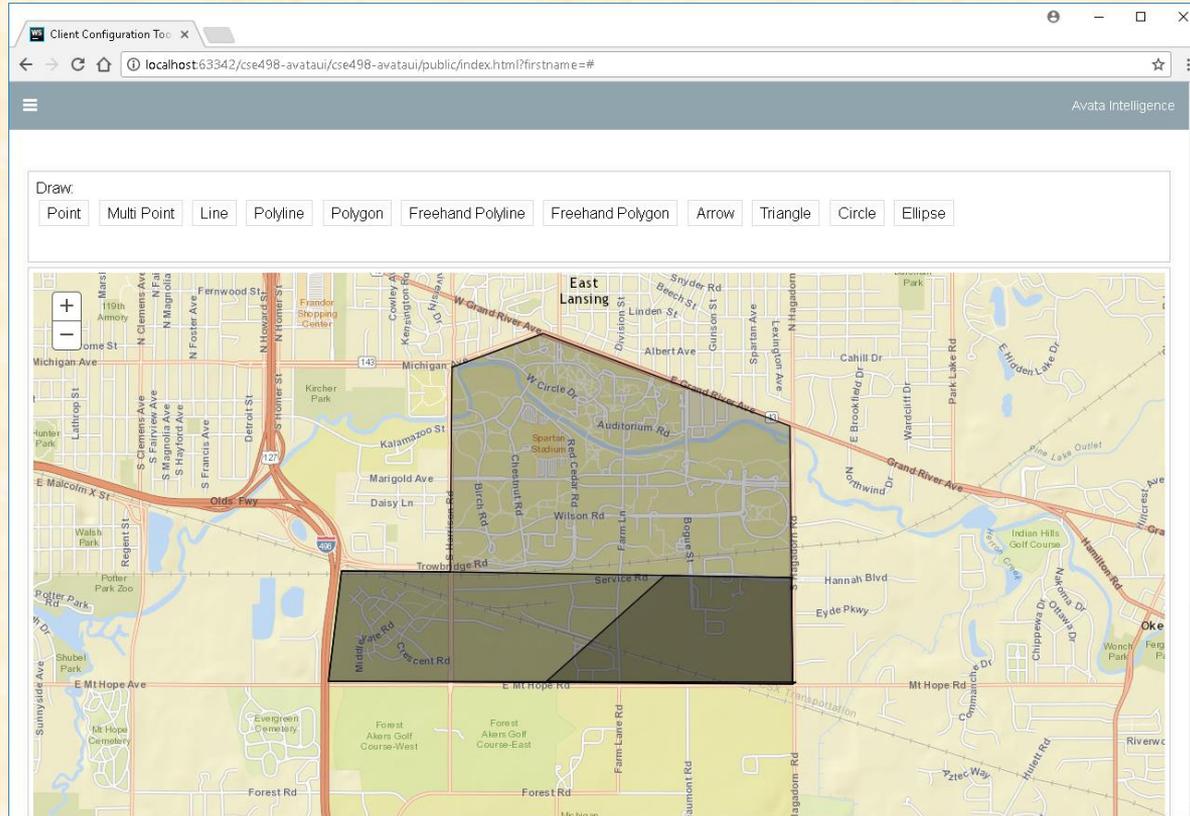
- Finish UI
 - Buttons
 - Sidebars
- Encapsulate front back-end can con
- Export MsSQL/My
- Implement front-overlapping
- Finish data hierarc
 - Geography
 - Taxonomy

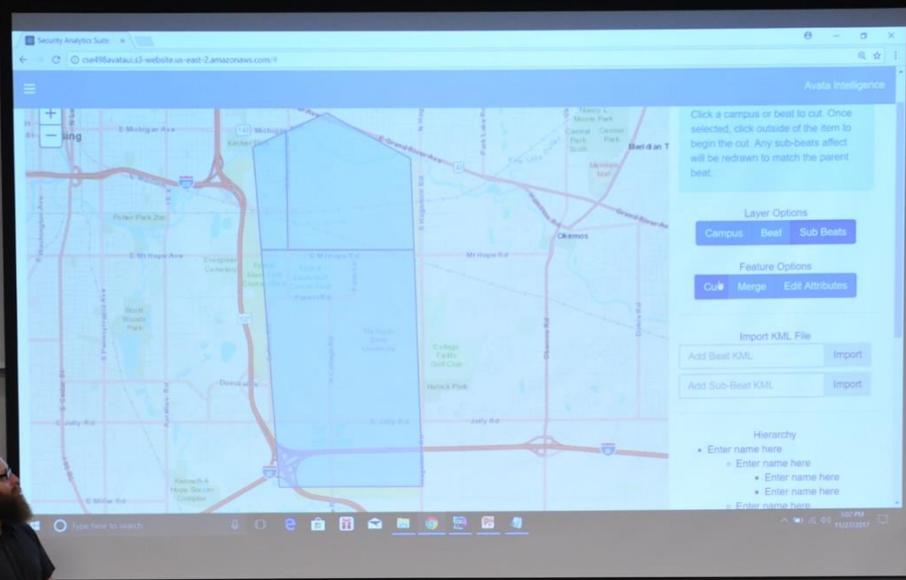
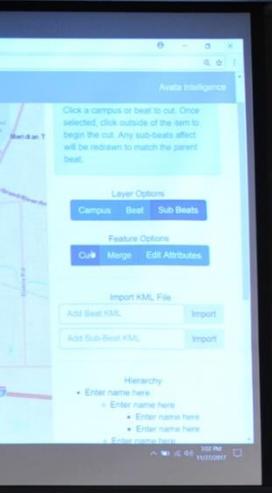
The Capstone Experience

Team Avata
Alpha Presentation

Team Avata Alpha Presentation

Geography Setup



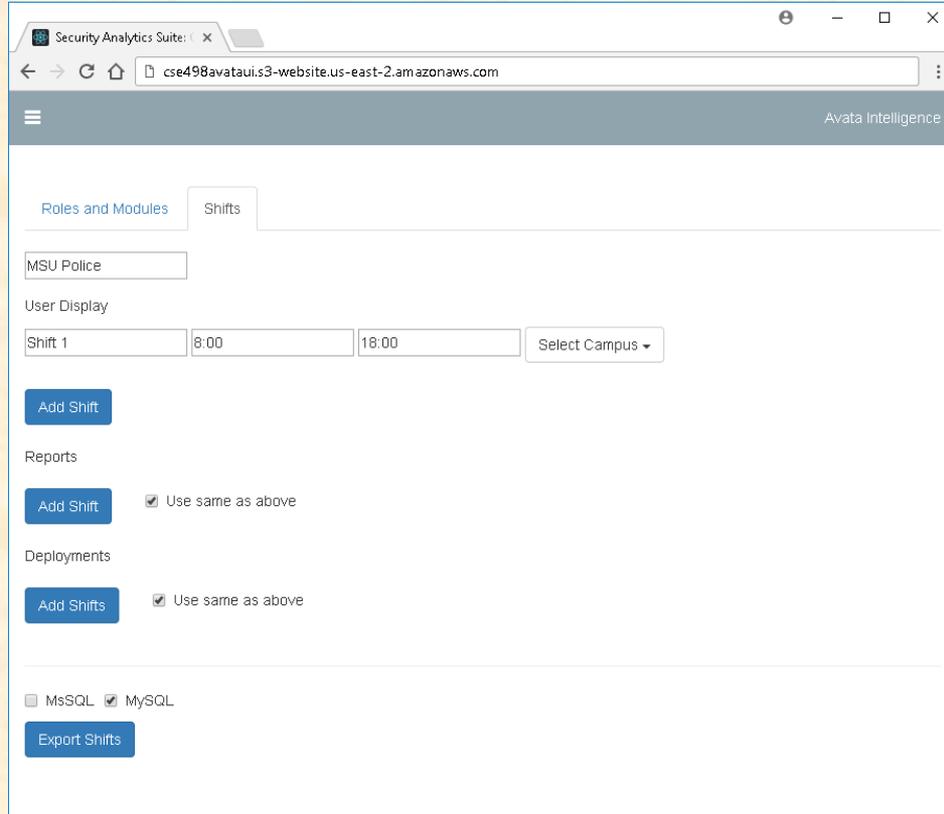


Team Avata Beta Presentation

Team Avata Beta Presentation

e.

Information: Shifts



The screenshot shows a web browser window titled "Security Analytics Suite" with the URL "cse498avataui.s3-website.us-east-2.amazonaws.com". The page is for "Avata Intelligence" and is currently on the "Shifts" tab. The configuration is for "MSU Police".

Roles and Modules | Shifts

MSU Police

User Display

Shift 1 | 8:00 | 18:00 | Select Campus ▾

Add Shift

Reports

Add Shift Use same as above

Deployments

Add Shifts Use same as above

MsSQL MySQL

Export Shifts



Team Avata Beta Presentation

Geography: Campuses

Security Analytics Suite | x

cse498avataui.s3-website.us-east-2.amazonaws.com/?firstName=#

Avata Intelligence

Click to begin drawing. Double click to finish drawing. Your polygon must have at least 3 sides.

Layer Options

Campus Beat Sub Beats

Feature Options

Add Delete Free Hand Add

Import KML File

Add Beat KML Import

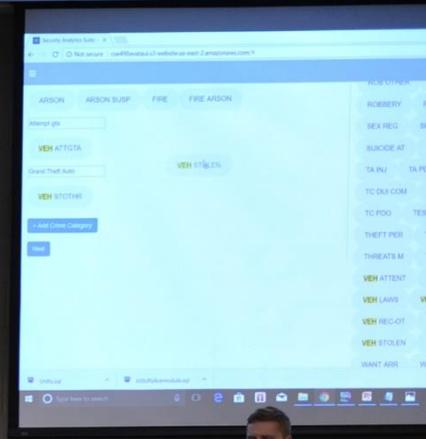
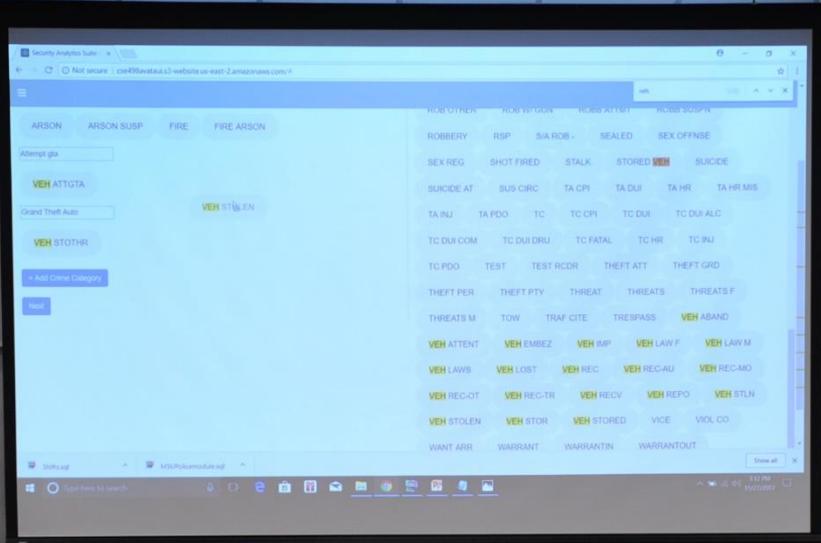
Add Sub-Beat KML Import

Hierarchy

- Campus 1
- Campus 2

Submit





Team Avata Beta Presentation

Team Avata Beta Presentation

Geography: Beats

Security Analytics Suite | x

cse498avataui.s3-website-us-east-2.amazonaws.com/?firstname=#

Avata Intelligence

East Lansing

Click a campus or beat to cut. Once selected, click outside of the item to begin the cut. Any sub-beats affect will be redrawn to match the parent beat.

Layer Options

Campus Beat Sub Beats

Feature Options

Cut Merge Free Hand Cut

Import KML File

Add Beat KML Import

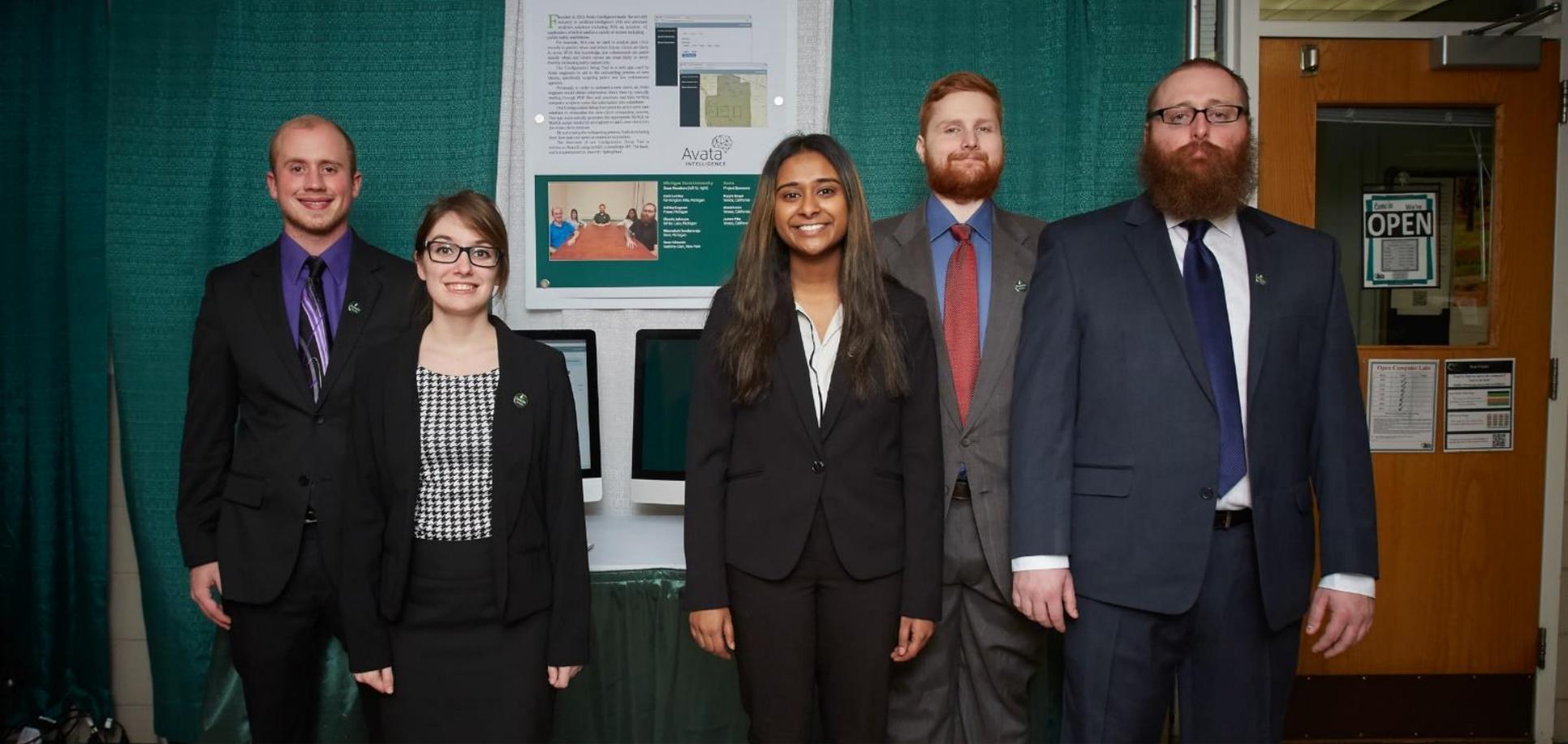
Add Sub-Beat KML Import

Hierarchy

- Campus 1
 - Beat 1
 - Beat 2
 - Beat 3
- Campus 2

Submit





Team Avata
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Ford

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*





Go Further

Cars Crossovers & SUVs Trucks & Vans Shopping Tools Owner Find a Dealer Saved Items



39 YEARS

FORD F-SERIES

AMERICA'S BEST SELLING TRUCKS



Team Ford Project Overview

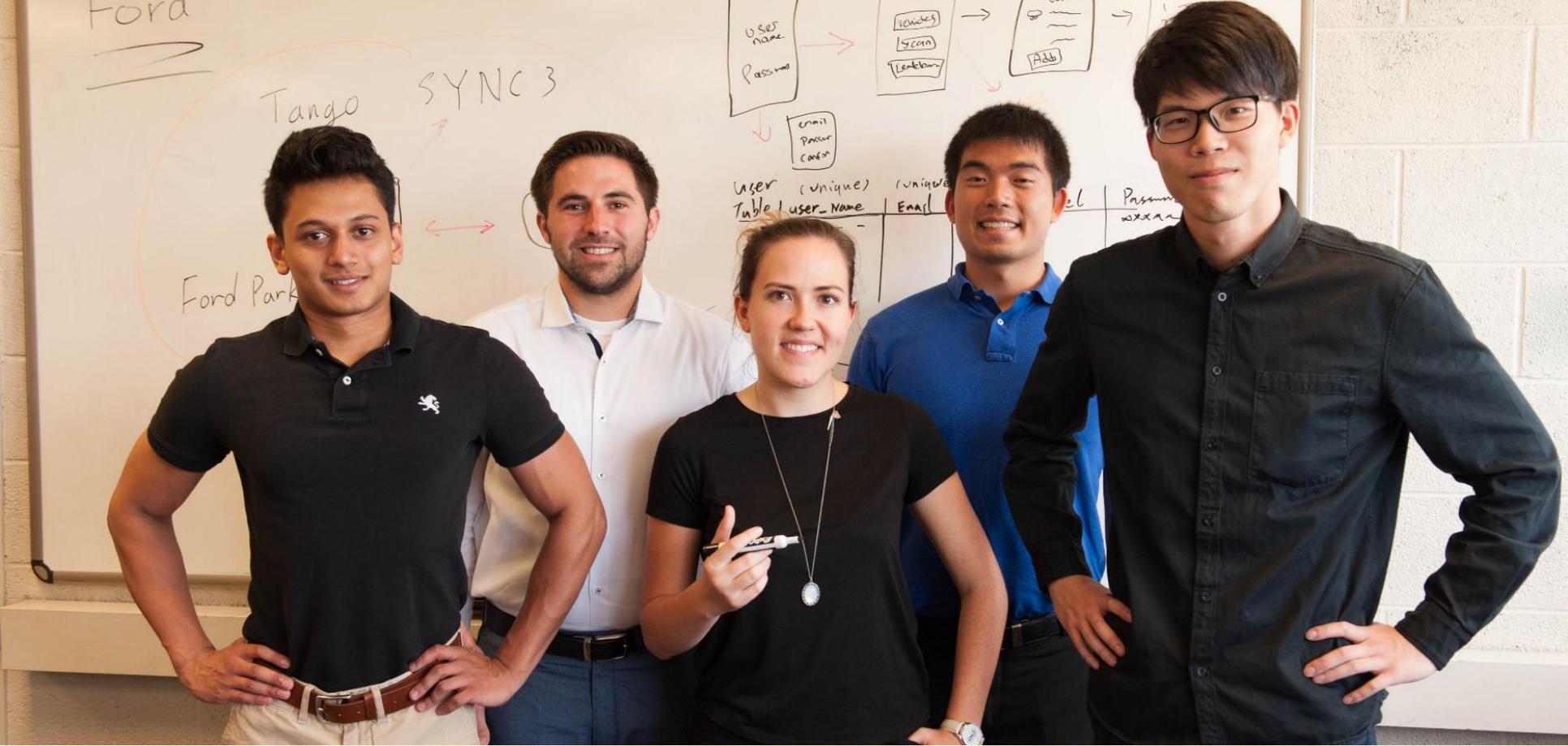
Ford Smart Parking

- Functionalities
 - Notify Drivers of Nearby Available Parking Spaces
 - That Fit Their Model Vehicle
 - Using Ford's Sync 3
- Features
 - Create and Manage User Profiles
 - Enable User Flagging of Open Parking Spaces
 - Dimensions
 - GPS Location
 - Timestamp
 - Integrate with Google Tango
 - Send Notifications to Sync 3
 - Receives Notifications of Available Spaces
 - Notifies Remote Server When Space Taken
 - Design and Build Sync 3 App
- Technologies
 - Lenovo Phab 2 Pro
 - Google Android Tablets and Phones / Java
 - Google Tango
 - Java 2 Platform Enterprise Edition (J2EE)
 - Sync 3 Emulator and AppLink
 - Microsoft SQL Server 2016



Dearborn, Michigan



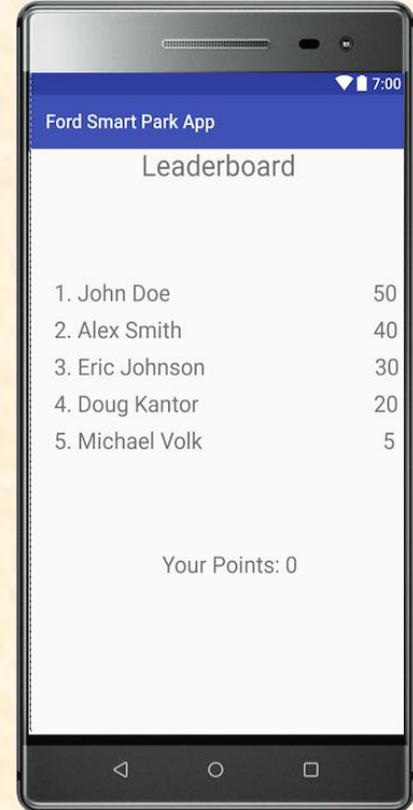
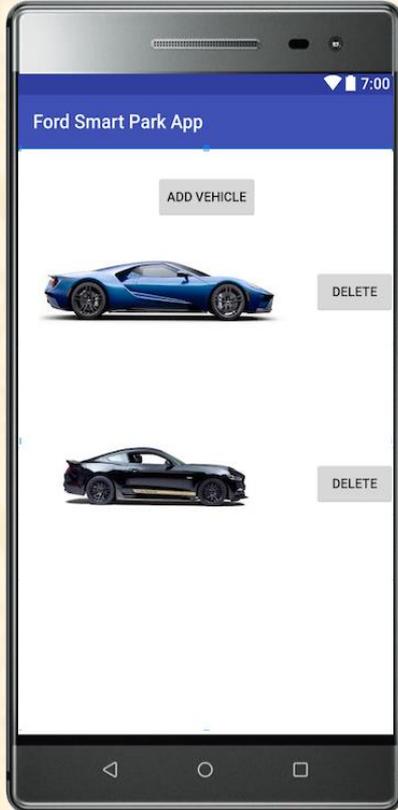


Team Ford

Rahul Patel, Doug Kantor, Helena Narowski, Eric Wu, Cheng Jin

Team Ford Project Plan Presentation

Screen Mockup



Tango Parking



Screen Mockup: Google Tango Parking Spot Scanning



The Capstone Experience

Team Ford Project Plan Presentation

6

Screen M
Spot Scan

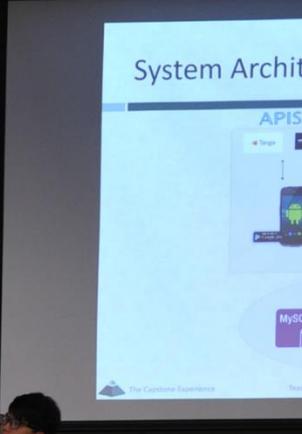
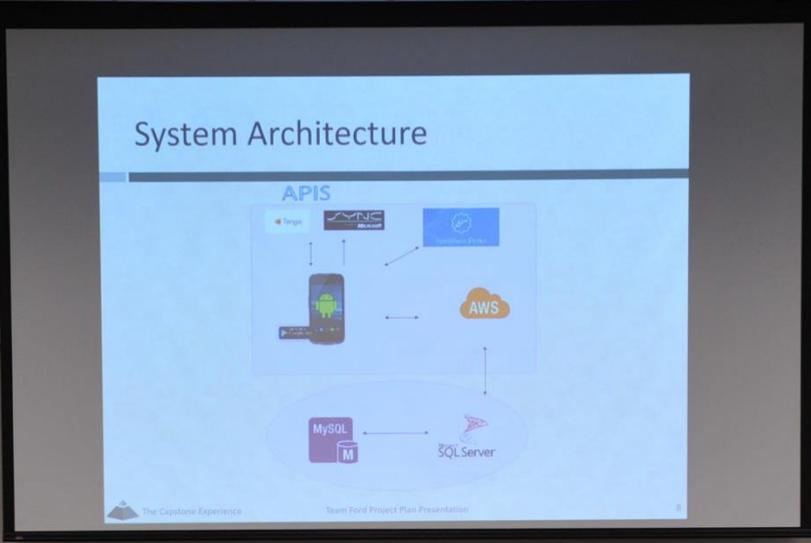
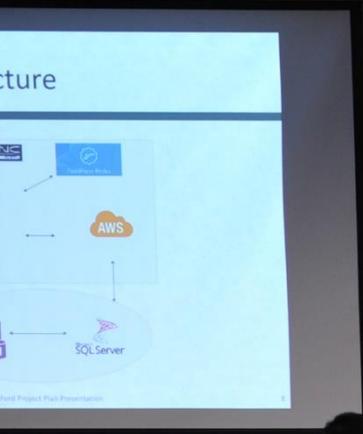
The Capstone Experience

Team Ford Project Plan Presentation

Team Ford Project Plan Presentation

Architecture Diagram



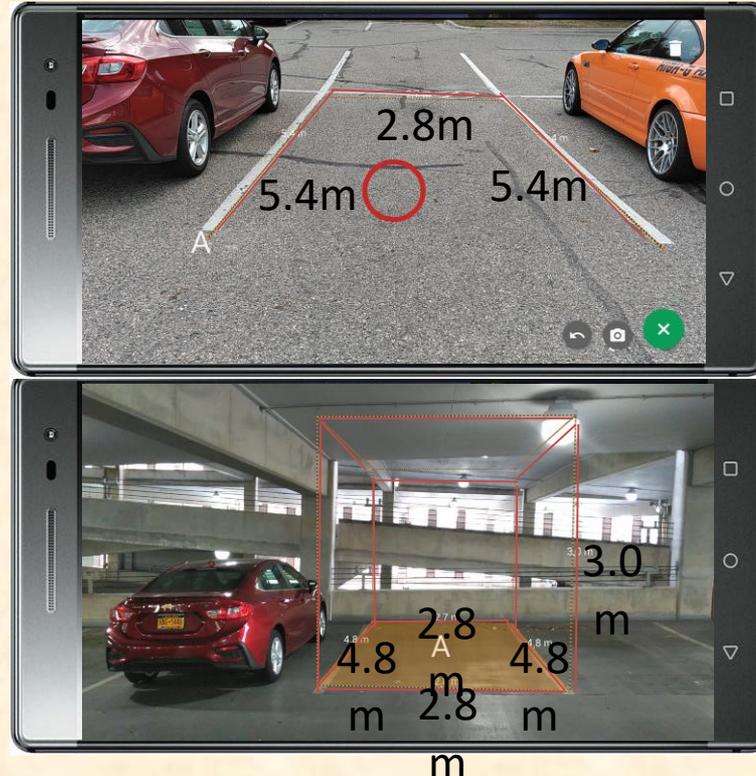


Team Ford
Project Plan Presentation

Team Ford Project Plan Presentation

e.

Screen Mockup



Team Ford Project Plan
Presentation

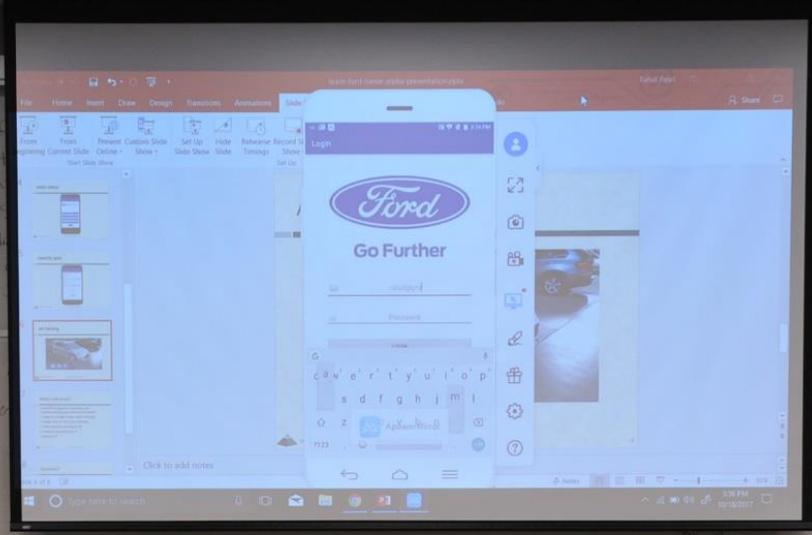
The Capstone Experience





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of



01-10/12
Review
Anthony

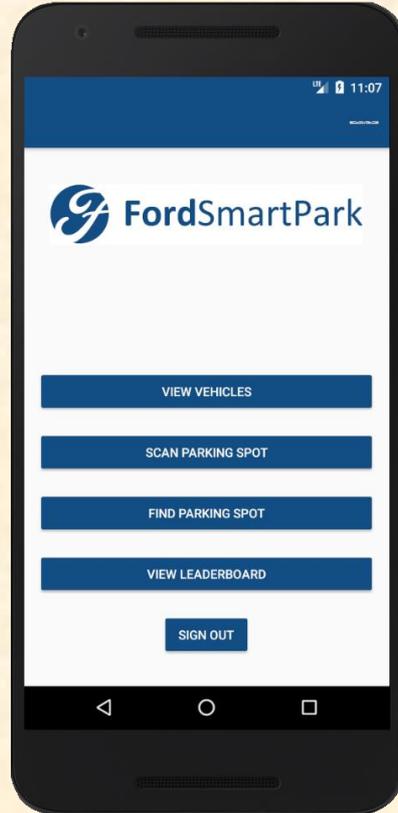


Team Ford Alpha Presentation

Team Ford Alpha Presentation

e.

Main Menu



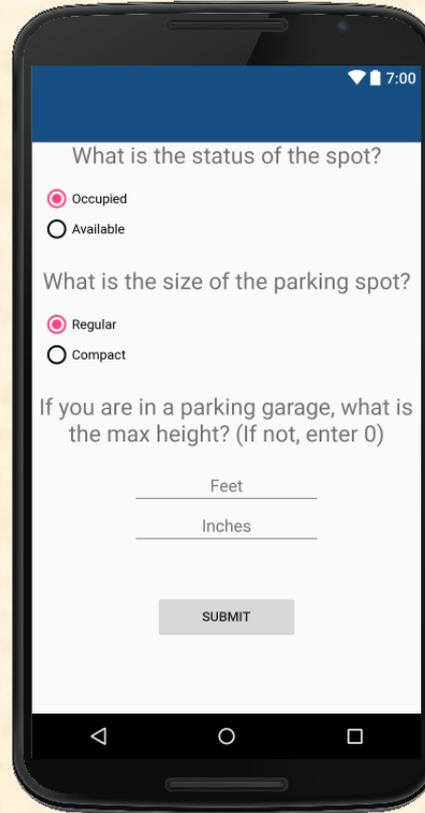
The Capstone Experience



Team Ford Alpha Presentation

e.

Identify Spot



The image shows a smartphone screen with a survey form. The form has a blue header bar. The first question is "What is the status of the spot?" with two radio button options: "Occupied" (selected) and "Available". The second question is "What is the size of the parking spot?" with two radio button options: "Regular" (selected) and "Compact". The third question is "If you are in a parking garage, what is the max height? (If not, enter 0)". Below this question are two input fields labeled "Feet" and "Inches". At the bottom of the form is a grey "SUBMIT" button. The smartphone's status bar at the top shows signal strength, Wi-Fi, and the time 7:00. The bottom of the screen shows the Android navigation bar with back, home, and recent apps icons.

7:00

What is the status of the spot?

Occupied

Available

What is the size of the parking spot?

Regular

Compact

If you are in a parking garage, what is the max height? (If not, enter 0)

Feet

Inches

SUBMIT





Team Ford Alpha Presentation

Team Ford Alpha Presentation

e.

AR Parking



The Capstone Experience

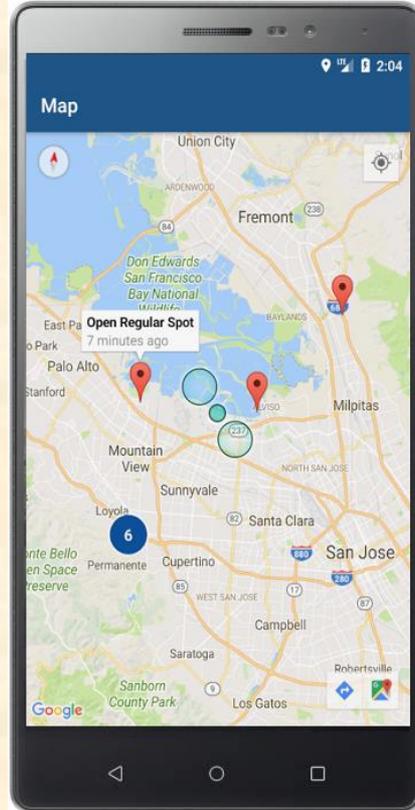




Team Ford Beta Presentation

Team Ford Beta Presentation

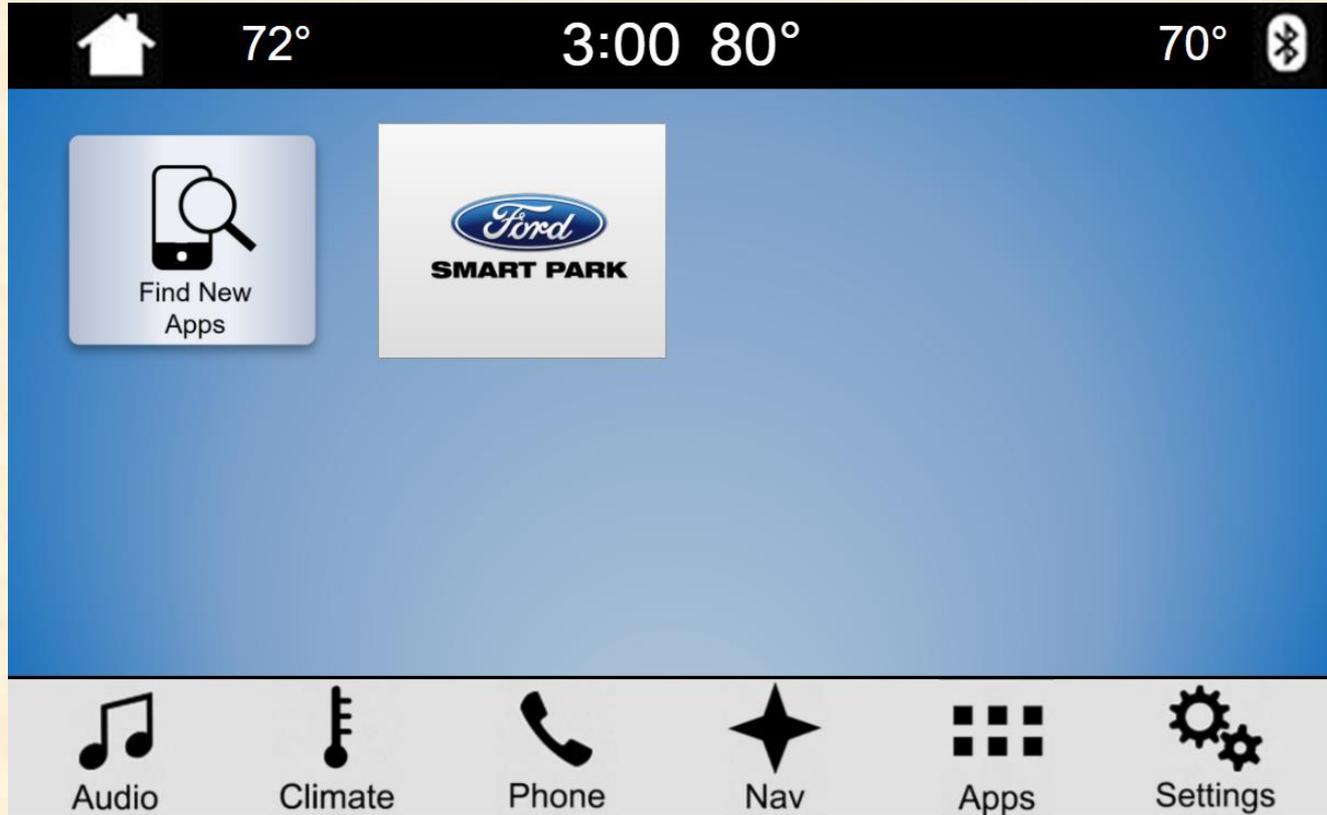
Find Parking Spots



Team Ford Beta Presentation

e.

Sync 3 Web



The Capstone Experience



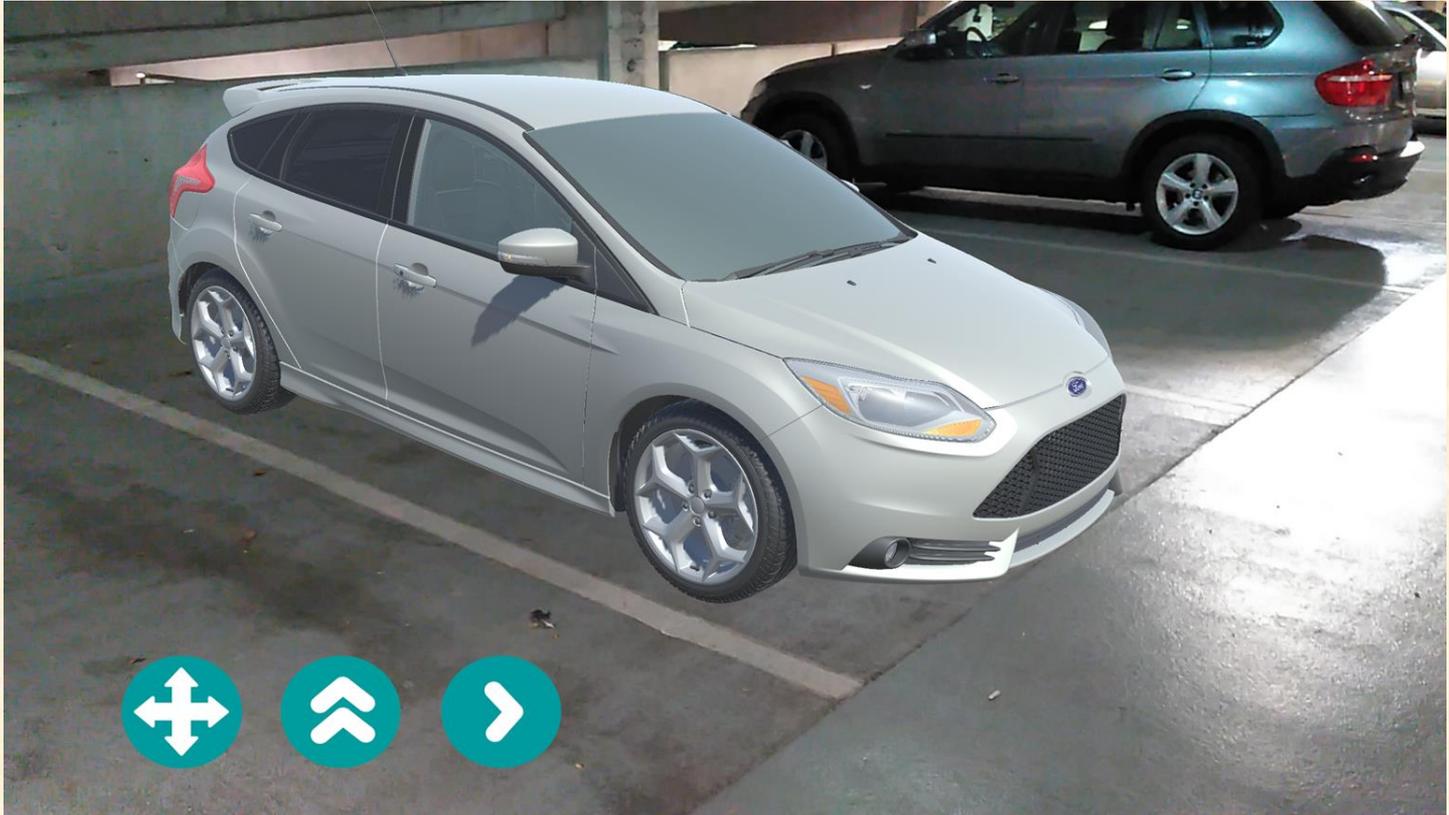


Team Ford Beta Presentation

Team Ford Beta Presentation

e.

AR Parking



The Capstone Experience





Team Ford
Design Day

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Team GM

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

The image features the General Motors (GM) logo, which consists of the letters "GM" in a bold, sans-serif font, positioned above a horizontal bar. The logo is rendered in a light blue color with a subtle gradient and a slight shadow, giving it a three-dimensional appearance. It is centered within a dark blue square background. The entire logo is set against a light beige, textured background. The image is framed by a dark green border at the top and bottom, and a light grey border on the left and right sides.

GM



GENERAL MOTORS

Select a Country | Contact Us

Search

SHOP FOR A VEHICLE +

NEWS AND STORIES +

OUR COMPANY +

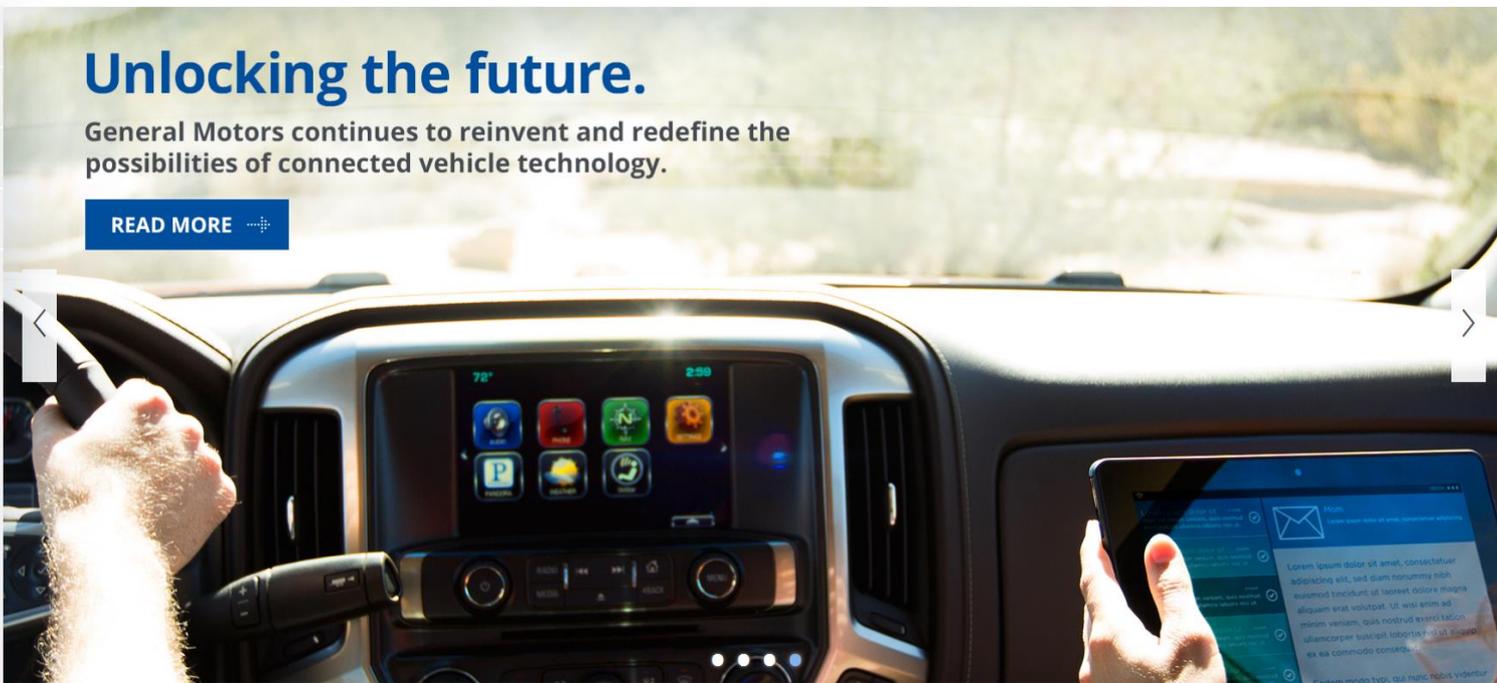
INVESTORS +

OWNER ASSISTANCE +

Unlocking the future.

General Motors continues to reinvent and redefine the possibilities of connected vehicle technology.

READ MORE



Shop Chevrolet.com



Shop Buick.com



Shop GMC.com



Shop Cadillac.com

Team GM

Project Overview

Automated Video Workplace Safety System

- Functionalities
 - Alert Employees of Safety Issues and Situations
 - Using Computer Analysis of Real-Time Camera Feeds
- Features
 - Design and Build Web and Mobile Apps
 - Utilize Camera to Watch Area of Concern
 - Leverage Image Recognition and Machine Learning (ML)
 - Identify People and Personal Protective Equipment (PPE)
 - Helmet
 - Eye Protection
 - Hearing Protection
 - Vest
 - Determine Safety Alerts
 - Send to Mobile App
 - Record in Centralized Database
 - Produce Summary Reports for Management
- Technologies
 - CSS / HTML / JavaScript / PHP
 - Google Android Tablets and Phones / Java
 - nVidia Deep Learning SDK
 - nVidia DGX-1 Deep Learning Hardware
 - Image Recognition
 - Machine Learning (ML)
 - Mobile Push Notifications



Detroit, Michigan





Team GM

Michael Peng, Marc Bellemare, Steve Levesque, Ike Uchendu, Damien Hong

Team GM Project Plan Presentation

Screen Mockup

GENERAL MOTORS



HOME

NOTIFICATION HISTORY

MANAGER SETTINGS

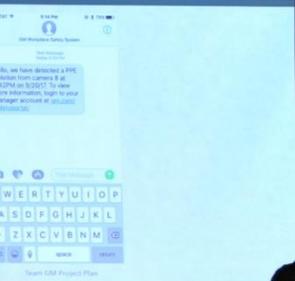
CAMERA MANAGEMENT

Recent Notifications

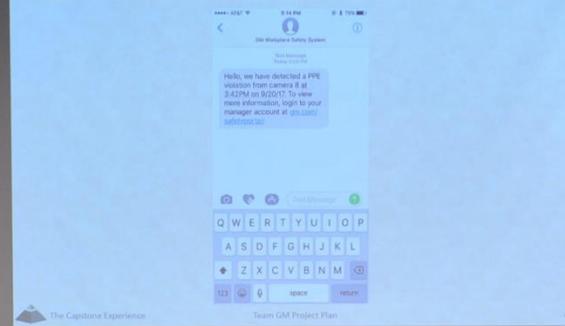
Camera	Area	Time	Date	Manager	PPE
3	D	10:41AM	9/25/17	Bob Smith	Eye Protection
8	A	12:11PM	9/25/17	Bob Smith	Headwear
5	C	1:23PM	9/25/17	Bob Smith	Gloves
14	E	3:35PM	9/25/17	Jay Jones	Headwear
7	B	4:03PM	9/25/17	Jay Jones	Eye Protection
1	F	5:57PM	9/25/17	Jay Jones	Gloves



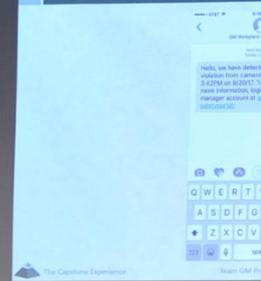
up: SMS Notification



Screen Mockup: SMS Notification



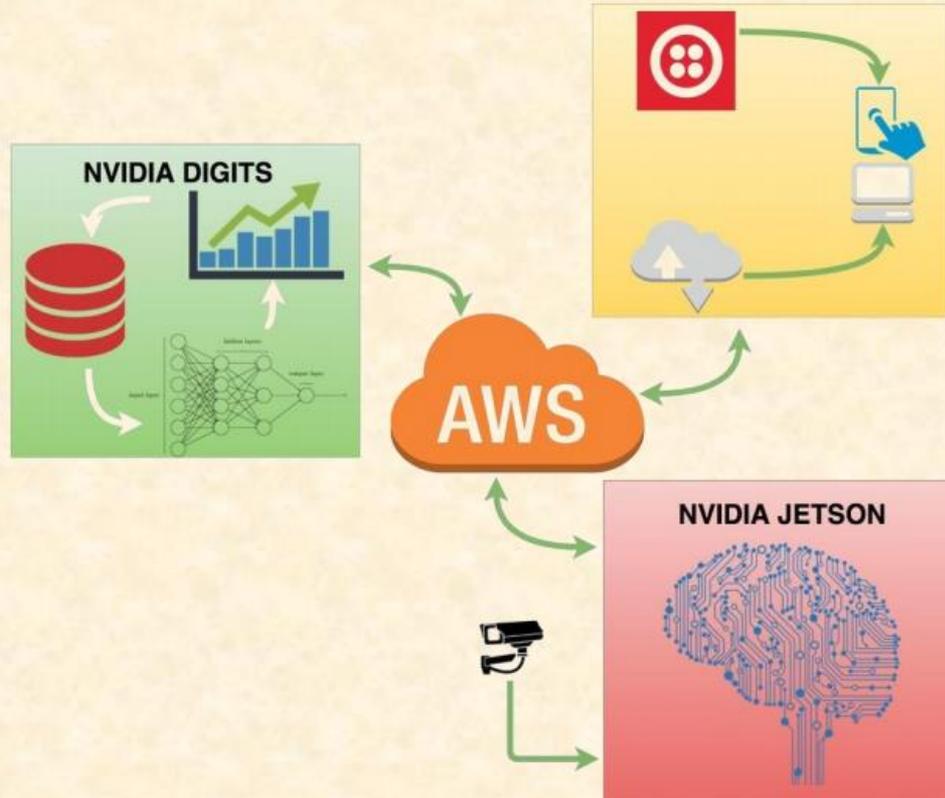
Screen Mockup: S

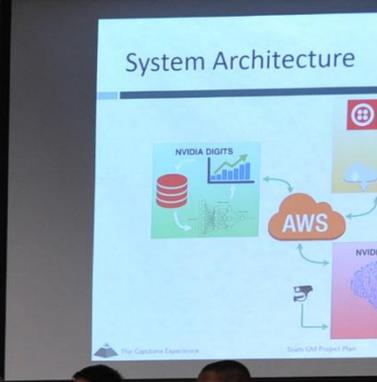
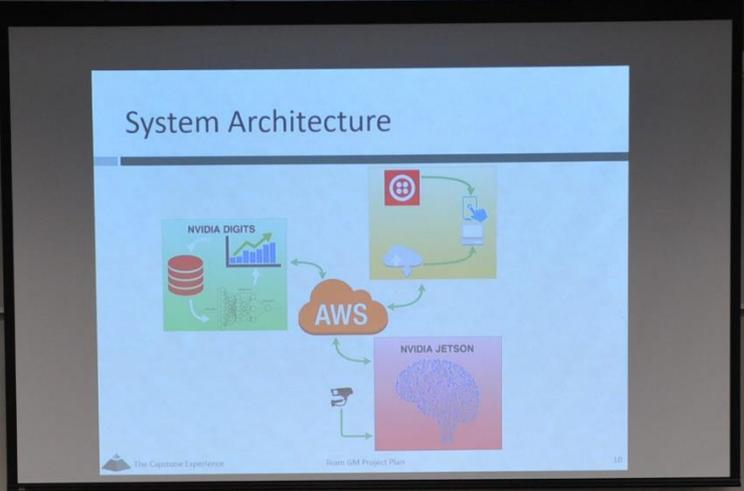
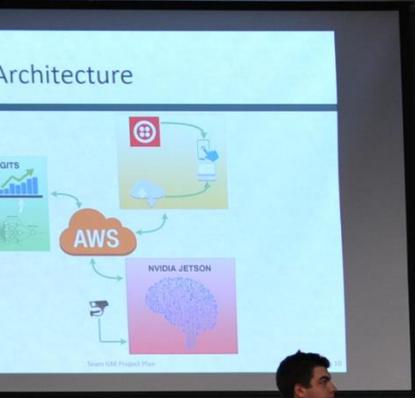


Team GM
Project Plan Presentation

Team GM Project Plan Presentation

Architecture Diagram

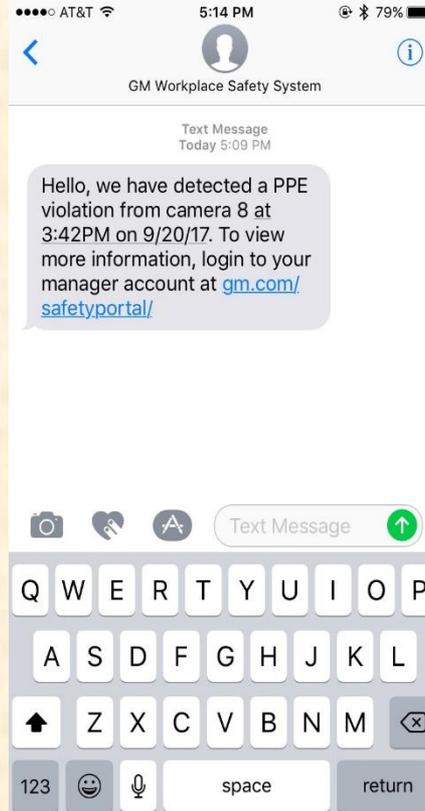




Team GM
Project Plan Presentation

Team GM Project Plan Presentation

Screen Mockup



Q14... of
fixed train
H₂O pot
viz -
Climate ch
Why does it
heat & H₂

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```
nvidia@tegra-ubuntu: ~/wss
[GIE] layer inception_5b/pool_proj + inception_5b/relu_pool_proj - 0.937056 ms
[GIE] layer inception_5b/ix1 copy - 0.122464 ms
[GIE] layer cvg/classifier - 0.611840 ms
[GIE] layer cvg/classifier output reformatter 0 - 0.009280 ms
[GIE] layer bbox/regressor - 0.610816 ms
[GIE] layer bbox/regressor output reformatter 0 - 0.012704 ms
[GIE] layer network time - 225.964096 ms
5 bounding boxes detected
bounding box 0 (766.992188, -58.007812) (1251.796875, 965.830
88 h=1023.837891
bounding box 1 (360.922852, 281.206055) (663.750000, 703.410
8 h=422.204590
bounding box 2 (521.601562, 308.232422) (653.818359, 654.5654
7 h=346.333008
bounding box 3 (-3.251953, 468.676758) (122.519531, 669.79248
h=201.115723
bounding box 4 (169.218750, 464.062500) (325.136719, 661.223
9 h=197.160645
draw boxes 5 0 0.000000 200.000000 255.000000 100.000000
detectnet-console: successfully wrote 1920x1080 image to '/home
et.png'
PEDESTRIAN MODEL OUTPUT END
```

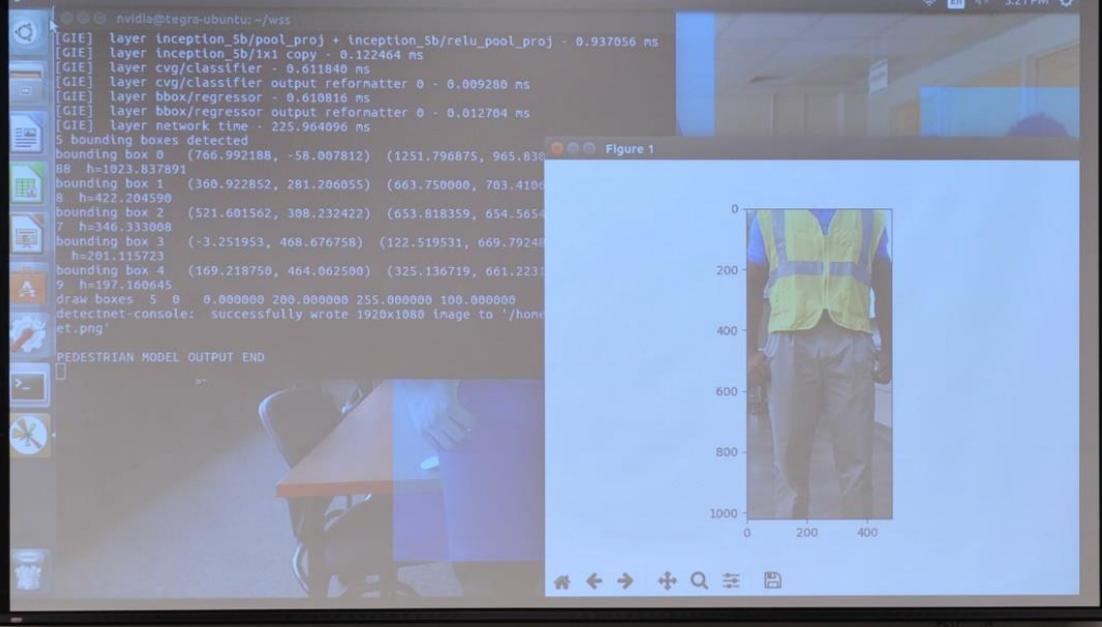
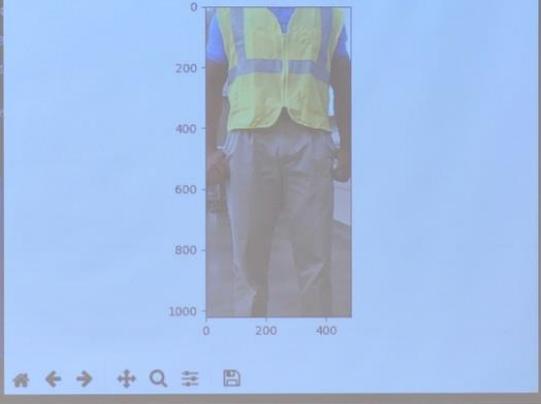
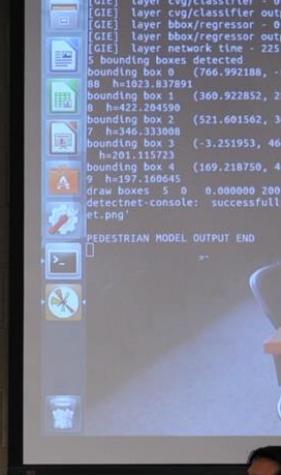


Figure 1



```
[GIE] layer cvg/classifier out
[GIE] layer bbox/regressor out
[GIE] layer network time - 225
5 bounding boxes detected
bounding box 0 (766.992188, -
88 h=1023.837891
bounding box 1 (360.922852, 2
8 h=422.204590
bounding box 2 (521.601562, 3
7 h=346.333008
bounding box 3 (-3.251953, 46
h=201.115723
bounding box 4 (169.218750, 4
9 h=197.160645
draw boxes 5 0 0.000000 200
detectnet-console: successfull
et.png'
PEDESTRIAN MODEL OUTPUT END
```



Team GM Alpha Presentation

Team GM Alpha Presentation

e.

Pedestrian Object Detection



The Capstone Experience



Team GM Alpha Presentation

e.

Web Portal

GENERAL MOTORS

Home

Notifications

Cameras

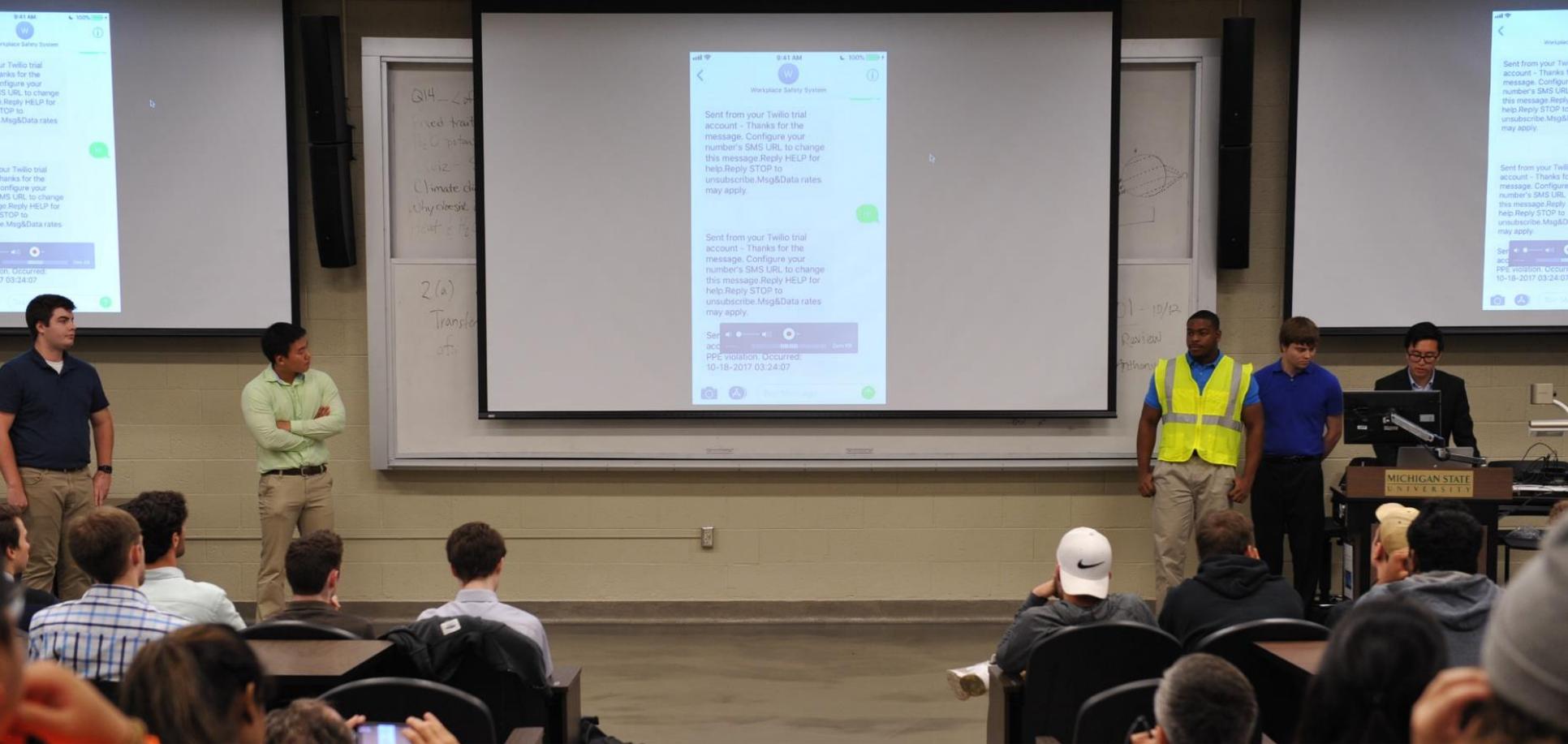
Analytics

Settings

Camera	Area	Time	Date
3	D	10:41 AM	9/25/2017
3	D	10:41 AM	9/25/2017

© 2017 General Motors



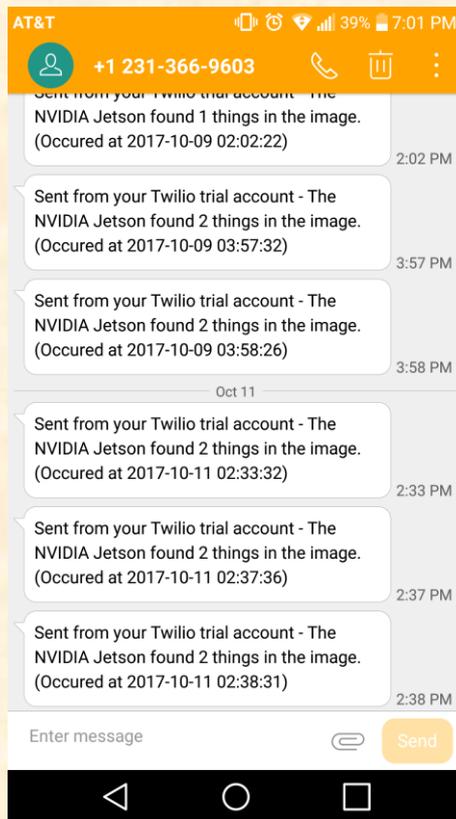


Team GM Alpha Presentation

Team GM Alpha Presentation

e.

Texting View

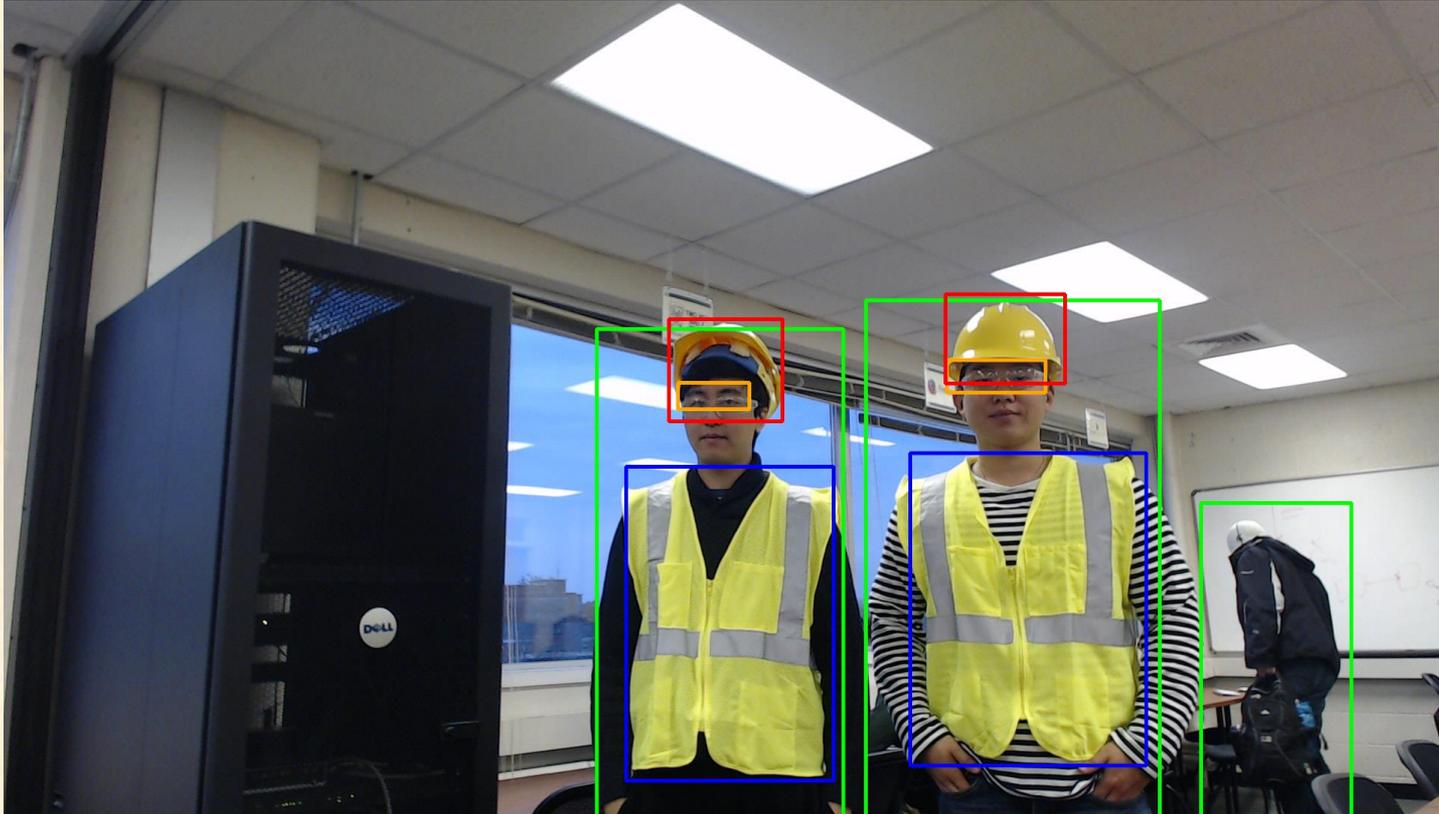




Team GM Beta Presentation

Team GM Beta Presentation

Object Detection



Team GM Beta Presentation

e.

Web Portal - Violations

 GENERAL MOTORS			
Workplace Safety System Home Violations Cameras Analytics Settings			
Camera Name	PPE Violated	Date	Violation Image
CameraA	vest	2017-11-09 14:19:54	View Violation Image
Muffler Rm Entr	vest	2017-11-09 18:02:45	View Violation Image
Muffler Rm Entr	vest	2017-11-10 16:42:43	View Violation Image
Muffler Rm Entr	vest	2017-11-10 16:47:04	View Violation Image
Muffler Rm Entr	vest	2017-11-10 16:48:31	View Violation Image
Muffler Rm Entr	vest	2017-11-10 16:49:17	View Violation Image



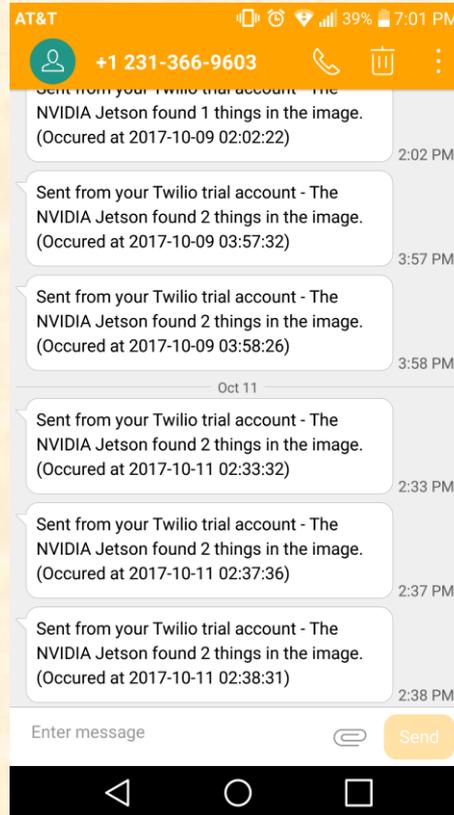


Team GM Beta Presentation

Team GM Beta Presentation

e.

SMS View





Team GM
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Humana

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

Humana

for

Individuals & Families

Employers

Agents & Brokers

Providers

Español

Humana

Contact us

Ask Humana



Sign In

Medicare

Insurance

Health & Wellness

Member Resources

Now is the time to enroll in a 2017 Medicare plan

Shop now

Feedback



Team Humana Project Overview

MyHumanaBot

- Functionalities
 - Provide Instant Information to Customers
 - About Plans, Claims, Etc.
 - Via a Chatbot
- Features
 - Build and Design Two Web Apps
 - MyHumanaBot App
 - Humana Administrative App
 - Supports
 - Customer or Non-Customer
 - Logged In or Not Logged In
 - Handles Variety of Scenarios
 - Information About Plans
 - Claims Status
 - Humana Pharmacy Status
 - Finding a Doctor
 - Etc.
 - Incorporate Context
 - Maintain Conversation History
 - Account for Security
- Technologies
 - Microsoft C# / .NET
 - SQL / MySQL / Mongo Database
 - RESTful Web Services



Humana

Louisville, Kentucky



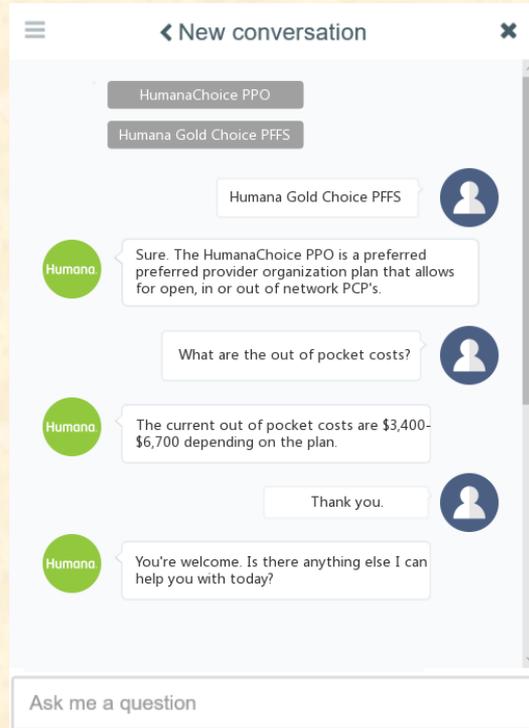


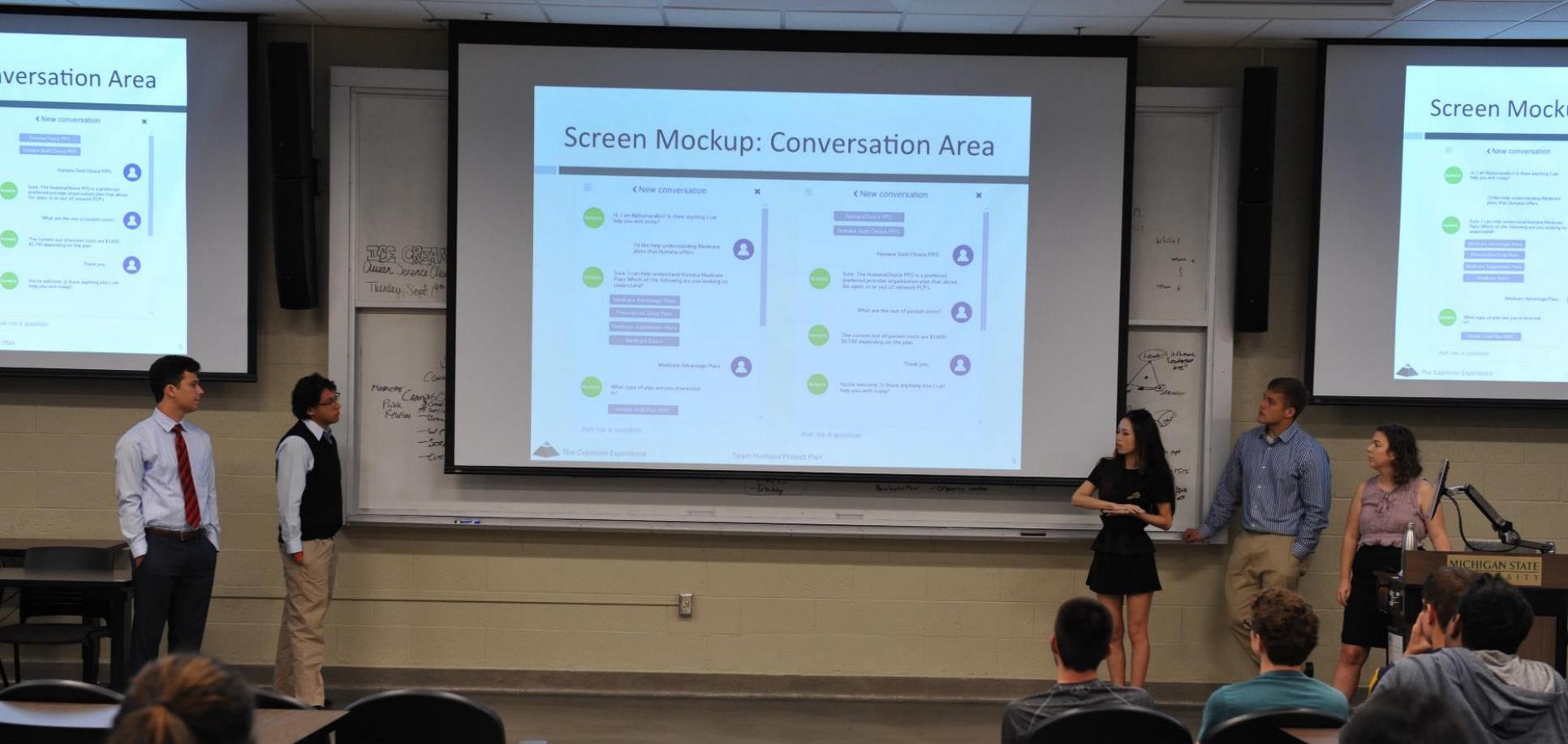
Team Humana

Tony Dionise, Madeline Levinson, Jason Thompson, Sharon Shi, Tynan Ford

Team Humana Project Plan Presentation

Screen Mockup





Conversation Area

← New conversation

HumanChoice PPO
HumanChoice CHOICE PPO

HumanChoice CHOICE PPO

Hi, I am HumanChoice! Is there anything I can help you with today?

To help help understanding Medicare plans that HumanChoice offers.

Hi, I can help understand HumanChoice and Plans which of the following are you looking to understand?

HumanChoice PPO
HumanChoice CHOICE PPO
Medicare Advantage Plans
HumanChoice PPO

What are the out of pocket costs?

The current out of pocket costs are \$1,400-\$4,700 depending on the plan.

Thank you.

Hi, welcome. Is there anything else I can help you with today?

Ask me a question

Screen Mockup: Conversation Area

← New conversation

HumanChoice PPO
HumanChoice CHOICE PPO

HumanChoice CHOICE PPO

Hi, I am HumanChoice! Is there anything I can help you with today?

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Hi, welcome. Is there anything else I can help you with today?

Ask me a question

The Custom Experience

Team Humana Project Plan

Screen Mockup

← New conversation

HumanChoice PPO
HumanChoice CHOICE PPO

HumanChoice CHOICE PPO

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Thank you.

Hi, welcome. Is there anything else I can help you with today?

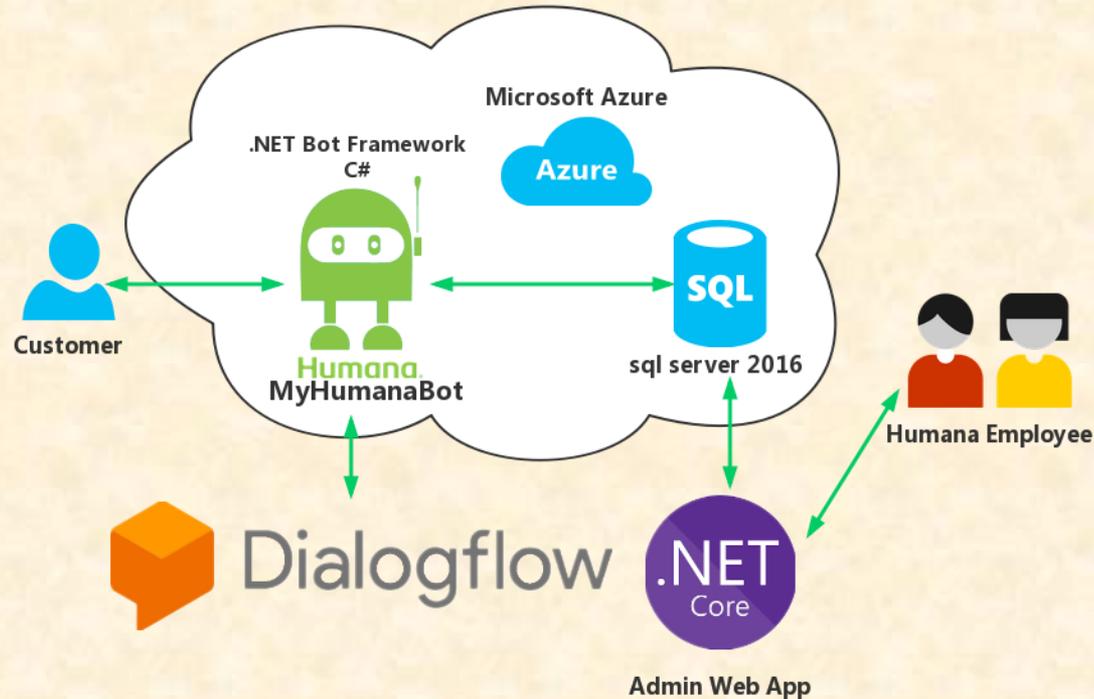
Ask me a question

The Custom Experience

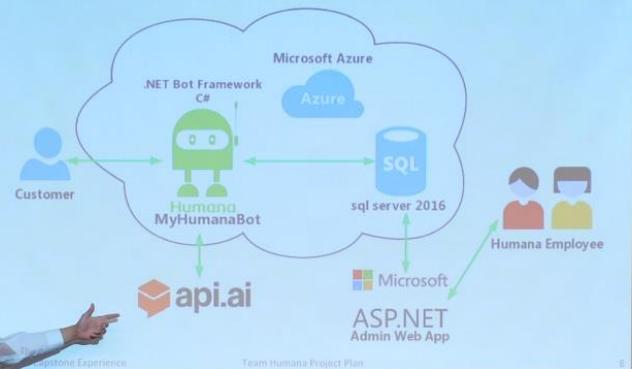
Team Humana Project Plan Presentation

Team Humana Project Plan Presentation

Architecture Diagram



System Architecture



Team Humana Project Plan Presentation

Team Humana Project Plan Presentation

Screen Mockup

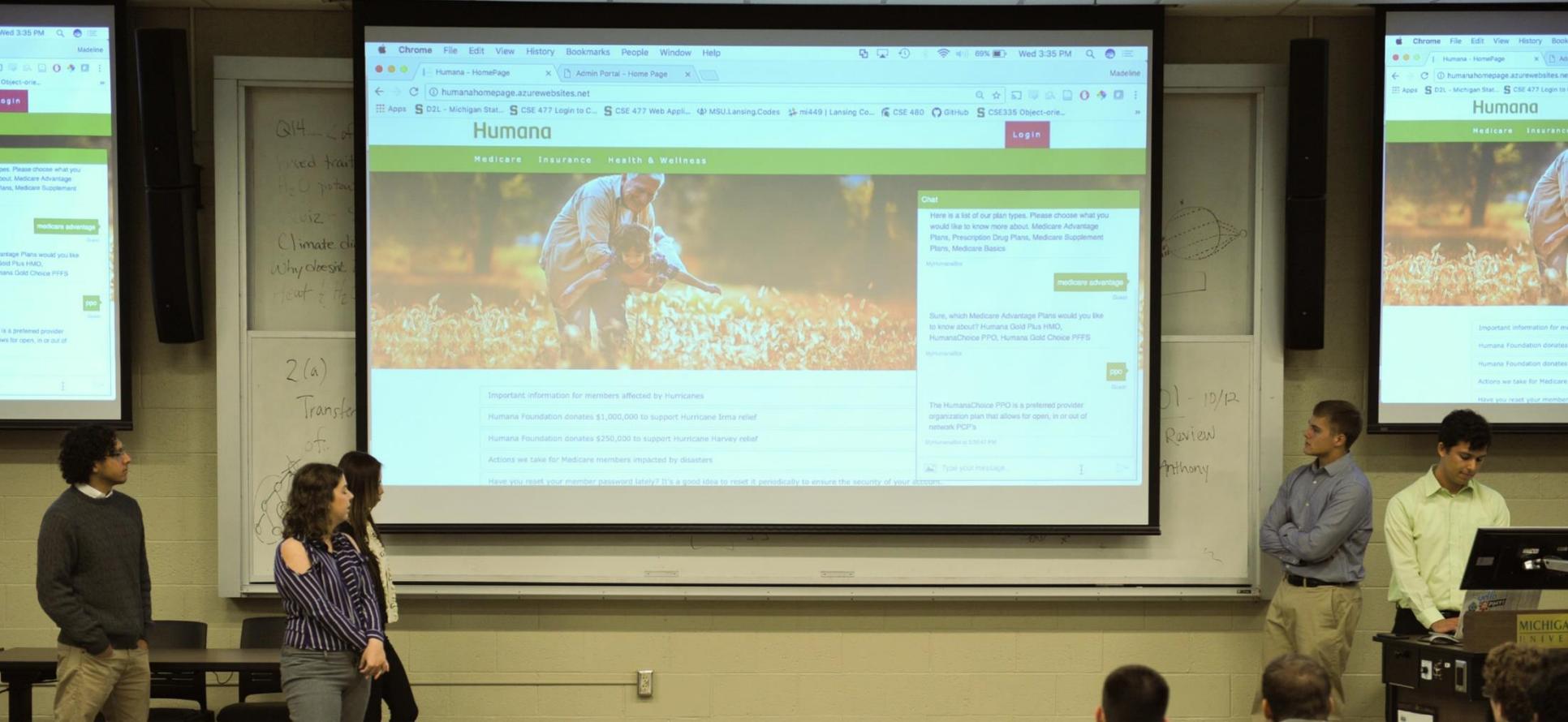
Page Header

MyHumanaBot Chat Log

Search User ID: [download all](#)

Date/Time	User ID	Conversation
Sep. 19, 2017 23:23	guest	download
Sep. 19, 2017 20:27	hpotter7	download
Sep. 19, 2017 14:33	guest	download
Sep. 19, 2017 09:17	tford01	download
Sep. 19, 2017 07:30	guest	download
Sep. 18, 2017 22:00	sharonshi1	download
Sep. 18, 2017 15:45	<u>adionise</u>	download
Sep. 18, 2017 10:57	guest	download
Sep. 18, 2017 01:32	thom1078	download
Sep. 17, 2017 19:02	<u>mlevinson</u>	download
Sep. 17, 2017 11:15	guest	download
Sep. 17, 2017 09:37	johnsmith1	download





Chrome File Edit View History Bookmarks People Window Help

Humana - HomePage x Admin Portal - Home Page x

humanahomepage.azurewebsites.net

Humana

Medicare Insurance Health & Wellness

Login

Chat

Here is a list of our plan types. Please choose what you would like to know more about: Medicare Advantage Plans, Prescription Drug Plans, Medicare Supplement Plans, Medicare Basics.

medicare advantage

Search

Sure, which Medicare Advantage Plans would you like to know about? Humana Gold Plus HMO, HumanaChoice PPO, Humana Gold Choice PFFS

medicare advantage

Search

The HumanaChoice PPO is a preferred provider organization plan that allows for open, in or out of network PCP's

Medicare as of 1:58:41 PM

Type your message

Important information for members affected by hurricanes

Humana Foundation donates \$1,000,000 to support Hurricane Irma relief

Humana Foundation donates \$250,000 to support Hurricane Harvey relief

Actions we take for Medicare members impacted by disasters

Have you reset your member password lately? It's a good idea to reset it periodically to ensure the security of your account.

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the O potat
quiz -
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Heat & H

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Transf
of

01-10/12
Review
Anthony

Team Humana Alpha Presentation

Team Humana Alpha Presentation

e.

Homepage

The screenshot shows the Humana website homepage in a browser window. The address bar displays "https://www.humana.com". The navigation menu includes "for" (Individuals & Families, Employers, Agents & Brokers, Providers) and "Español". The main header features the Humana logo, a "Contact us" link, an "Ask Humana" search bar, and a "Sign In" button. A green navigation bar contains "Medicare", "Insurance", "Health & Wellness", and "Member Resources". The main content area features a large banner with the text "Medicare Advantage and Prescription Drug Plan Open Enrollment is almost here!" and a "Shop now" button. Below the banner are four service tiles: "Medicare", "Dental & Vision", "Group Insurance", and "Humana Pharmacy". A "Feedback" button is visible on the right side of the banner.

Health Insurance, Medic... x

Secure | https://www.humana.com

for Individuals & Families Employers Agents & Brokers Providers Español

Humana Contact us Ask Humana Sign In

Medicare Insurance Health & Wellness Member Resources

Medicare Advantage and Prescription Drug Plan Open Enrollment is almost here!

You have from October 15 through December 7 to enroll in a Medicare Advantage or prescription drug plan.

Shop now

Medicare Dental & Vision Group Insurance Humana Pharmacy

Feedback

The Capstone Experience



Team Humana Alpha Presentation

Chat Widget



Time	Sender	Message
10/25/2017 3:35:35 PM	Guest	
10/25/2017 3:35:37 PM	MyHumanaBot	
10/25/2017 3:35:48 PM	Guest	
10/25/2017 3:35:48 PM	MyHumanaBot	
10/25/2017 3:35:54 PM	Guest	
10/25/2017 3:35:54 PM	MyHumanaBot	
10/25/2017 3:36:11 PM	Guest	
10/25/2017 3:36:12 PM	MyHumanaBot	
10/25/2017	Guest	

Humana Admin Portal

Conversations Members Logout

Message	Time	Sender
medicare advantage	10/25/2017 3:35:35 PM	Guest
Sure, which Medicare Advantage Plans would you like to know about? I humana Gold Plus HMO, HumanaChoice PPO, Humana Gold Choice PFFB	10/25/2017 3:35:37 PM	MyHumanaBot
ppo	10/25/2017 3:35:48 PM	Guest
The HumanaChoice PPO is a preferred provider organization plan that allows for open, in or out of network PCP's	10/25/2017 3:35:48 PM	MyHumanaBot
thanks	10/25/2017 3:35:54 PM	Guest
Anytime. That's what I'm here for.	10/25/2017 3:35:54 PM	MyHumanaBot
can you help me find a doctor	10/25/2017 3:36:11 PM	Guest
What is your zip code?	10/25/2017 3:36:12 PM	MyHumanaBot
60251	10/25/2017	Guest

Humana Admin Portal

Conversations Members Logout

medicare advantage

Sure, which Medicare Advantage Plans would you like to know about? I humana Gold Plus HMO, HumanaChoice PPO, Humana Gold Choice PFFB

ppo

The HumanaChoice PPO is a preferred provider organization plan that allows for open, in or out of network PCP's

thanks

Anytime. That's what I'm here for.

can you help me find a doctor

What is your zip code?

60251

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 Why does it
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2(a)
 Transfer

Diagram of a sphere with dashed lines and a rectangular box below it.

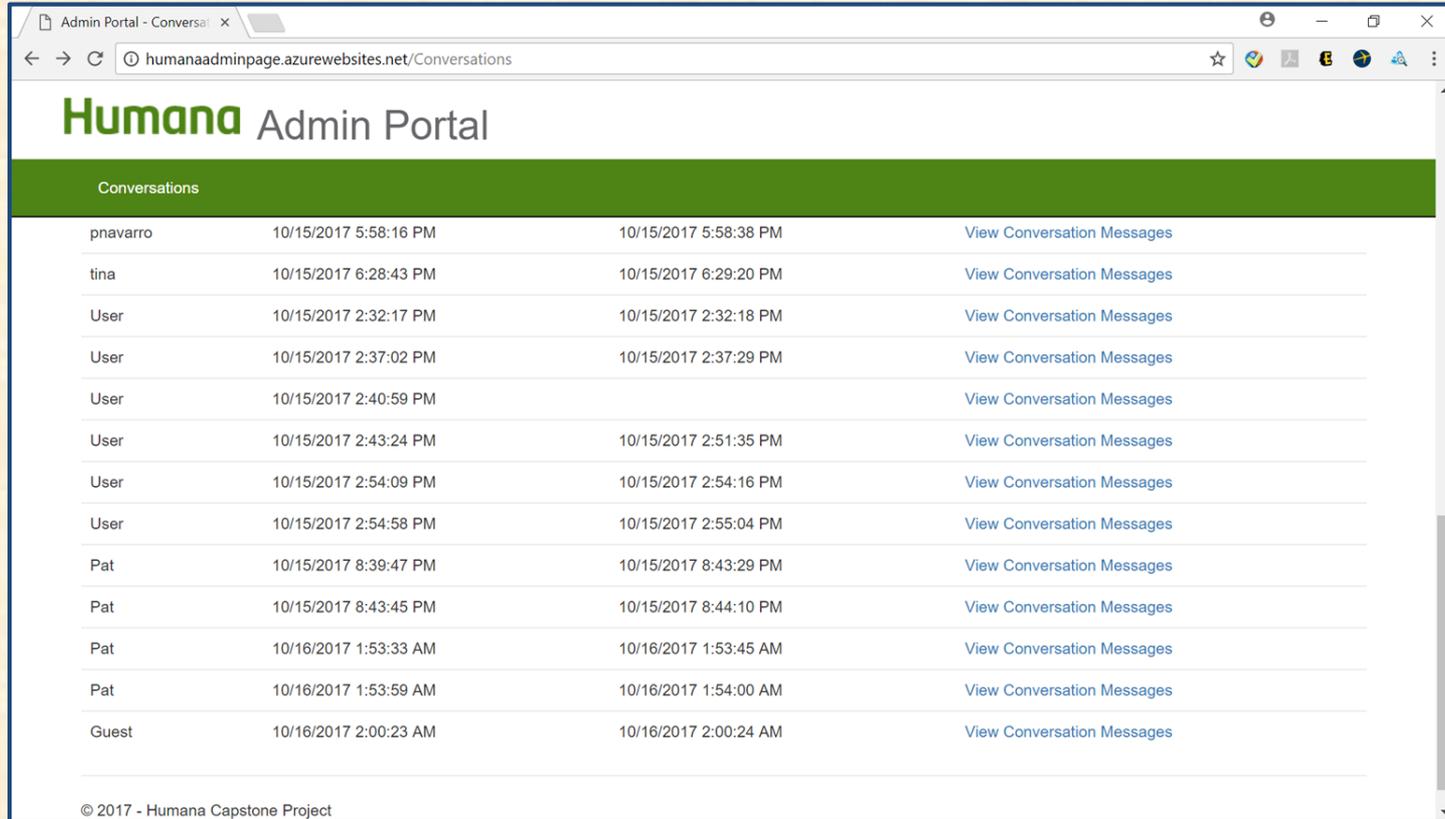
01-10/12
 Review
 Anthony

Team Humana Alpha Presentation

Team Humana Alpha Presentation

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Admin Page



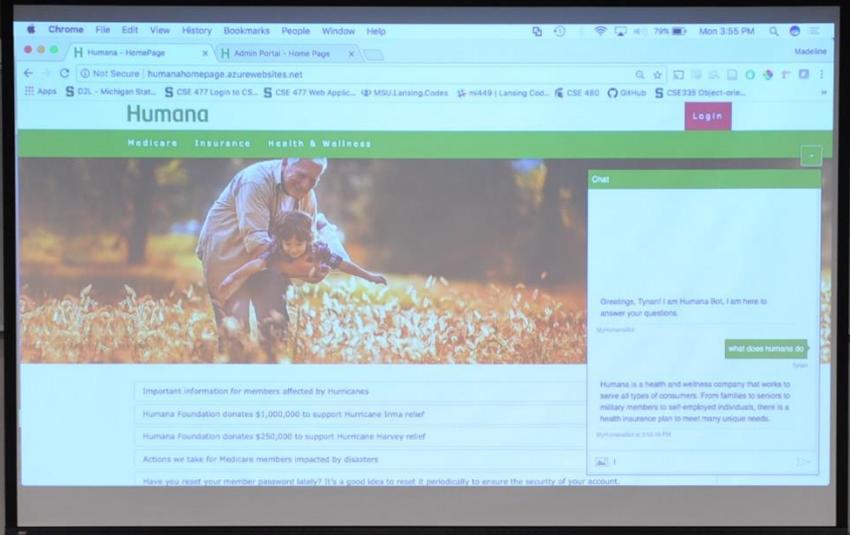
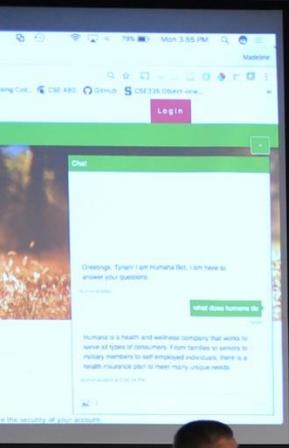
The screenshot shows a web browser window with the URL `humanaadminpage.azurewebsites.net/Conversations`. The page title is "Humana Admin Portal". Below the title is a green header bar with the word "Conversations". The main content is a table listing various conversations with columns for user name, start time, end time, and a link to view messages.

Conversations			
pnavarro	10/15/2017 5:58:16 PM	10/15/2017 5:58:38 PM	View Conversation Messages
tina	10/15/2017 6:28:43 PM	10/15/2017 6:29:20 PM	View Conversation Messages
User	10/15/2017 2:32:17 PM	10/15/2017 2:32:18 PM	View Conversation Messages
User	10/15/2017 2:37:02 PM	10/15/2017 2:37:29 PM	View Conversation Messages
User	10/15/2017 2:40:59 PM		View Conversation Messages
User	10/15/2017 2:43:24 PM	10/15/2017 2:51:35 PM	View Conversation Messages
User	10/15/2017 2:54:09 PM	10/15/2017 2:54:16 PM	View Conversation Messages
User	10/15/2017 2:54:58 PM	10/15/2017 2:55:04 PM	View Conversation Messages
Pat	10/15/2017 8:39:47 PM	10/15/2017 8:43:29 PM	View Conversation Messages
Pat	10/15/2017 8:43:45 PM	10/15/2017 8:44:10 PM	View Conversation Messages
Pat	10/16/2017 1:53:33 AM	10/16/2017 1:53:45 AM	View Conversation Messages
Pat	10/16/2017 1:53:59 AM	10/16/2017 1:54:00 AM	View Conversation Messages
Guest	10/16/2017 2:00:23 AM	10/16/2017 2:00:24 AM	View Conversation Messages

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Chat widget

The screenshot shows a chat window with a green header labeled "Chat". The conversation is as follows:

- MyHumanaBot:** Greetings, Tina! I am Humana Bot, I am here to answer your questions.
- tina:** what is the status of my go365 account?
- MyHumanaBot:** We must verify your identity before we move on.
- MyHumanaBot:** What is your favorite color?
- tina:** blue
- MyHumanaBot:** You are now verified
- MyHumanaBot:** Your status is Platinum

At the bottom, there is a timestamp "MyHumanaBot at 8:46:00 PM" and a text input field with a placeholder "Type your message..." and a send button.



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Chat Widget

Chat

what claim do I have?

tina

Your Claims With Humana
Your claims are shown below
Click on a claim to get more information!

4941568372

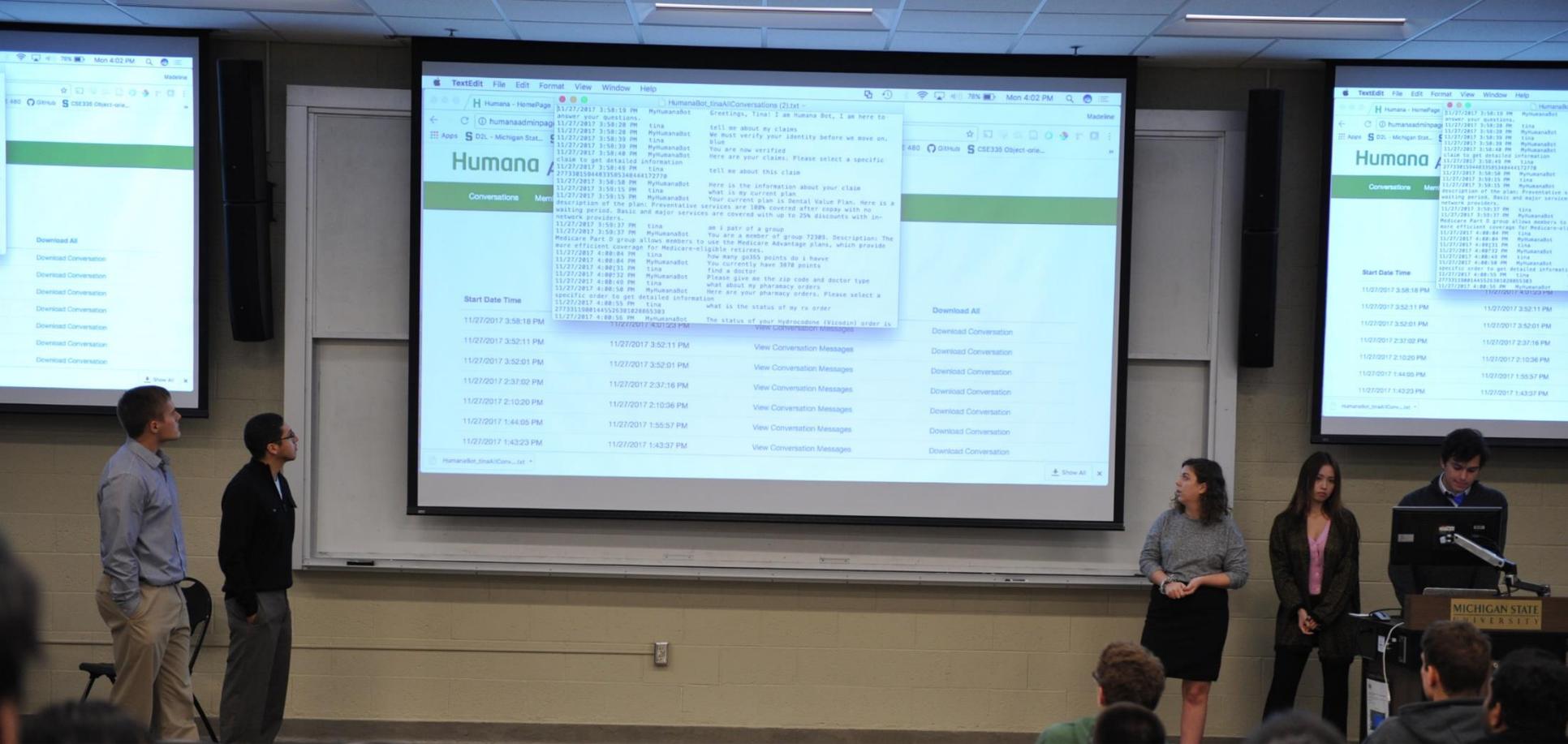
MyHumanaBot

Claim #4941568372
Here is the information about your claim

Status: paid
Date of Service: 4/17/2016 12:21:32 AM
Claim Date: Tuesday, April 19, 2016
Paid Date: Wednesday, April 27, 2016
Amount Billed: \$215.59
Amount Plan Pays: \$75.01
Amount Applied Deductible: \$229.70
Co-Insurance: \$11.88

 Type your message... 



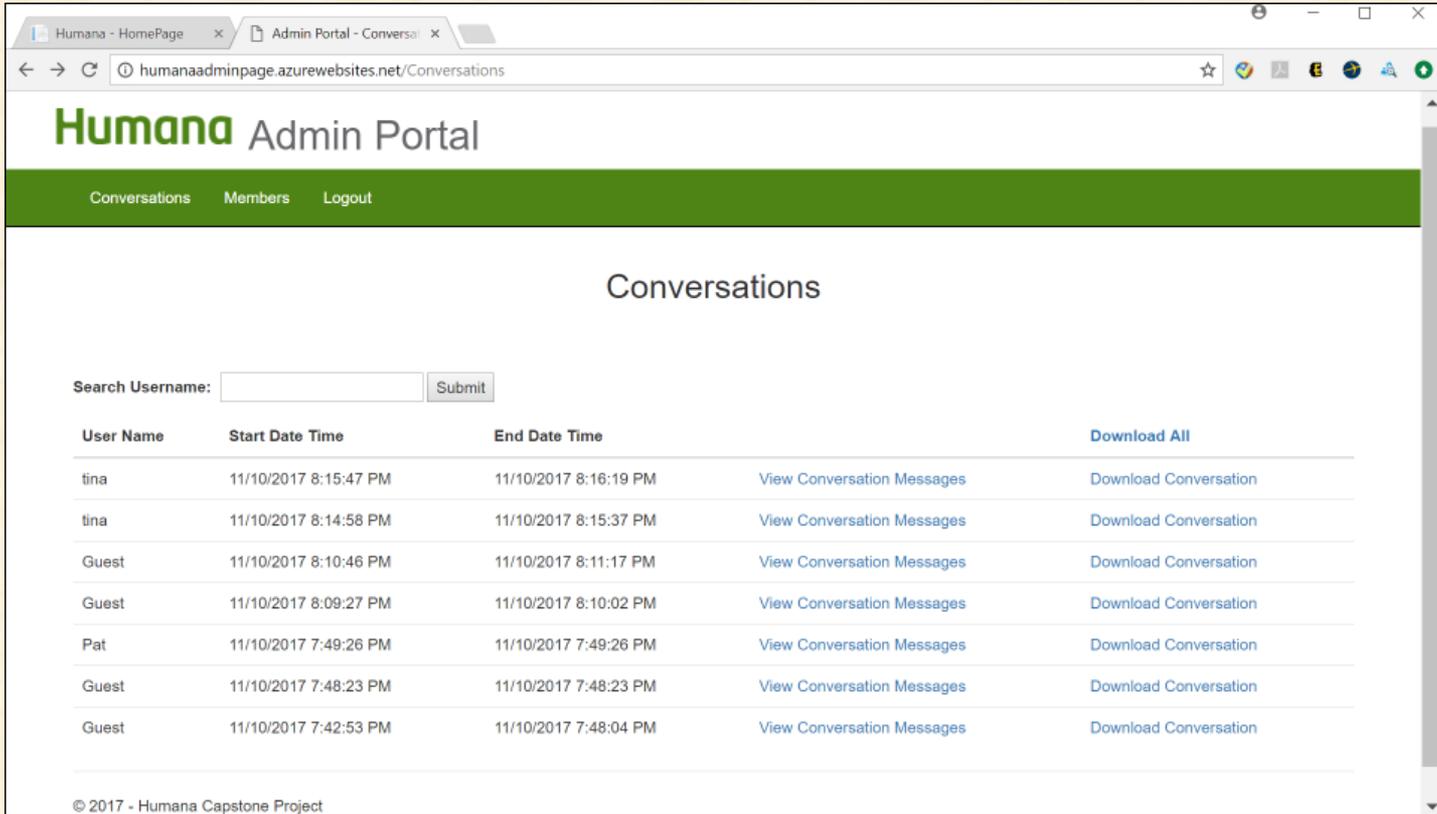


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Admin Page



Humana Admin Portal

Conversations Members Logout

Conversations

Search Username:

User Name	Start Date Time	End Date Time		Download All
tina	11/10/2017 8:15:47 PM	11/10/2017 8:16:19 PM	View Conversation Messages	Download Conversation
tina	11/10/2017 8:14:58 PM	11/10/2017 8:15:37 PM	View Conversation Messages	Download Conversation
Guest	11/10/2017 8:10:46 PM	11/10/2017 8:11:17 PM	View Conversation Messages	Download Conversation
Guest	11/10/2017 8:09:27 PM	11/10/2017 8:10:02 PM	View Conversation Messages	Download Conversation
Pat	11/10/2017 7:49:26 PM	11/10/2017 7:49:26 PM	View Conversation Messages	Download Conversation
Guest	11/10/2017 7:48:23 PM	11/10/2017 7:48:23 PM	View Conversation Messages	Download Conversation
Guest	11/10/2017 7:42:53 PM	11/10/2017 7:48:04 PM	View Conversation Messages	Download Conversation

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Team Humana
Design Day

MICHIGAN STATE
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The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

meijer[®]



Sign In

Create Account

FAQ About mPerks Contact Us



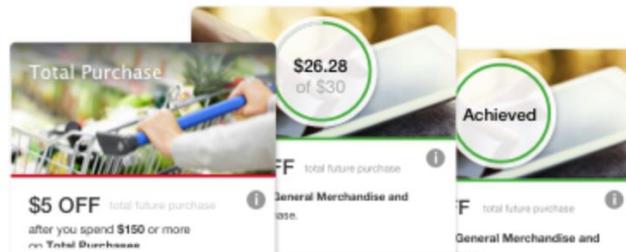
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Sign up for free & get the most out of your trips to Meijer

Rewards

Get rewarded for the way you shop at Meijer, plus earn extra savings with Pharmacy and mCard Rewards. Rewards apply when you enter your mPerks ID and PIN at checkout



Team Meijer Project Overview

Meijer Fresh-ipes

- Functionalities
 - Streamline and Simplify Shopping
 - By Providing Meal and Menu Planning
 - Intelligently and Interactively
- Features
 - Track Customer Shopping History
 - Determine Likely Existing Household Ingredients
 - Recommend Range of Recipes
 - Ingredient Availability
 - Food Preferences
 - Create Shopping List for Missing Ingredients
 - Integrate with mPerks
- Technologies
 - Amazon Echo Show
 - Microsoft .NET Framework, C#, ASP.NET
 - Microsoft Azure Mobile Services
 - Microsoft Visual Studio Team Server
 - Xamarin
 - Meijer Web Services
 - Application Insights
 - Hockey App
 - SQL Server



meijer[®]

Grand Rapids, Michigan





Team Meijer

Charles Heil, Dan Radler, Olive Miller, Justin Pearson, James Murray

Team Meijer Project Plan Presentation

e.

Screen Mockup

M Username
My Pantry
Shopping List
Planned Meals
Recipe Box
Suggestions
Favorites
Search



1. Chicken Pot Pie
75% ingredients in pantry



2. Hot Dogs
20% ingredients in pantry



3. Ap
10%

Try "Alexa, show me more."





Screen Mockup: Echo Show

- M Username
- My Pantry
- Shopping List
- Planned Meals
- Recipe Box
- Suggestions
- Favorites
- Search

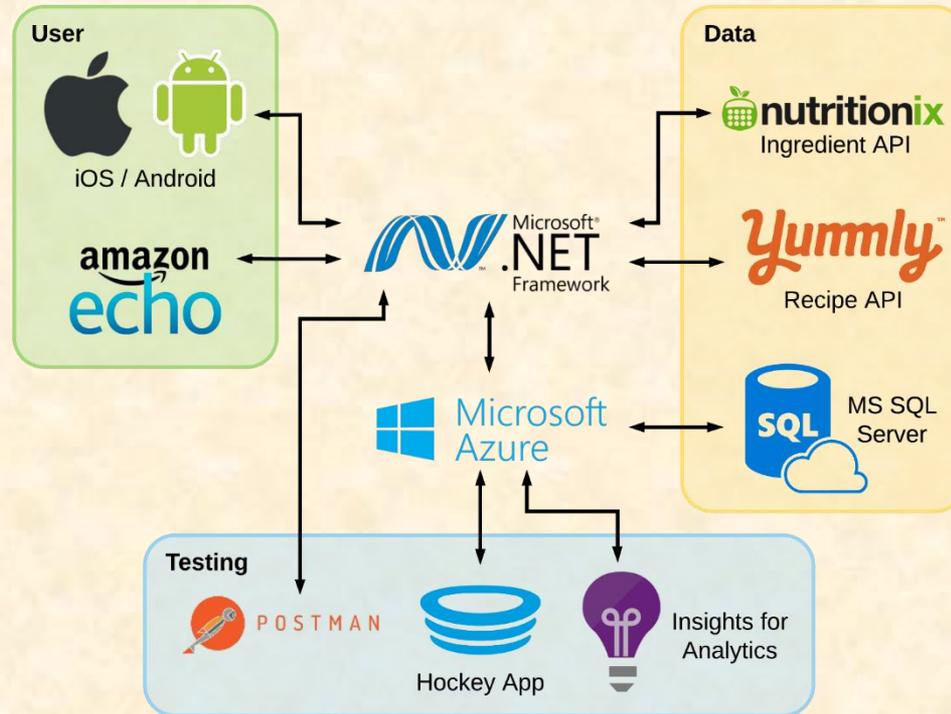


Try "Alexa, show me more."

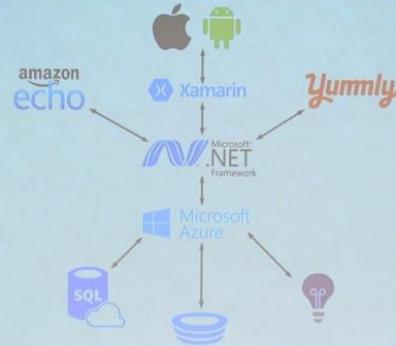
Team Meijer Project Plan Presentation

Team Meijer Project Plan Presentation

Architecture Diagram



System Architecture



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Team Meijer Project Plan Presentation

10

Team Meijer Project Plan Presentation

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Screen Mockup

M	My List	
	Butter	-
	Milk	-
	Eggs	-
	New Item	+
<i>Recommended</i>		
	• Kiwi	-
	• Butternut Squash	-
	• Star Fruit	-

M	My Pantry	
		Milk (Vitamin D) + -
		Beef + -
		

	<
My Pantry	
Recipes	
My Favorites	
My List	
My Account	



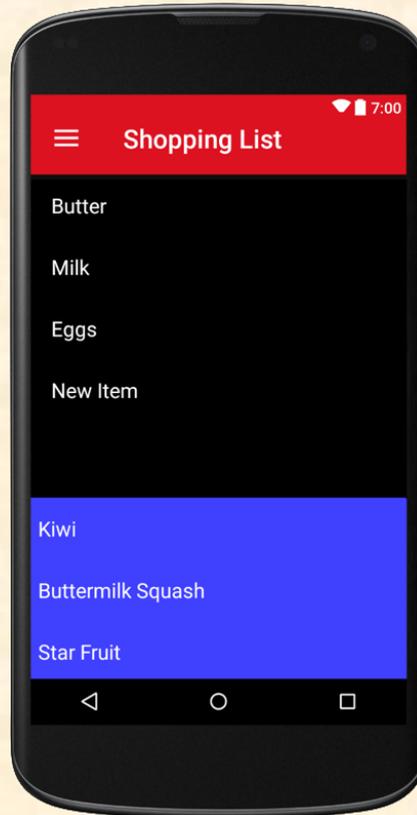


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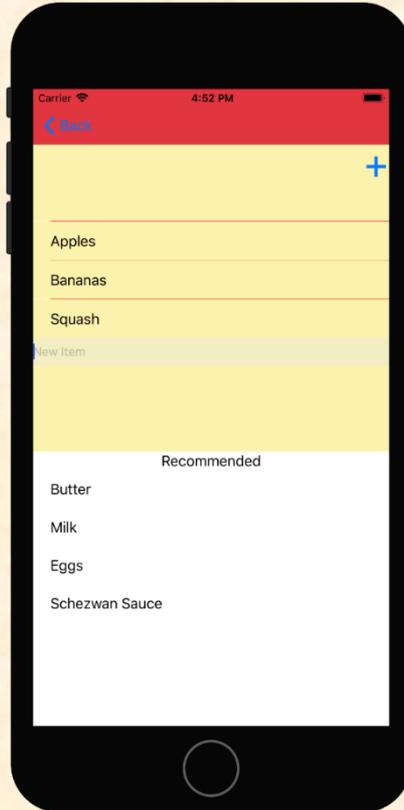
Android Shopping List



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iOS Shopping List



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Amazon Show Planned Meals



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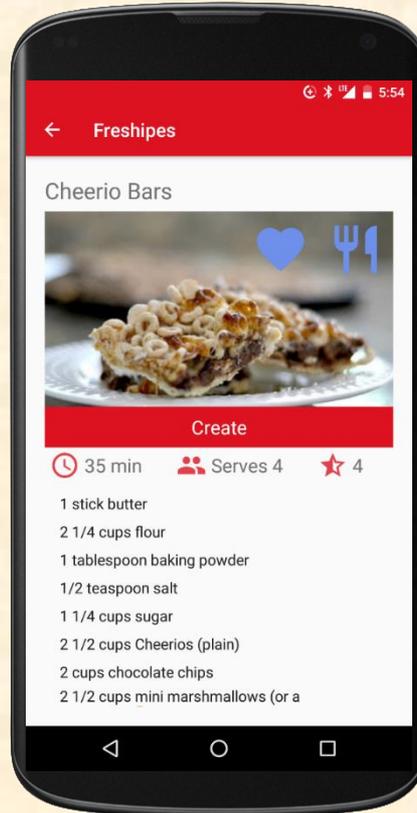


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Android Recipe View



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Amazon Show Planned Meals



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Amazon Show Recipe View



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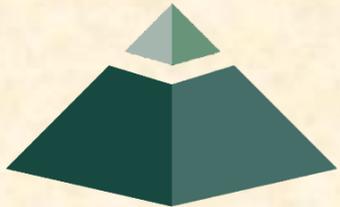
Team Meijer
Design Day

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Team Michigan State University

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*





2016

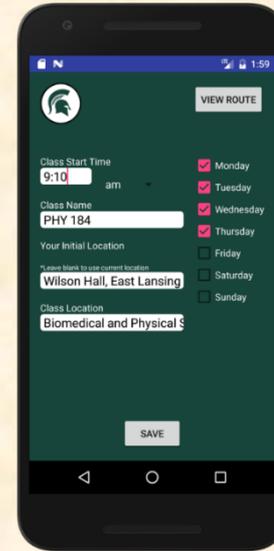
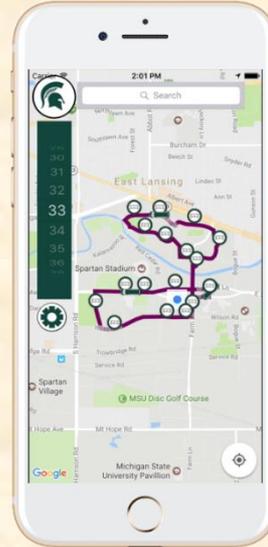
Year in Review

[VIEW VIDEO](#)

Team Michigan State University Project Overview

SEA: Spartan Experience App

- Functionalities
 - Enhance Student Experience
 - By Providing Information to Students
 - With Easy-to-Use Mobile App
- Features
 - Support Android and iPhone Natively
 - Utilize Amazon Web Services (AWS)
 - Any and All Of...
 - Provide Directions to Parking and Buildings
 - Show Cafeteria Menus
 - Display Campus Activities and Events
 - Show Emergency Phone Numbers
 - Provide News Feed and Twitter Feed
 - Create and Manage a Student Planner
 - Handle Course Search and Schedule Planner
 - Implement a Degree Navigator
 - Incorporate Existing CATA Bus Tracker
- Technologies
 - Apple iPads and iPhones (iOS) / Swift
 - Google Android Tablets and Phones / Java
 - RSS News Feeds



Information Technology Services
East Lansing, Michigan



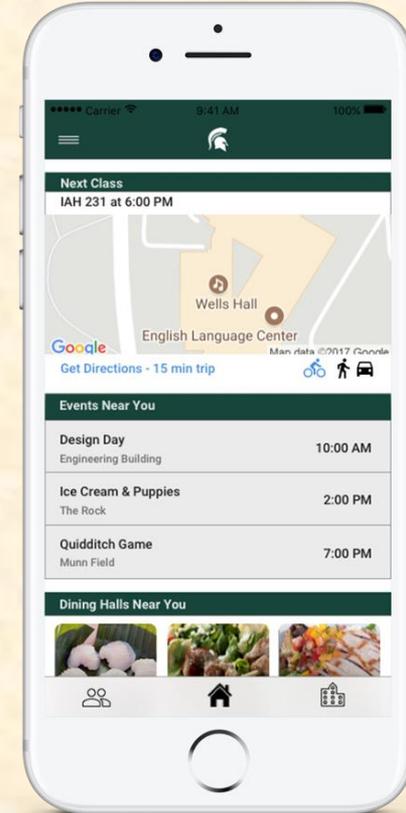
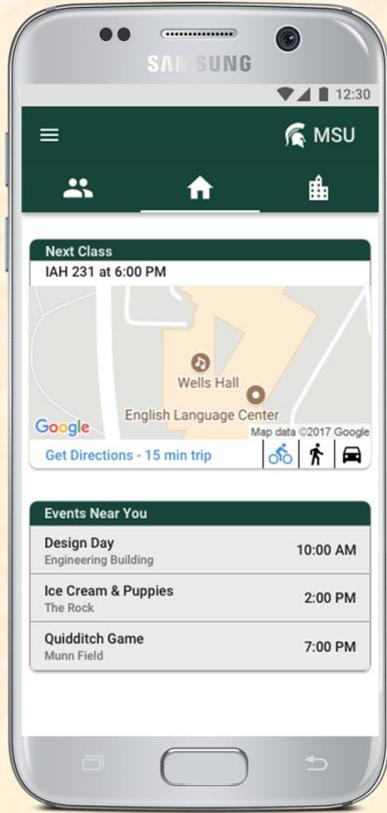
Team Michigan State University

Scott Swarthout, Ryan Johnson, Nayana Kodur, Patrick Pale, Roy Perryman

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Screen Mockup



The Capstone Experience





Screen Mockups: Social & Campus Tabs

Social Tab:
• MSU Twitter Feed

Campus Tab:
• Buildings
• Parking lots
• Dining halls
• Sparty's



The Capstone Experience

Team Michigan State University Project Plan



Team Michigan State University Project Plan Presentation

Team Michigan State University Project Plan Presentation

Architecture Diagram

External Data Feeds

Maps/Places API



Building Info

Web Scraping



Menus

JSON



Events

TweePy



MSU News

iCal File



Back End

PostgreSQL



- Buildings
- Parking Lots
- Schedules
- Classes
- Cafeteria Menus



Amazon AWS



API Gateway

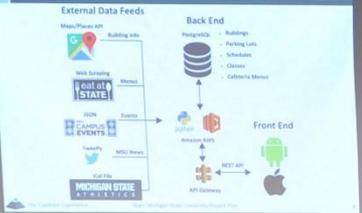
Front End



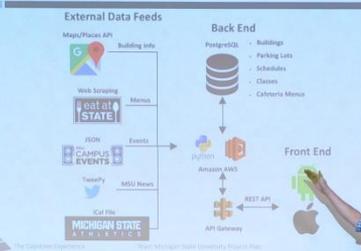
REST API



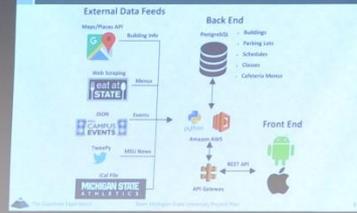
System Architecture



System Architecture



System Architecture

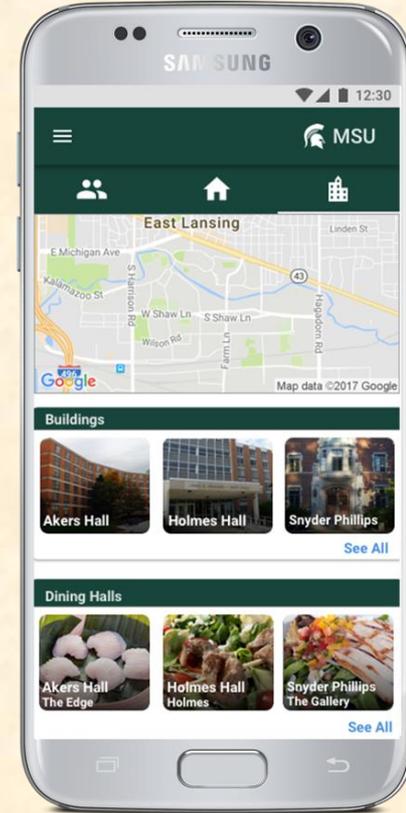


Team Michigan State University
Project Plan Presentation

Team Michigan State University Project Plan Presentation

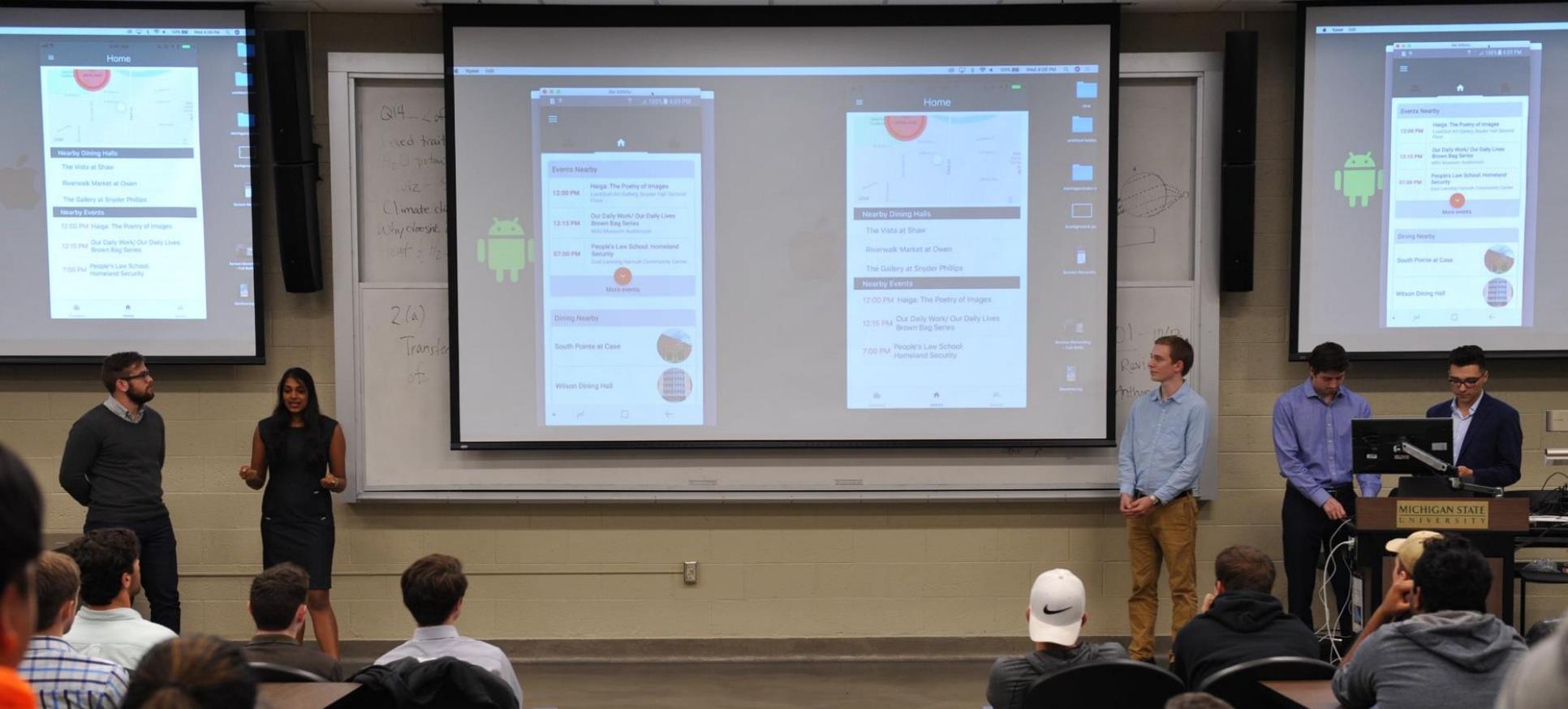
e.

Screen Mockup



The Capstone Experience



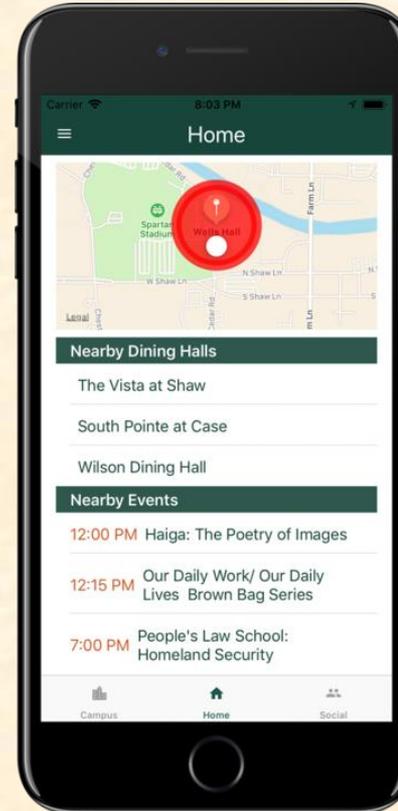
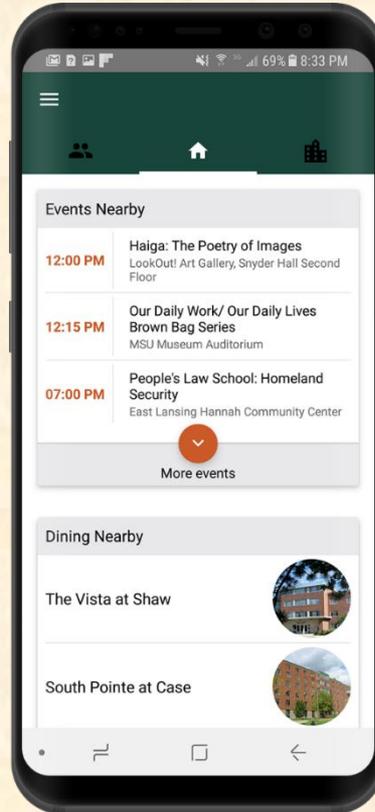


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Home View: Nearby Information



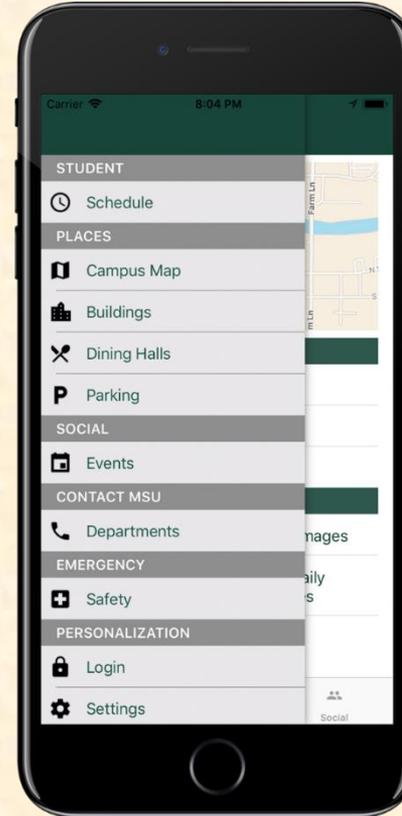
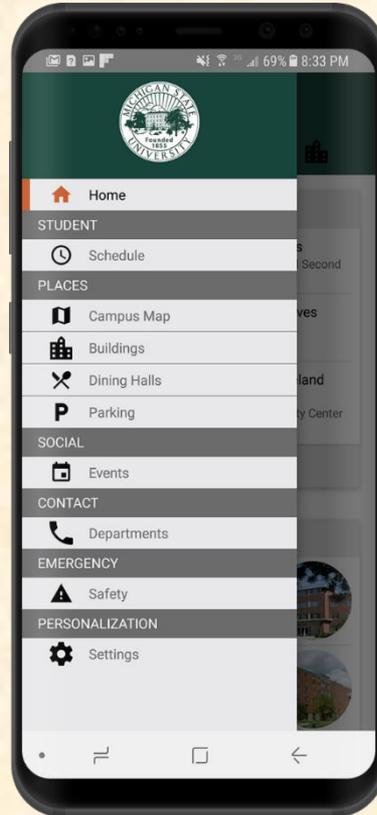
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Navigation Menu



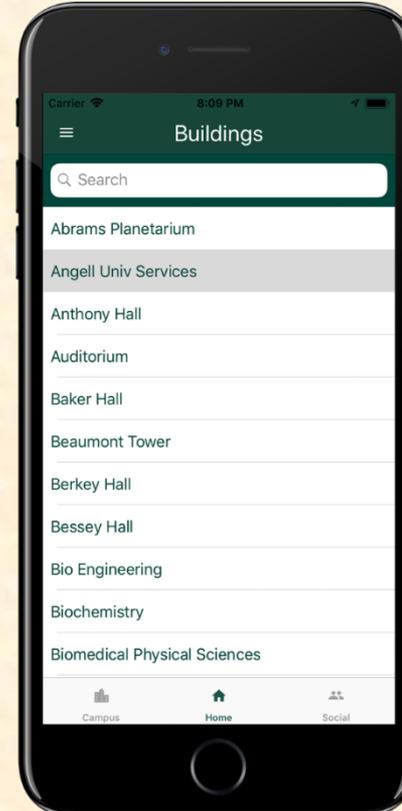
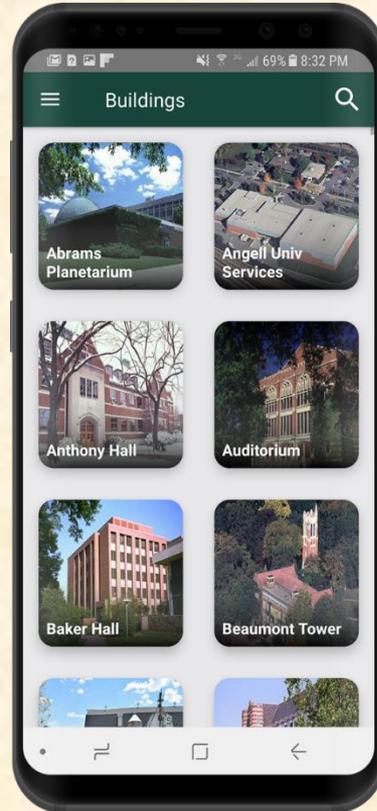


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Buildings View



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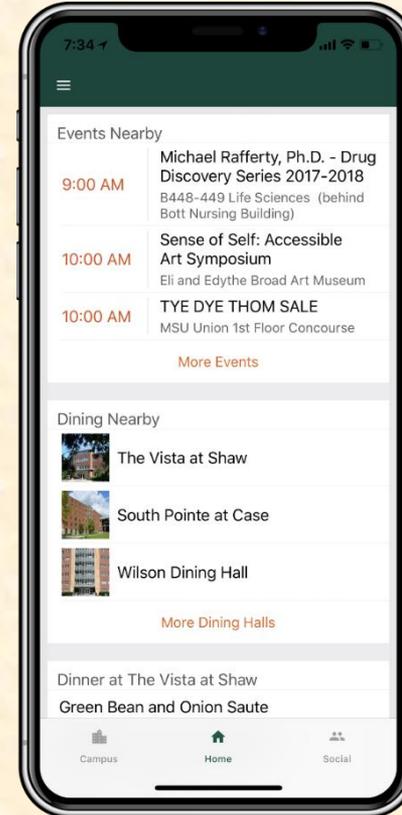
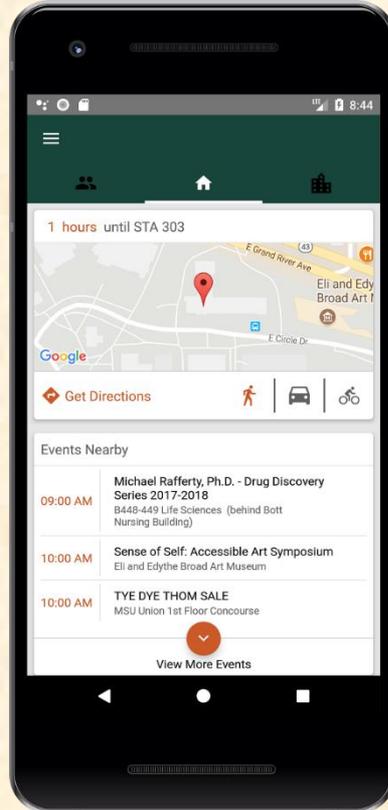


Team Michigan State University
Beta Presentation

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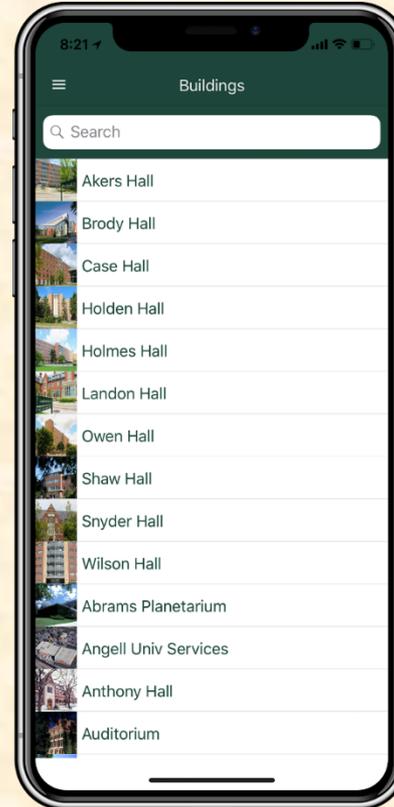
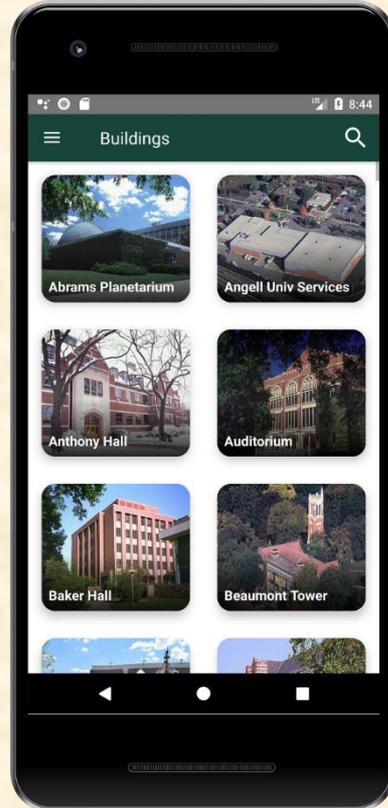
Home View: Nearby Information



Team Michigan State University Beta Presentation

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Buildings View



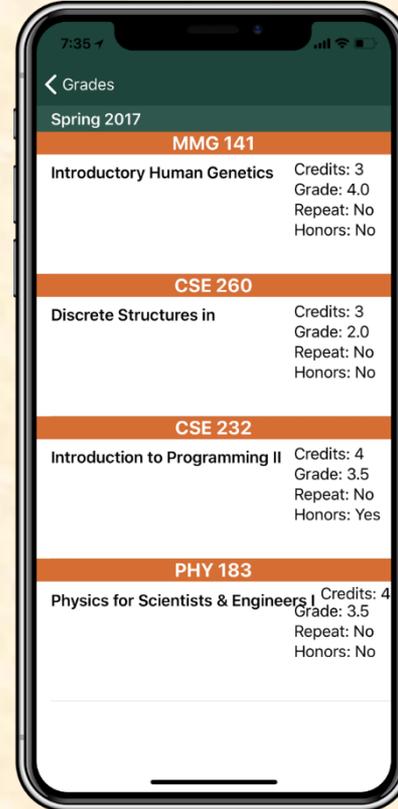
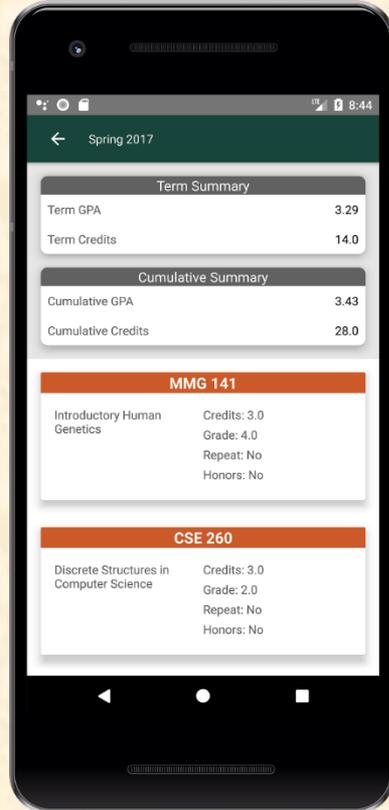


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Grades View





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Design Day

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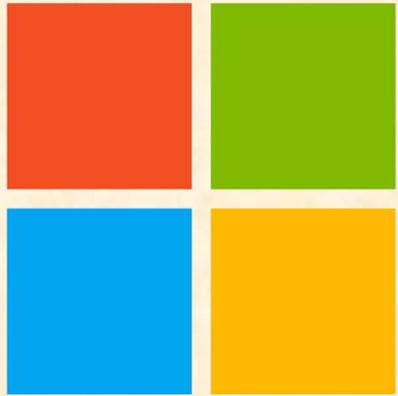
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Team Microsoft

Department of Computer Science and Engineering
Michigan State University
Fall 2017



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Microsoft

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The new Surface family

To do great things, you need powerful devices.

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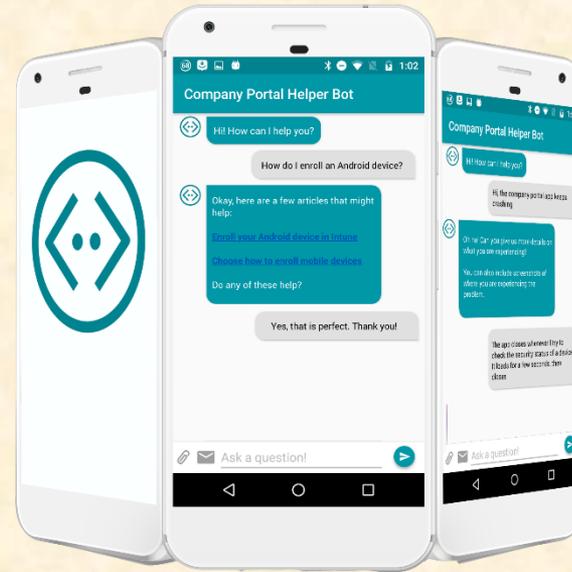
SHOP NOW >

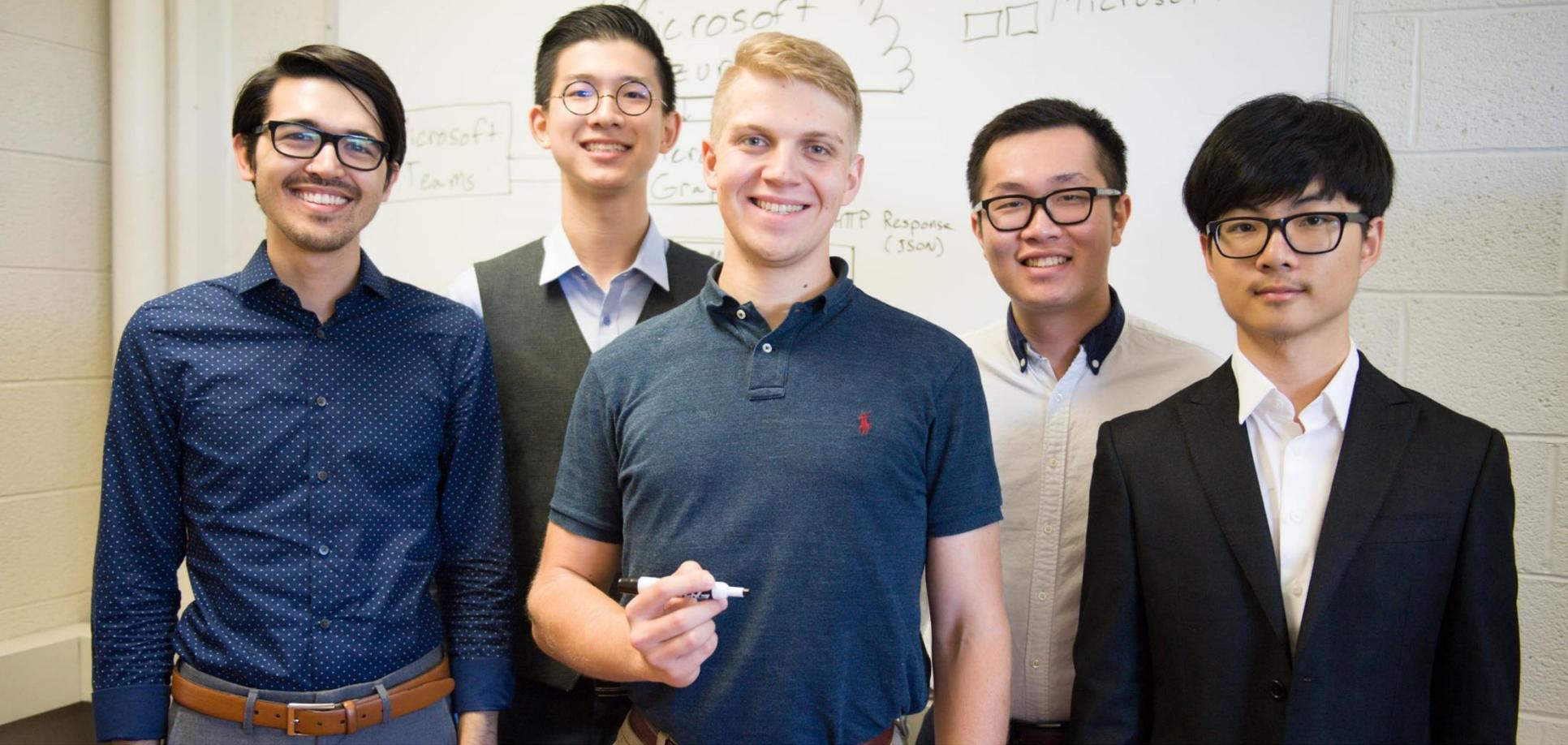


Team Microsoft Project Overview

Enhanced Company Portal with Graph

- Functionalities
 - Enhance Android Company App
 - By Leveraging Microsoft Graph API
 - Making Customers More Productive
- Features
 - Use Only Microsoft Graph
 - For All Data
 - To Add Functionality Beyond Device Management
 - Provide Social Interaction
 - Organize Team Documents
 - Create Team Channels
 - Track Recently Used Files
 - Increase Usefulness Beyond Existing Portal
 - Refresh User Interface
- Technologies
 - Microsoft Intune
 - Microsoft Graph
 - Microsoft Windows / C#
 - Google Android Tablets and Phones / Java
 - Apple iPads and iPhones (iOS) / Swift
 - RESTful Web Services





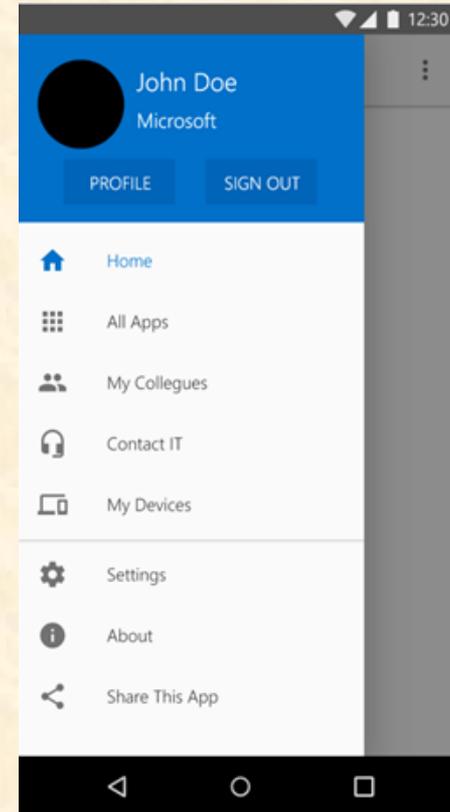
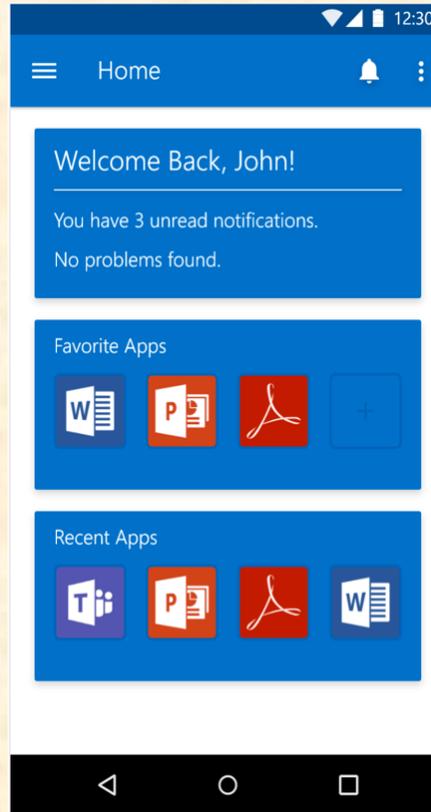
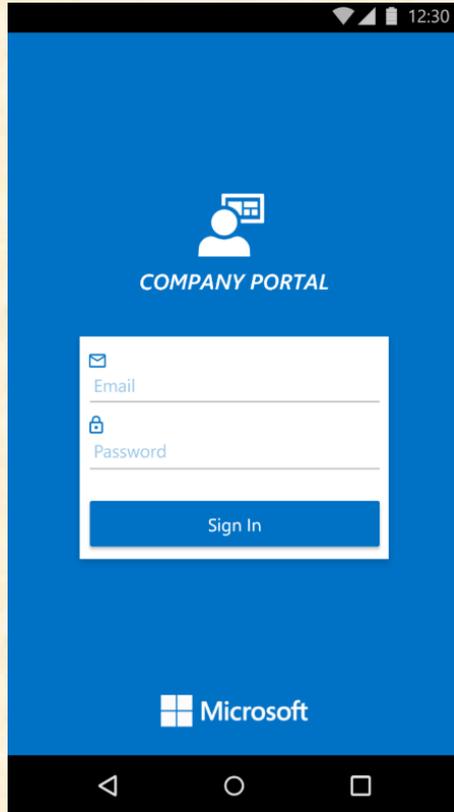
Team Microsoft

Jordan Green, Jason Yin, Matt Pasco, Mike Xiao, Mo Wang

Team Microsoft Project Plan Presentation

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Screen Mockup

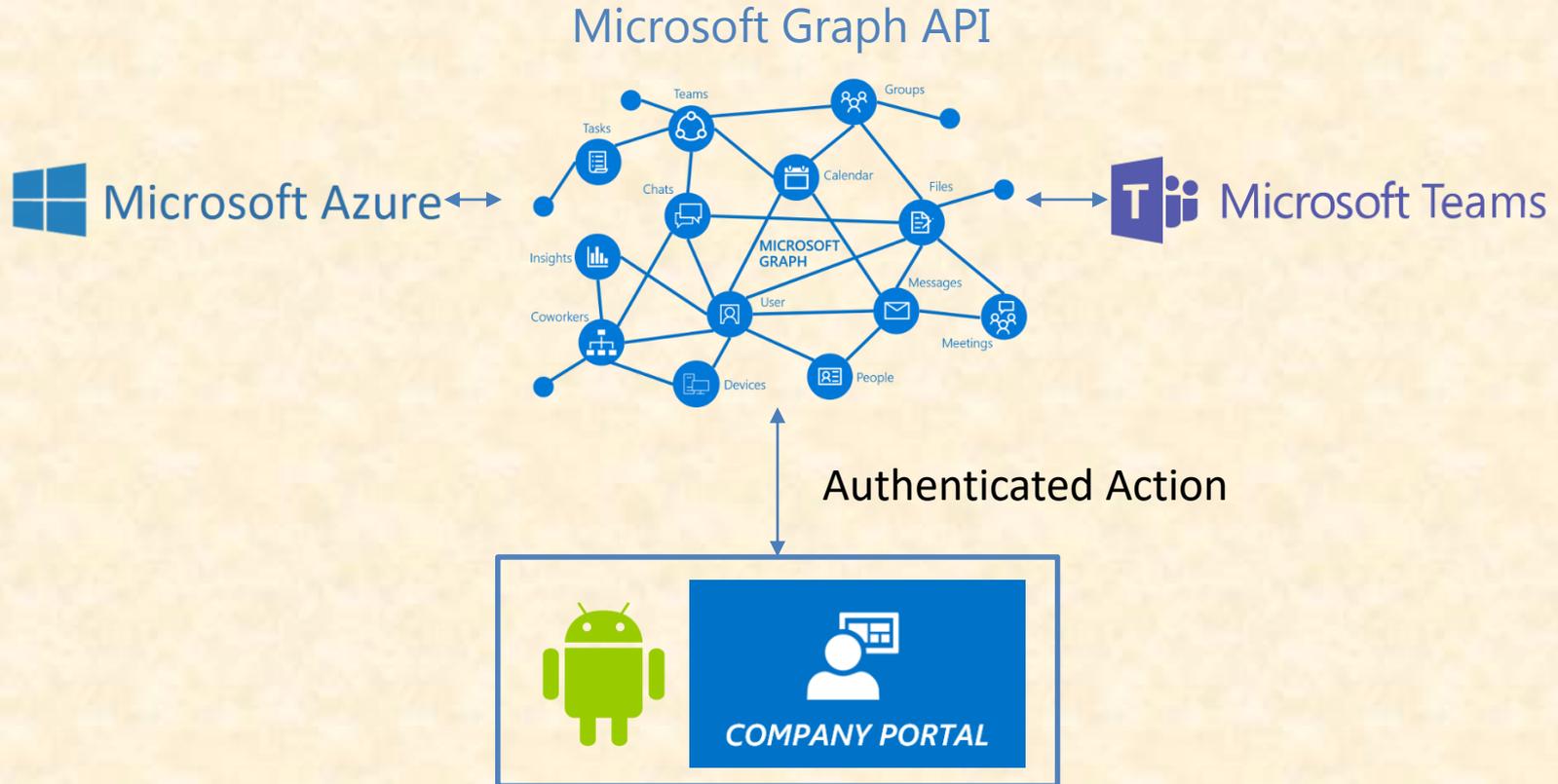




Team Microsoft Project Plan Presentation

Team Microsoft Project Plan Presentation

Architecture Diagram



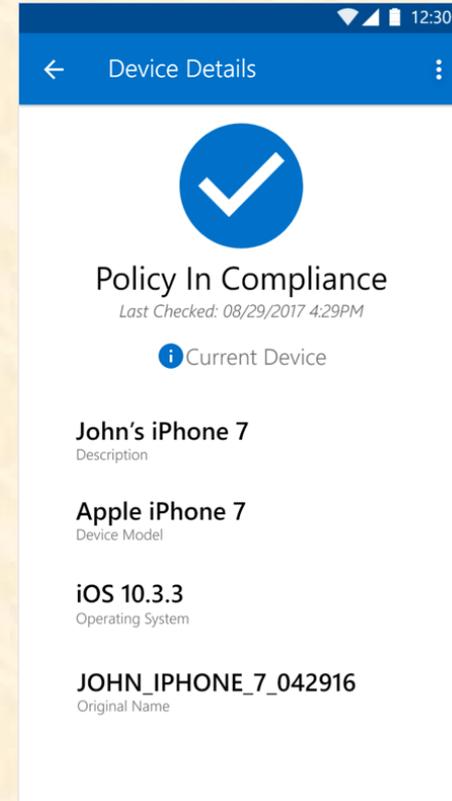
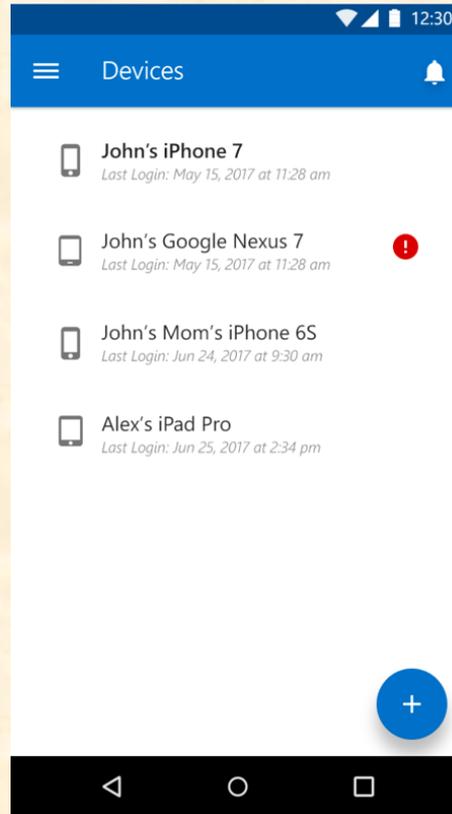
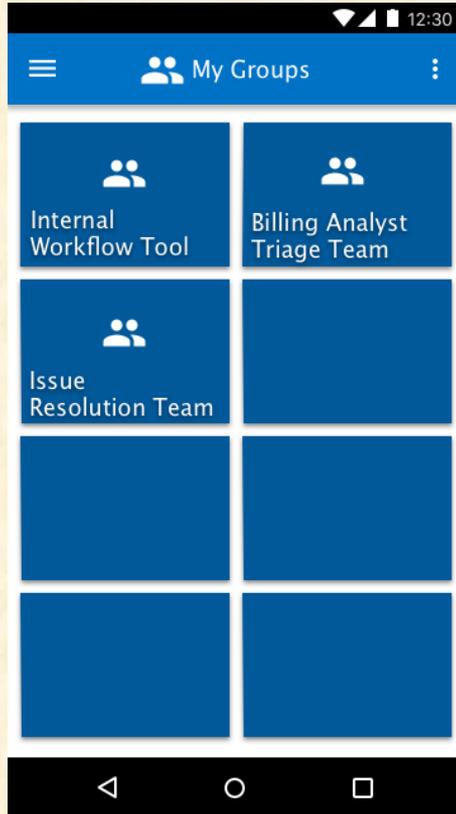


Team Microsoft Project Plan Presentation

Team Microsoft Project Plan Presentation

e.

Screen Mockup



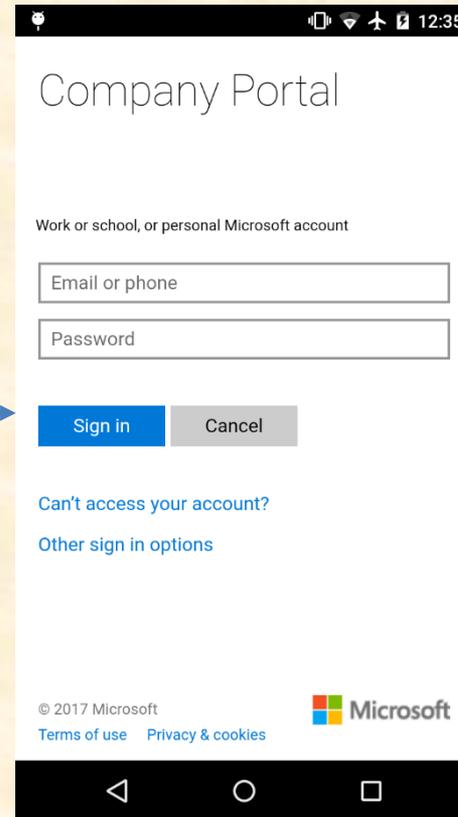
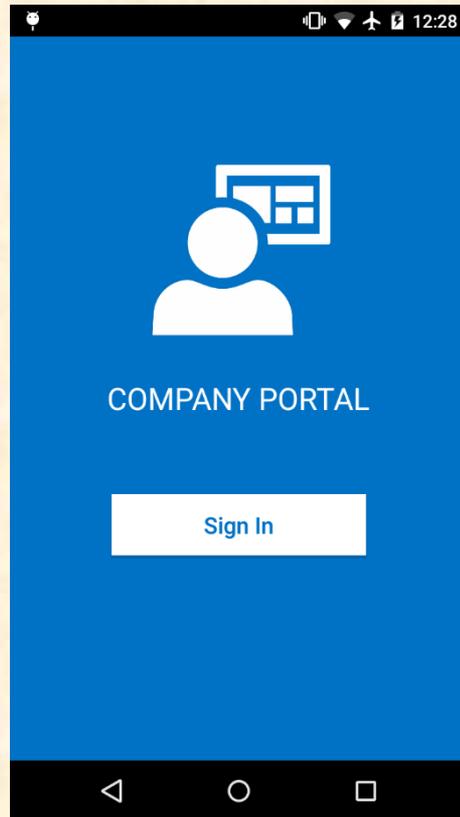


Team Microsoft Alpha Presentation

Team Microsoft Alpha Presentation

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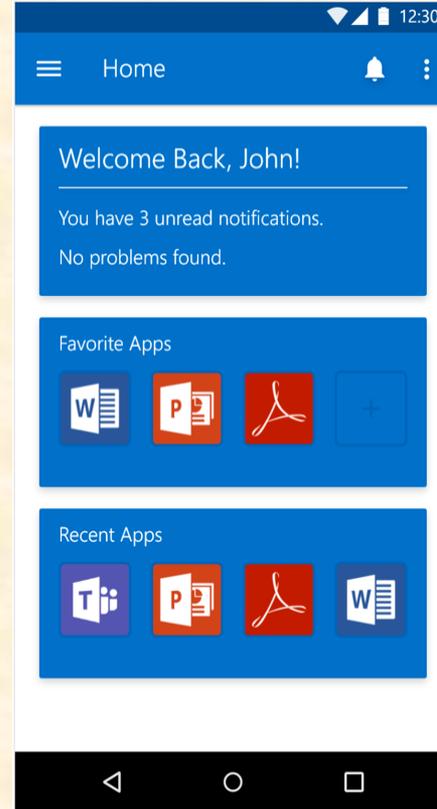
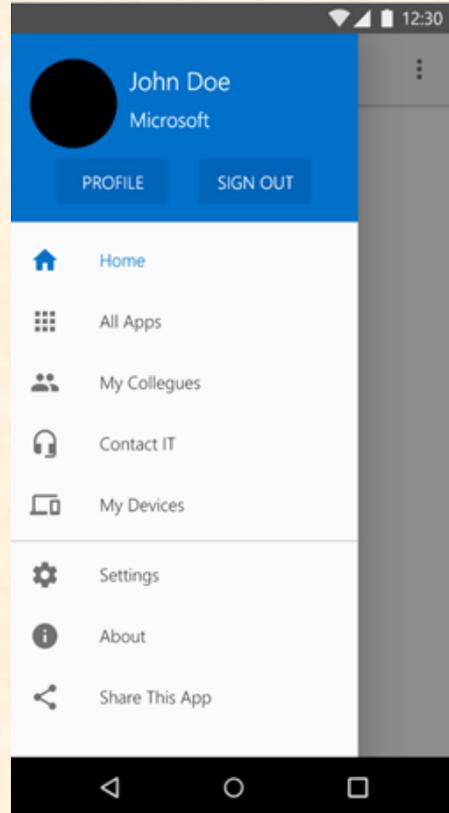
Login Page



Team Microsoft Alpha Presentation

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Home Page



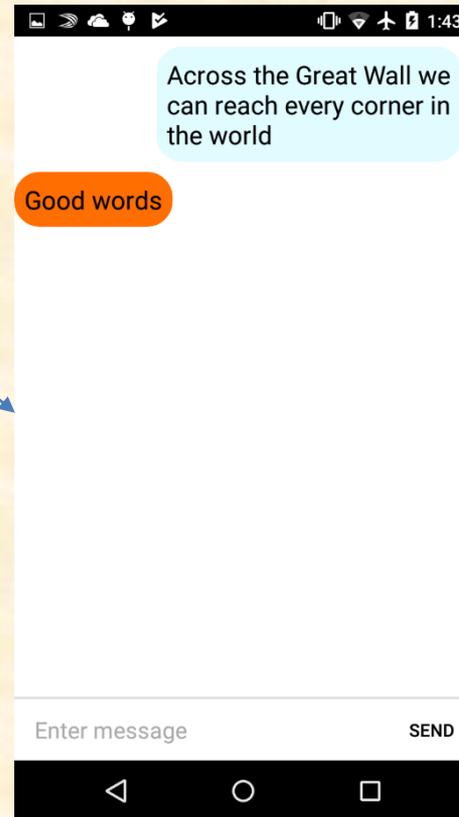
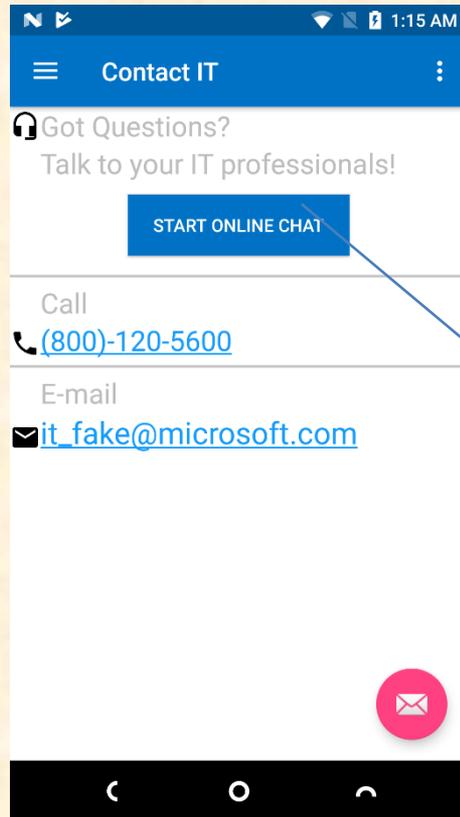


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Team Microsoft Alpha Presentation

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Contact IT



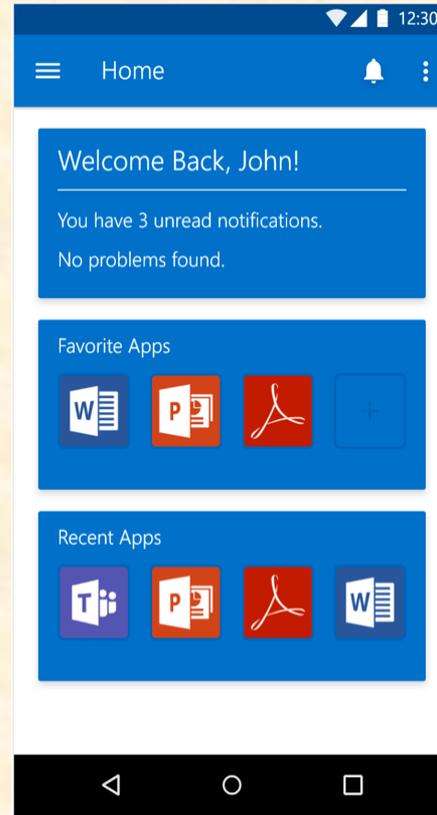
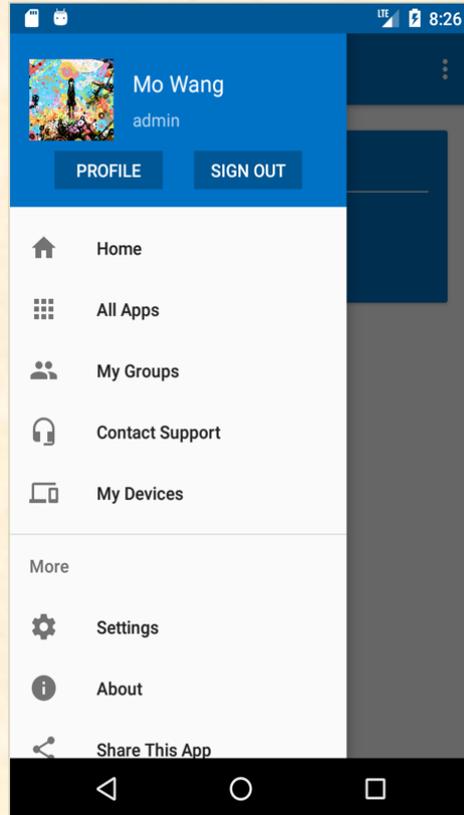


Team Microsoft Beta Presentation

Team Microsoft Beta Presentation

e.

Home Page



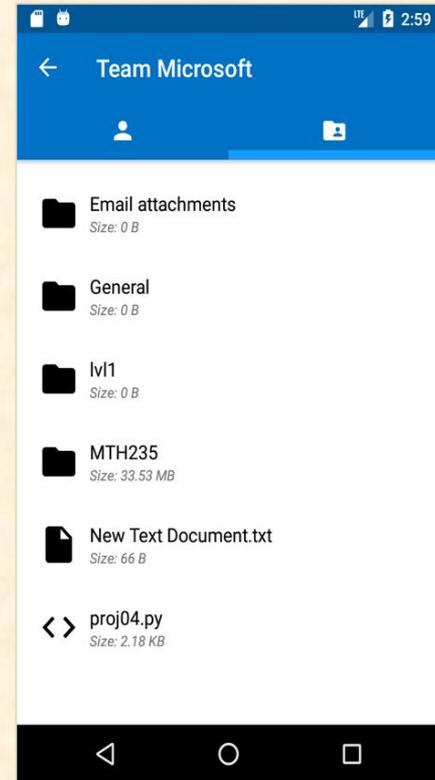
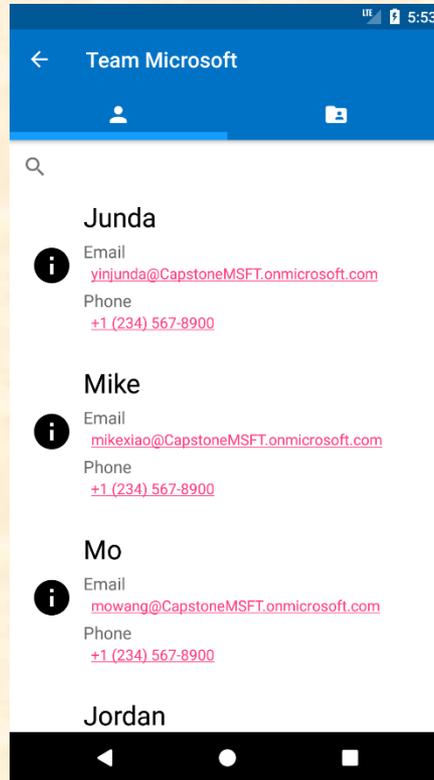
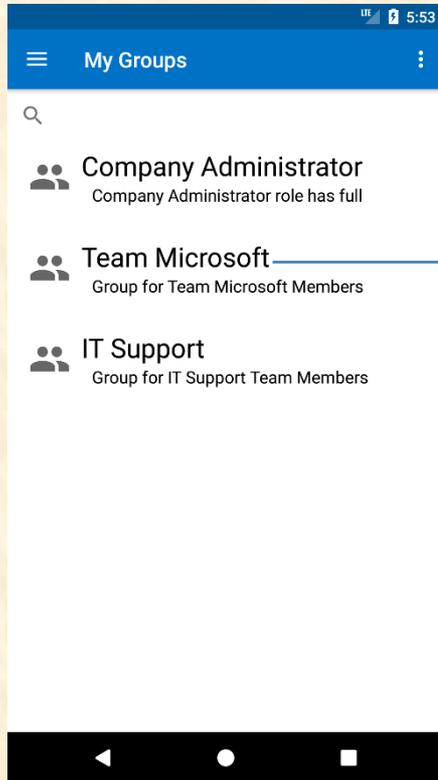
The Capstone Experience



Team Microsoft Beta Presentation

e.

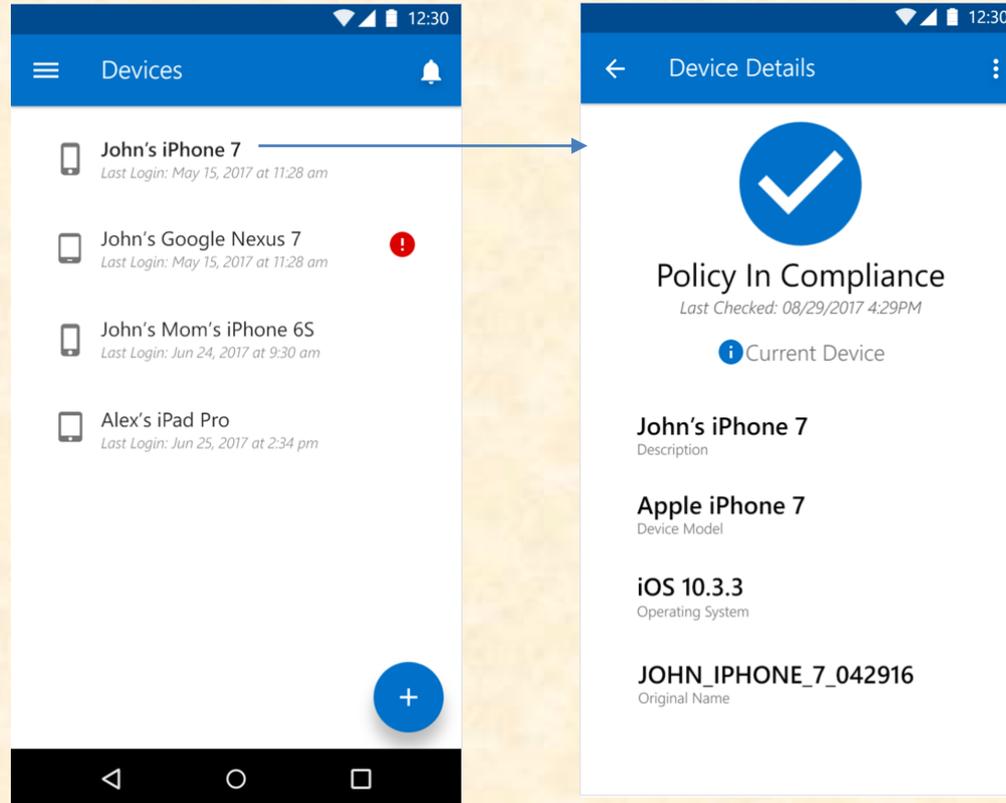
Groups Page

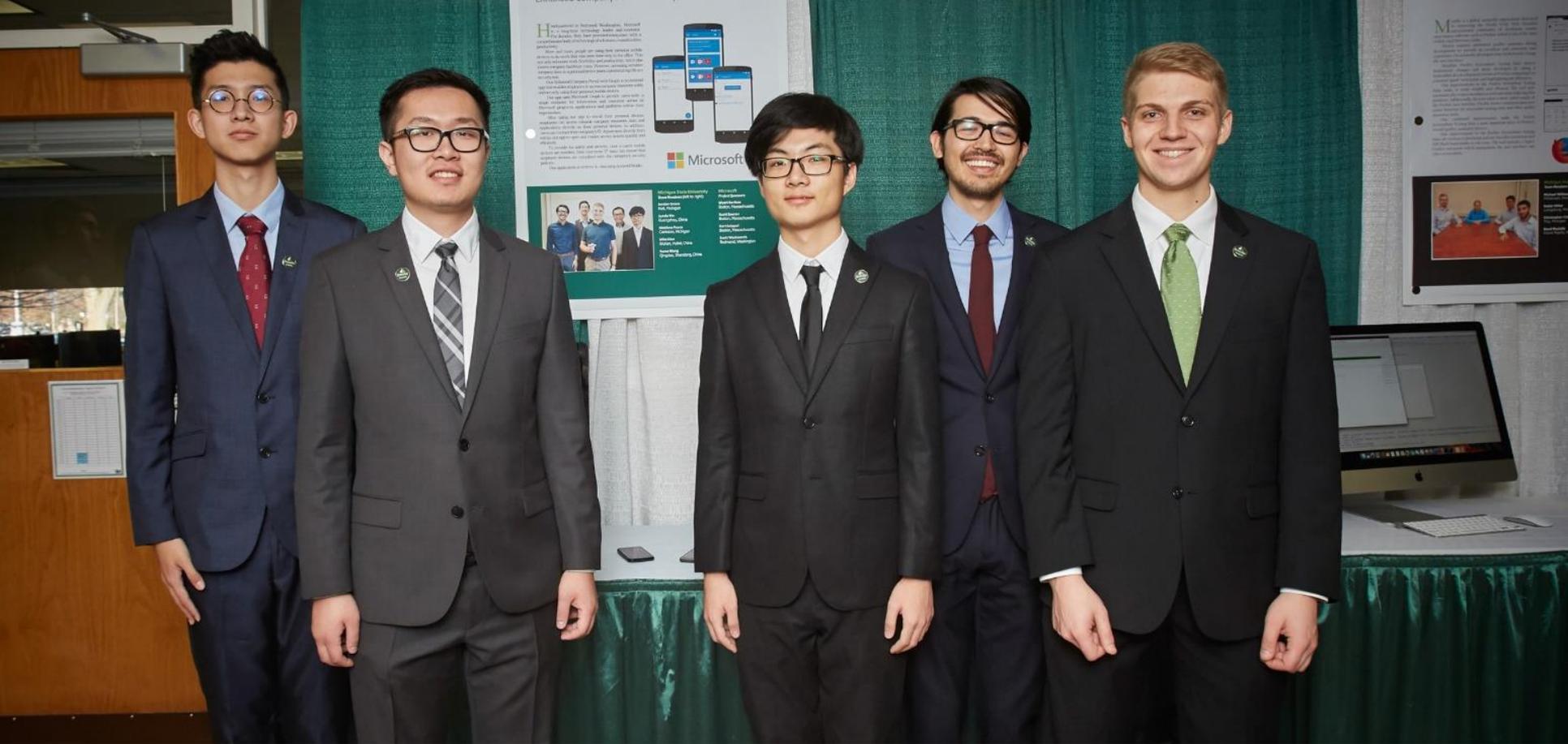


Team Microsoft Beta Presentation

e.

Devices Page





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Design Day

MICHIGAN STATE
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The Capstone Experience

Team Mozilla

Department of Computer Science and Engineering
Michigan State University
Fall 2017



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...to Professionals*



Firefox[®]

mozilla



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One Firefox.



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Mozilla
Advocacy

Download
Firefox

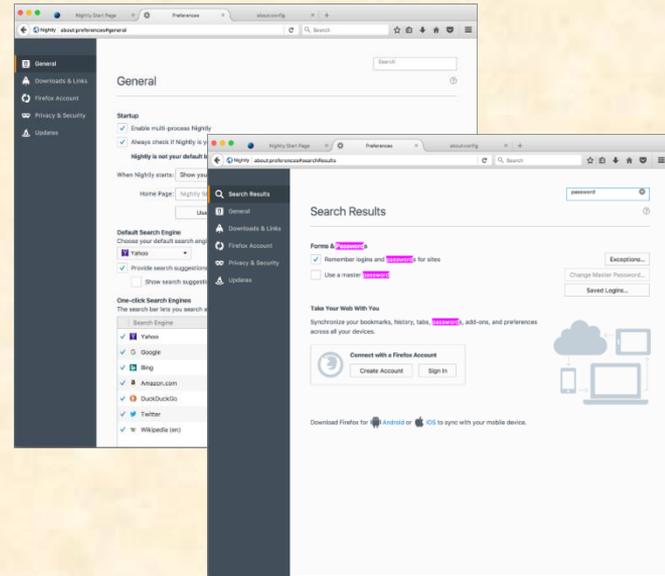


Team Mozilla

Project Overview

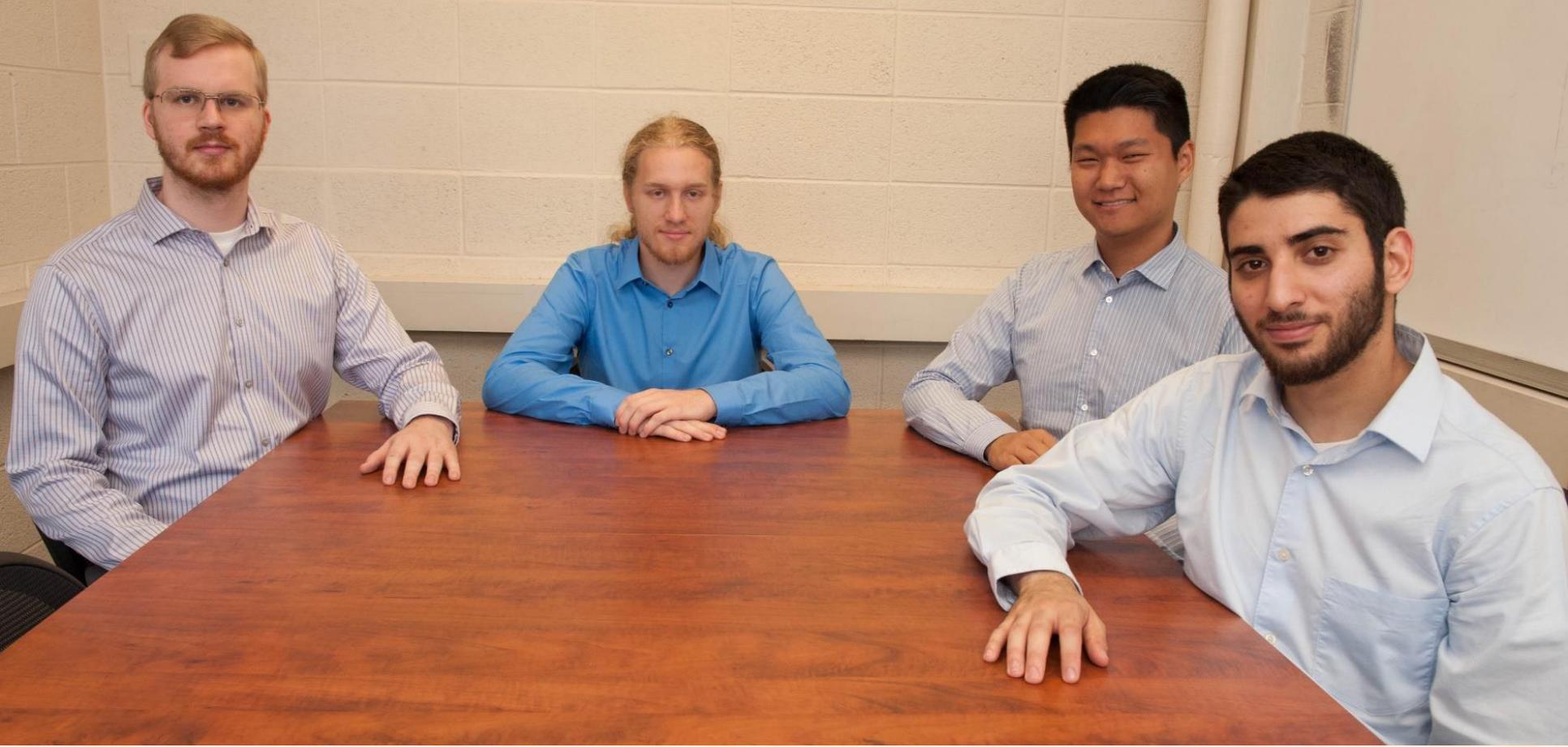
Taking Firefox Screenshots Testing Suite to 11

- Functionalities
 - Improve Firefox Screenshots Testing Suit
 - So Results Are More Readily Available
 - For Firefox Development Community at Large
- Features
 - Move Testing Suite from Tier 2 to Tier 3
 - Support Cropping Rules
 - Reduce Intermittent Failures and Difference Alerts
 - Produce Easily Consumable and Interpretable Test Results
 - Add New Testing States
- Technologies
 - CSS
 - JavaScript
 - Python
 - XUL / XBL
 - Mercurial
 - IRCcloud
 - Bugzilla
 - Review Board
 - Windows
 - OS X
 - Linux



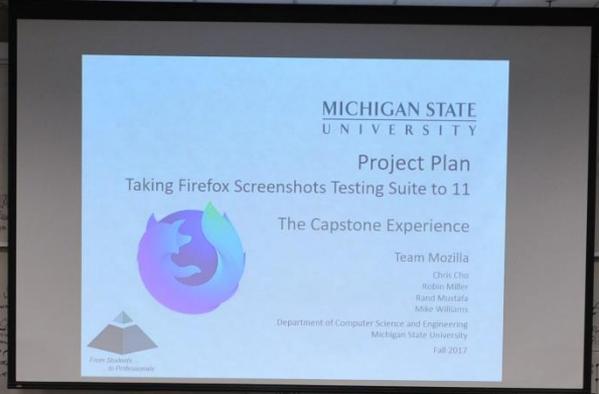
Firefox®

Mountain View, California



Team Mozilla

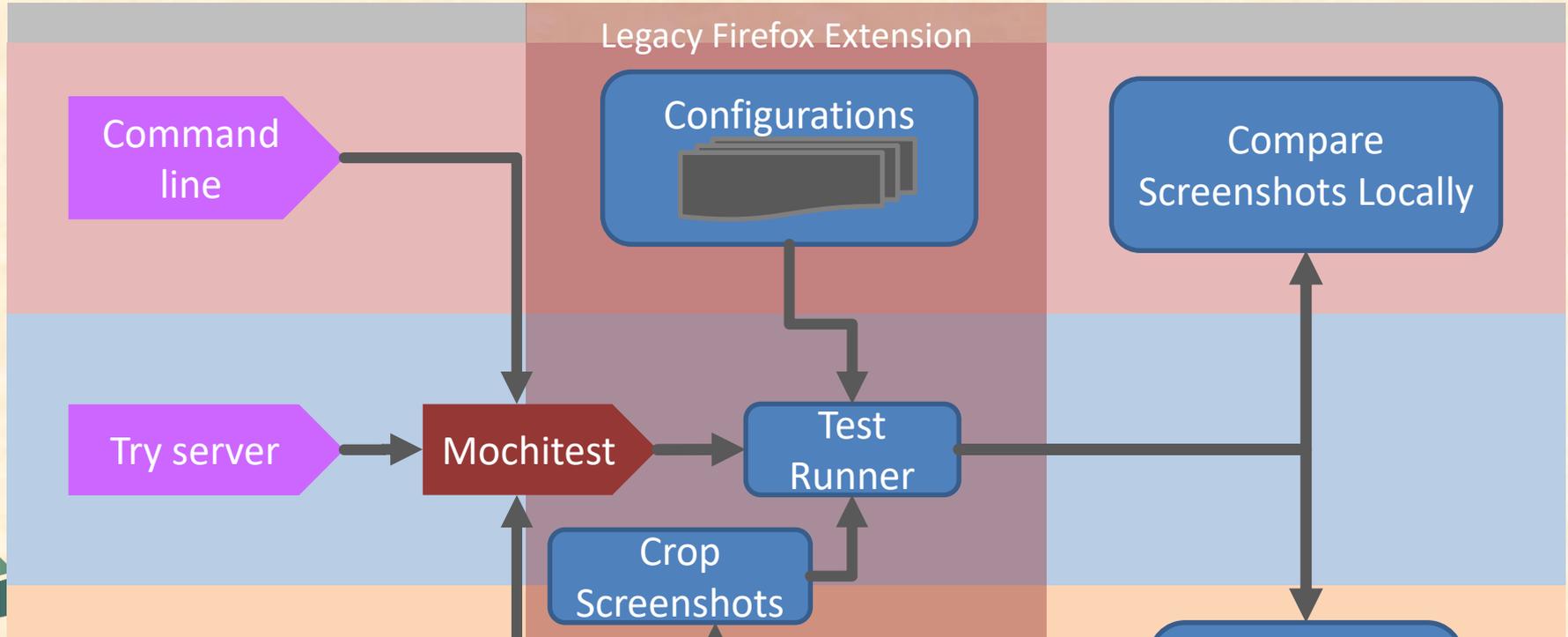
Mike Williams, Robin Miller, Chris Cho, Rand Mustafa

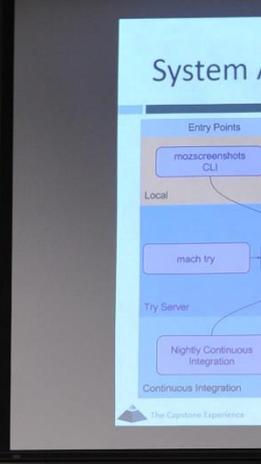
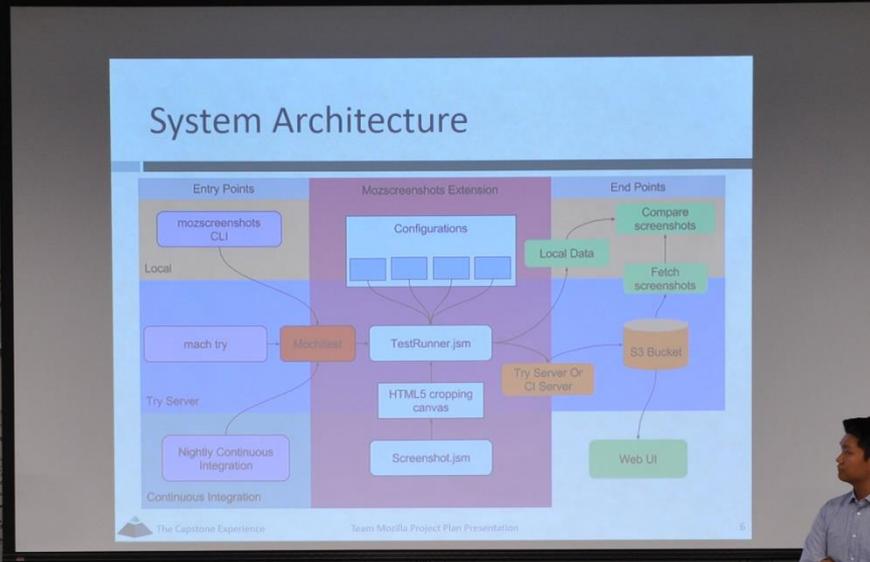
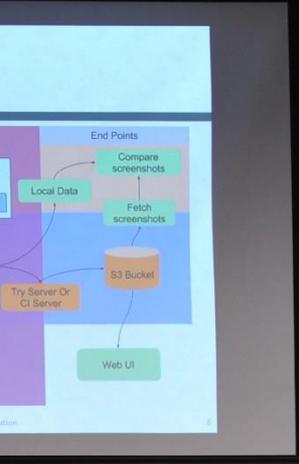


Team Mozilla
Project Plan Presentation

Team Mozilla Project Plan Presentation

Architecture Diagram





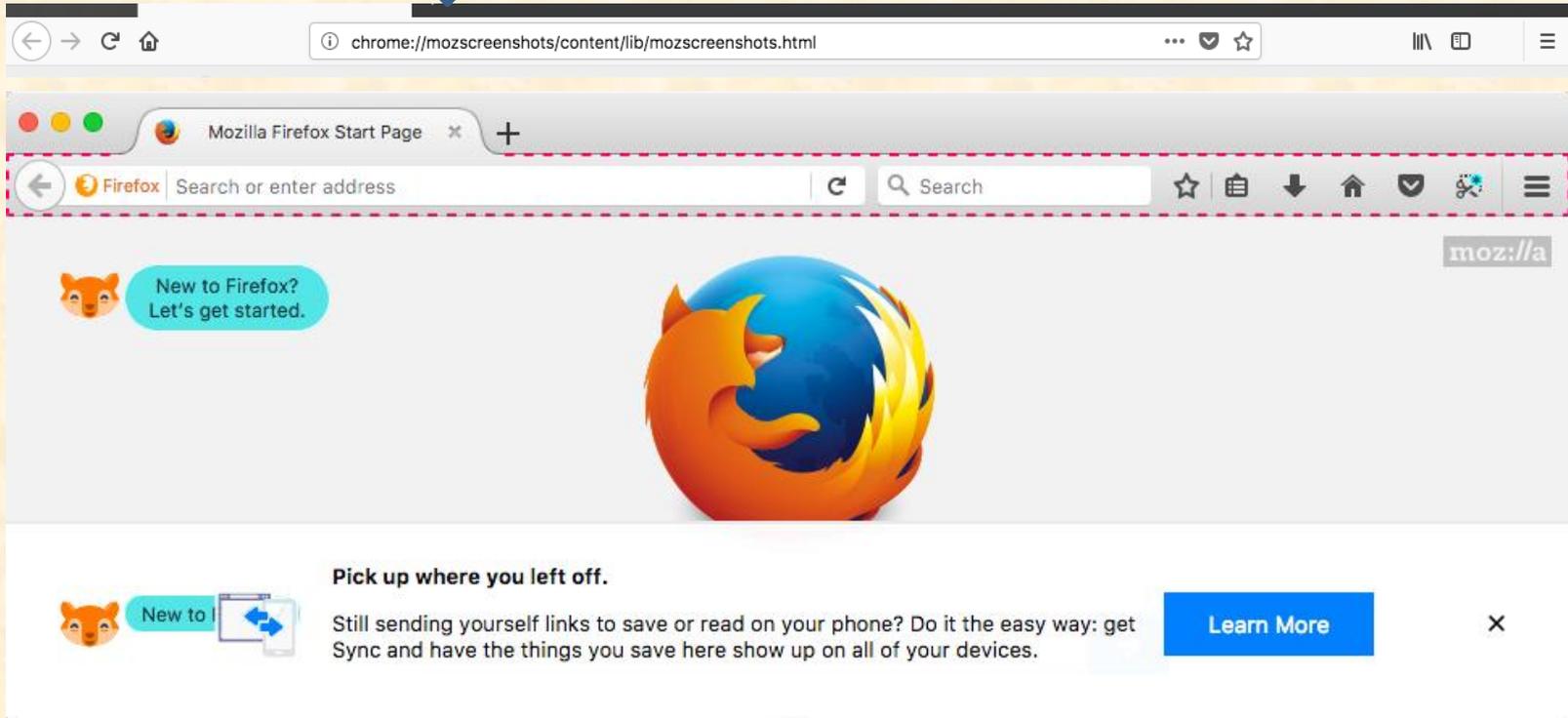
Team Mozilla Project Plan Presentation

Team Mozilla Alpha Presentation

e.

Automated Cropping Region

Cropped Region



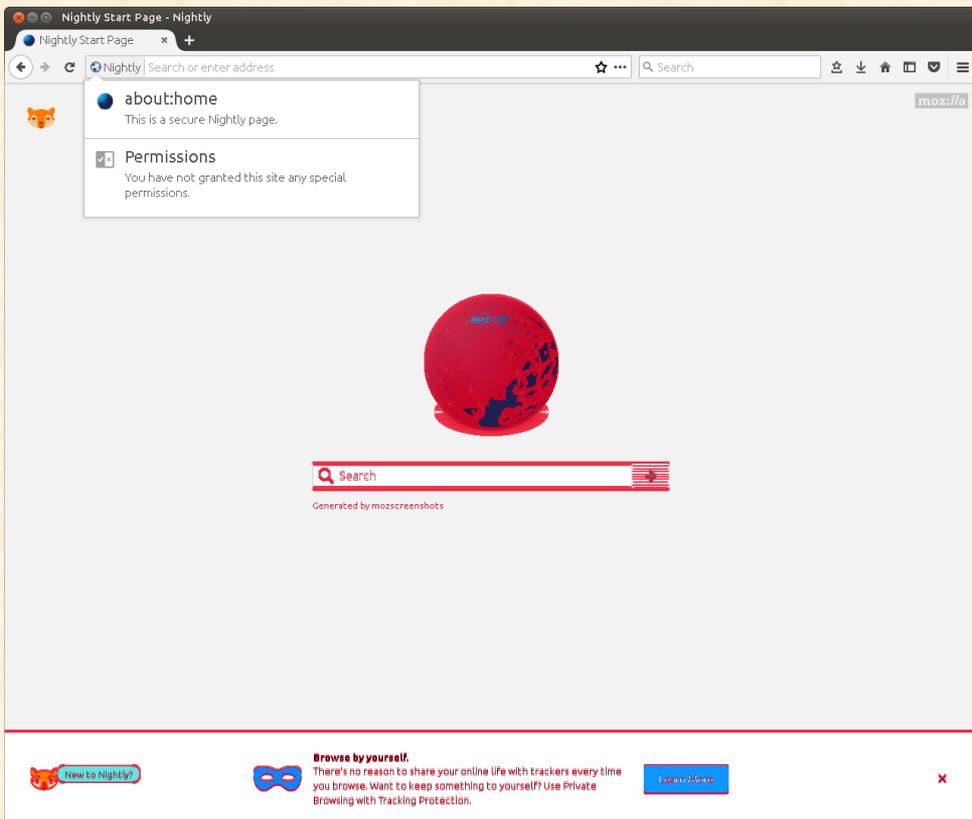
The Capstone Experience



Team Mozilla Alpha Presentation

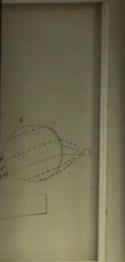
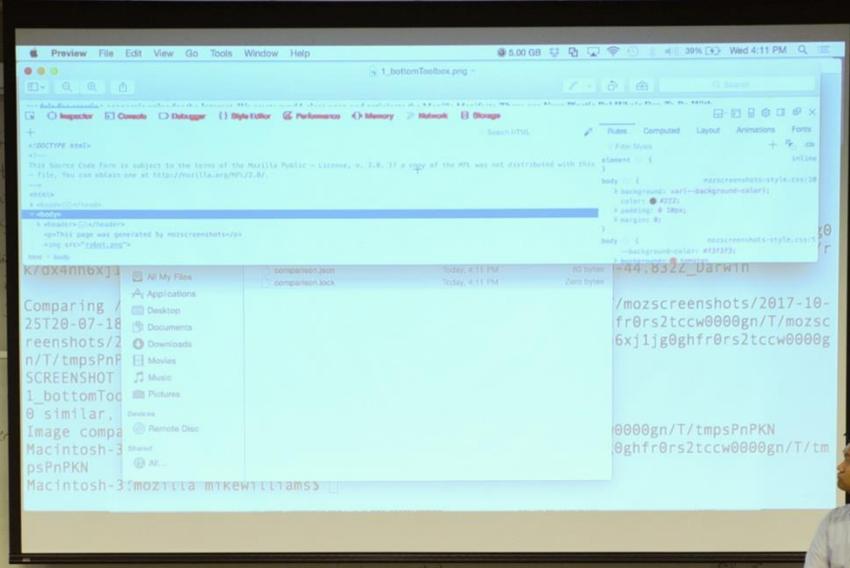
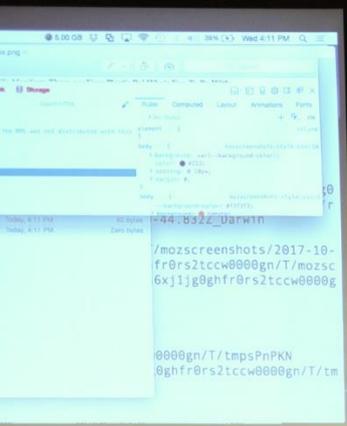
e.

Major Difference Detected



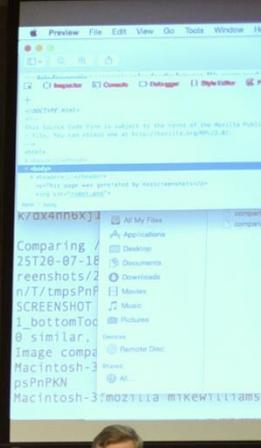
The Capstone Experience





Q14 - 2017-10-18
used from
H2O protein
012-10-18
Climate ch
Why does it
leaf + H2O

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Transfer
of



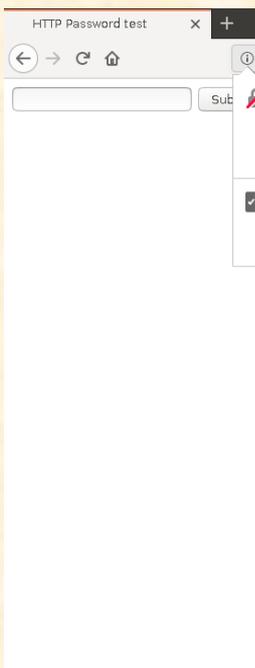
Team Mozilla Alpha Presentation

Team Mozilla Alpha Presentation

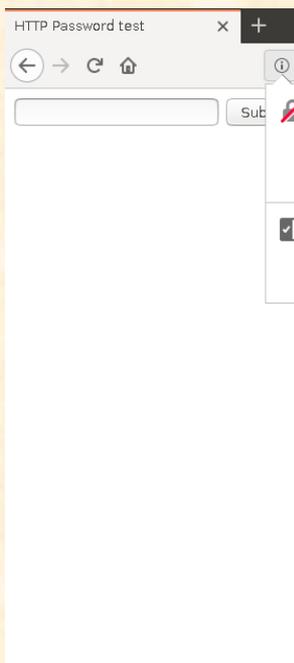
e.

Subtle Difference Detected

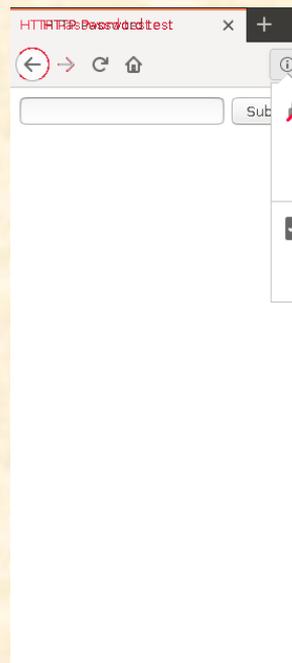
Before
Change



After
Change



Difference





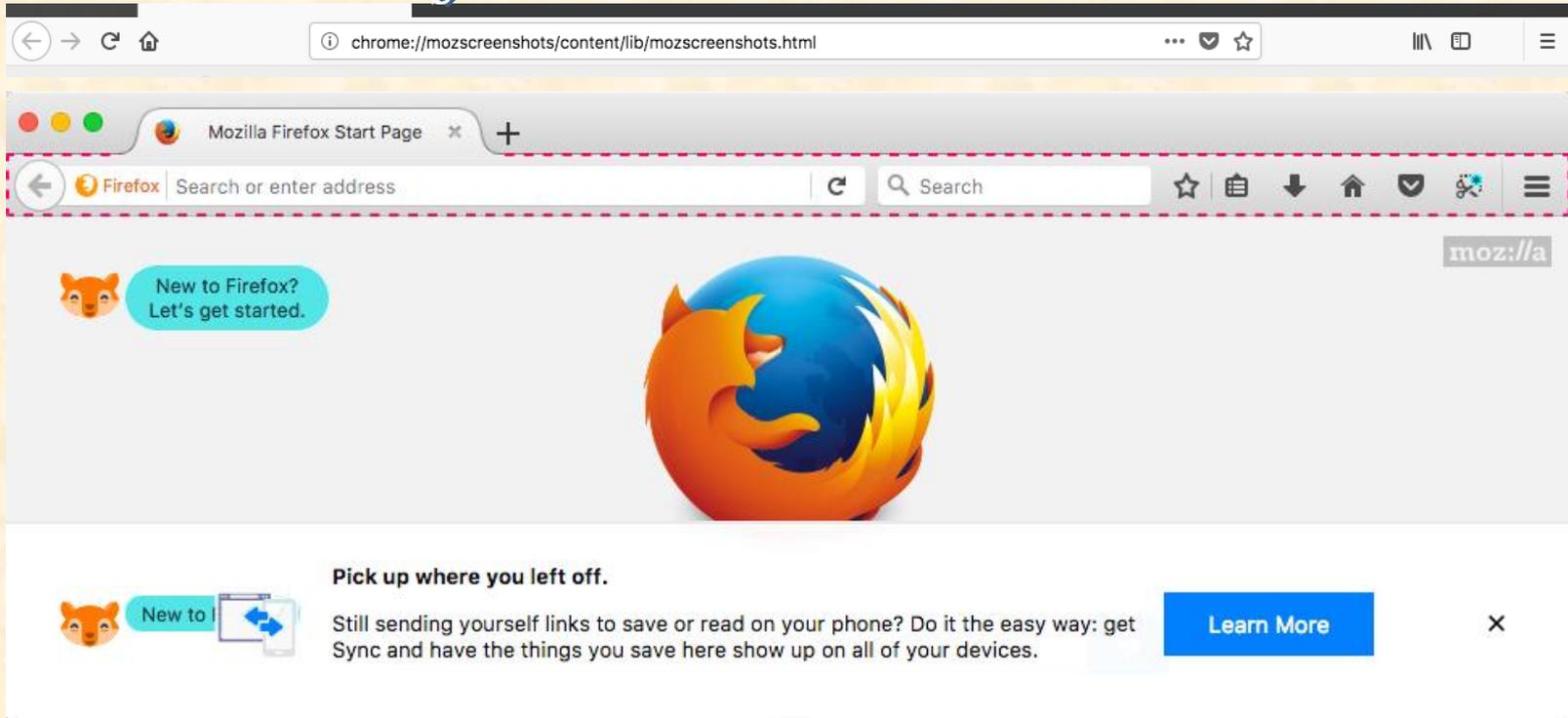
Team Mozilla Beta Presentation

Team Mozilla Beta Presentation

e.

Automated Cropping Region

Cropped
Region



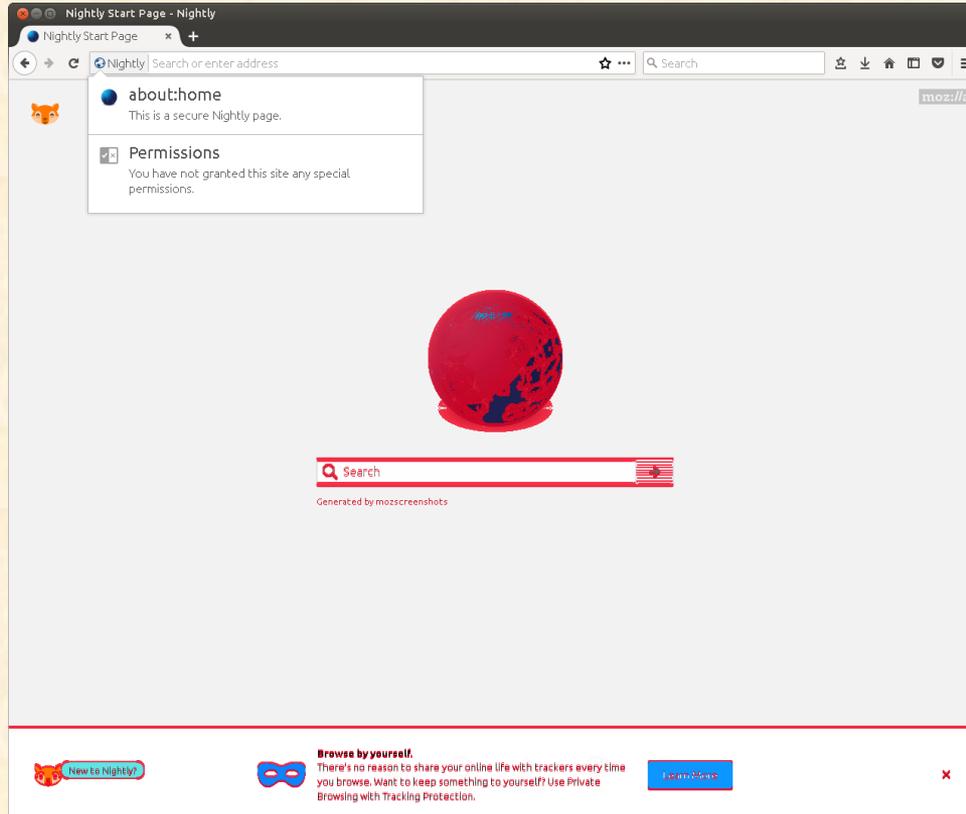
The Capstone Experience



Team Mozilla Beta Presentation

e.

Major Difference Detected



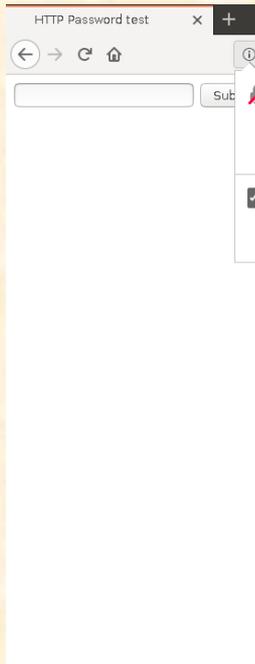


Team Mozilla Beta Presentation

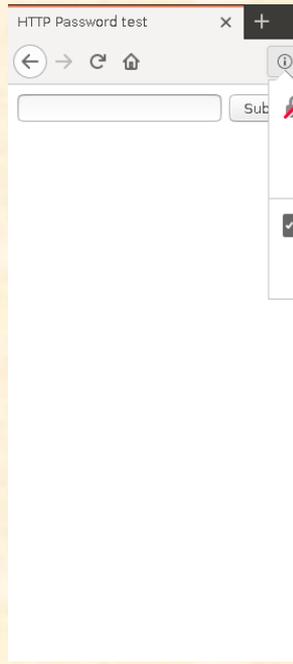
Team Mozilla Beta Presentation

Subtle Difference Detected

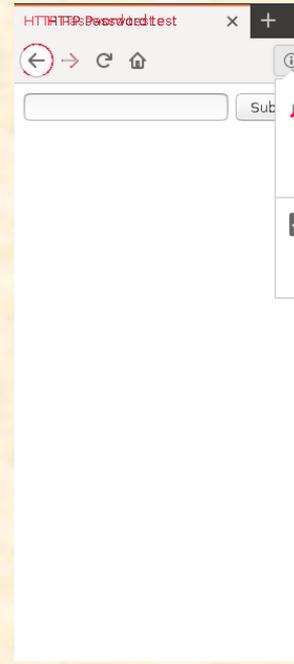
Before
Change



After
Change



Difference





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Team MSUFCU

Department of Computer Science and Engineering
Michigan State University
Fall 2017



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...to Professionals*



F E D E R A L C R E D I T U N I O N

Building Dreams *Together*



Rates

Careers

Locations & ATMs

Contact Us

LIVE CHAT ^

LOANS

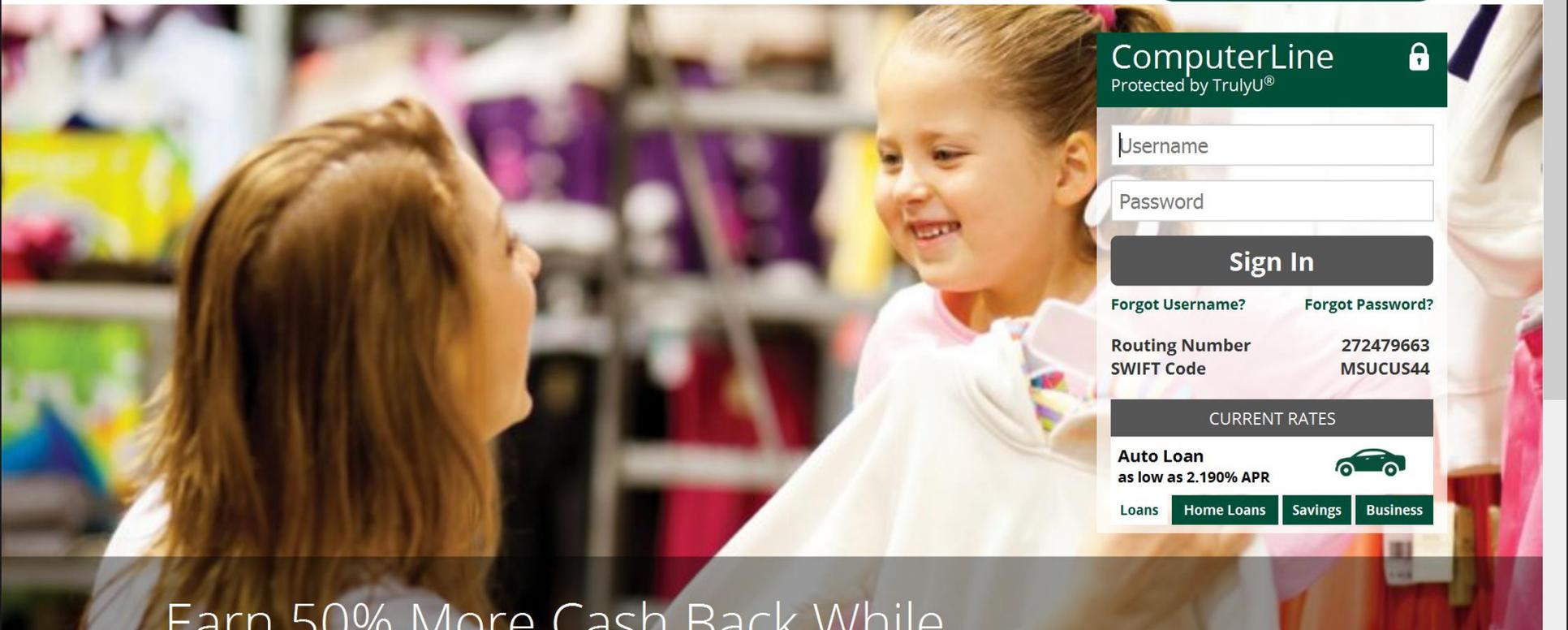
ACCOUNTS

SERVICES

BUSINESS

RESOURCES

OPEN AN ACCOUNT



ComputerLine



Protected by TrulyU®

Sign In

Forgot Username?

Forgot Password?

Routing Number

272479663

SWIFT Code

MSUCUS44

CURRENT RATES

Auto Loan

as low as 2.190% APR



Loans

Home Loans

Savings

Business

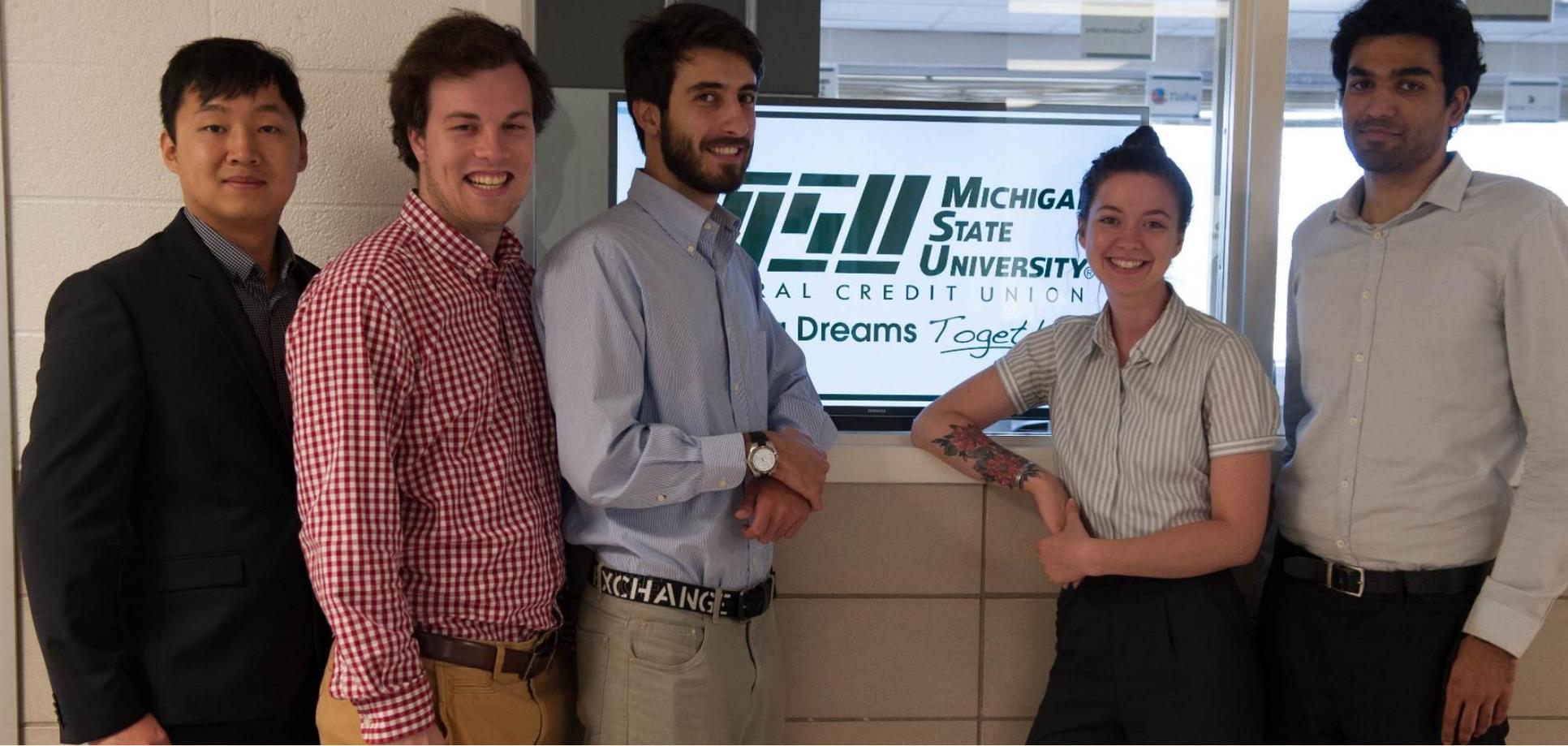
Earn 50% More Cash Back While

Team MSUFCU Project Overview

Digital Banking with Chatbots

- Functionalities
 - Provide Virtual Banking Assistance
 - Using a Chatbot
- Features
 - Handles Same Services As Live Chat Service
 - Leverage Natural Language Processing
 - Emulate Human-to-Human Interaction
 - Redirect Complex Requests to Customer Service Reps
 - Support Short Message Service (SMS) and iMessage
 - Integrate with Other MSUFCU Services
 - Website
 - Mobile App
 - Amazon's Alexa
 - Provide Web-Based Content Management System
- Technologies
 - Amazon Echo
 - Alexa Skills Kit
 - CSS / HTML5 / PHP / JavaScript
 - Google Android Tablets and Phones / Java
 - Apple iPads and iPhones (iOS) / Swift or Objective-C
 - MySQL
 - Short Message Service (SMS) and Apple's iMessage
 - Encryption based on SQL standards
 - Natural Language Processing (NLP)



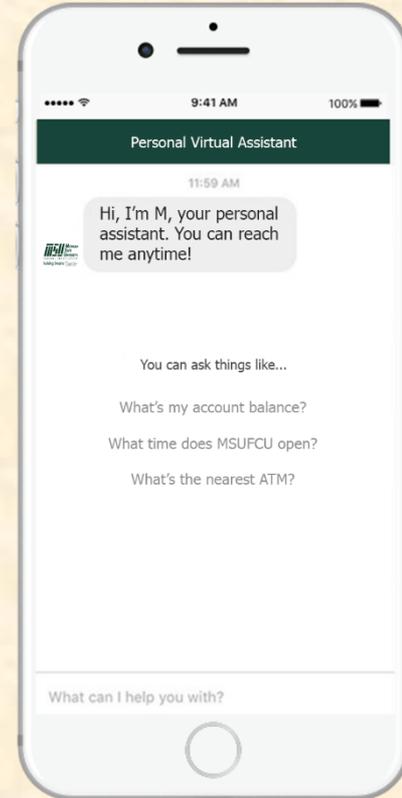
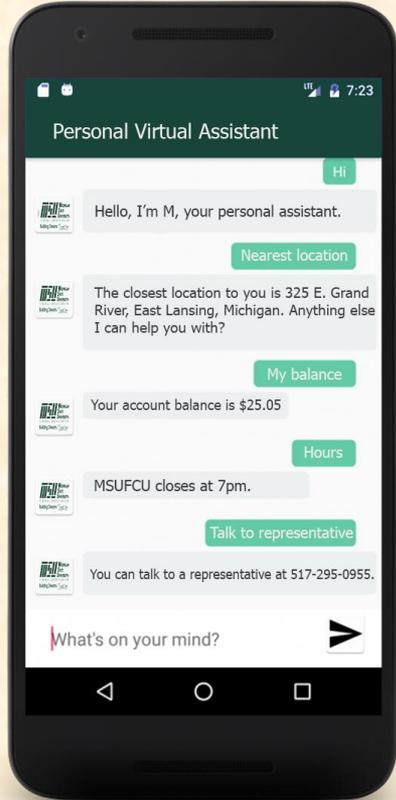


Team MSUFCU

Chuanyun Xiao, Josh Benner, Gus Fernandes, Cori Tymoszek, Syed Naqvi

Team MSUFCU Project Plan Presentation

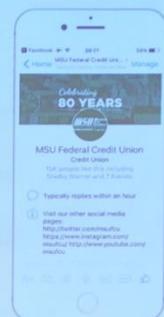
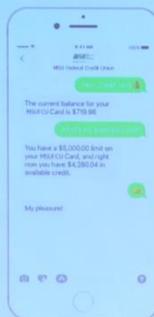
Screen Mockup



essage and FB



Screen Mockup: iMessage and FB Messenger



The Capstone Experience Team MSUFCU Project Plan

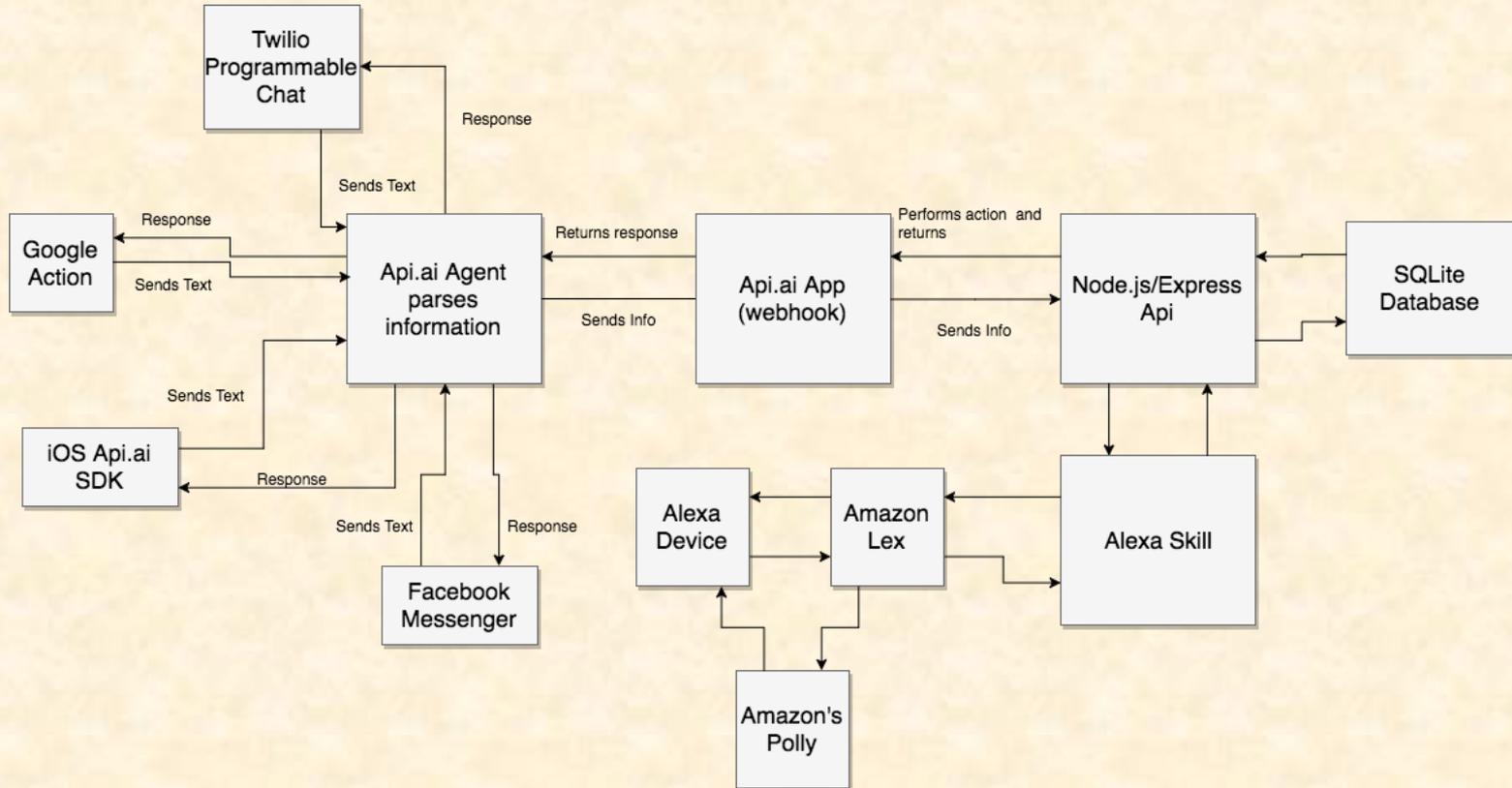
Screen
Mess

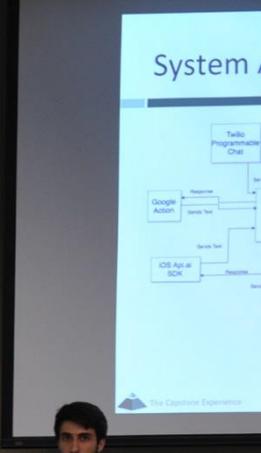
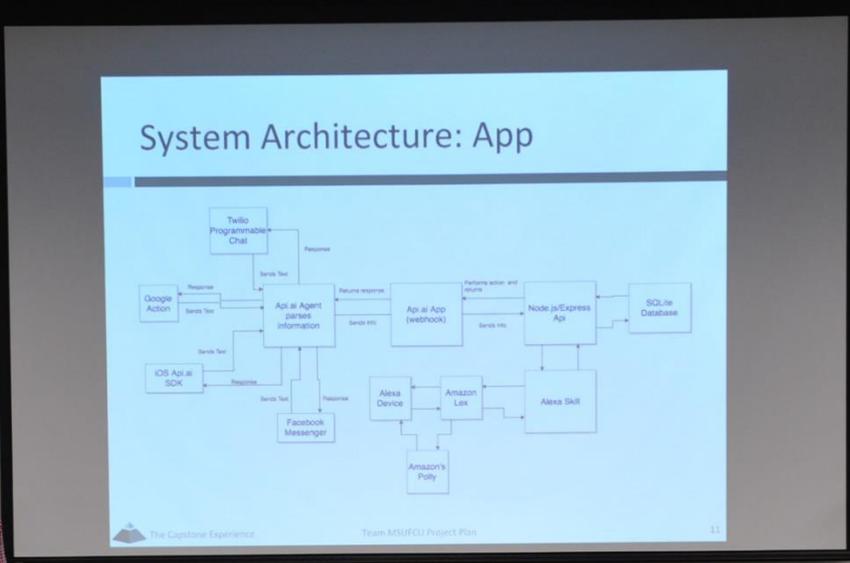
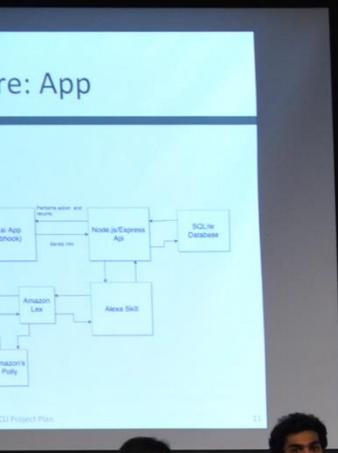


Team MSUFCU Project Plan Presentation

Team MSUFCU Project Plan Presentation

Architecture Diagram





Team MSUFUCU
Project Plan Presentation

Team MSUFCU Project Plan Presentation

"Alexa, what's my account balance?"

"Alexa, what time does MSUFCU open today?"



"Alexa, I can't access my bank account."

"Alexa, show me my last 5 transactions."





Team MSUFCU Alpha Presentation

Team MSUFCU Alpha Presentation

Google Assistant and Alexa

Hey, what's my checking account balance?

Sure, account balance. Please say your 4 digit PIN.

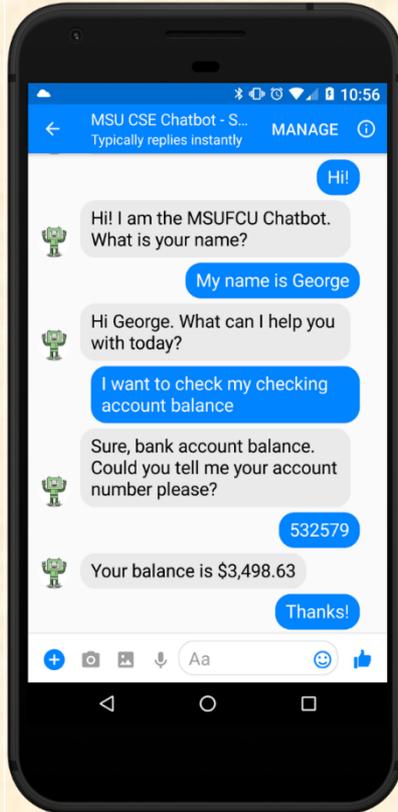
It's 6781.

Thanks. Your balance is \$3,498.63



Team MSUFCU Alpha Presentation

Facebook Messenger



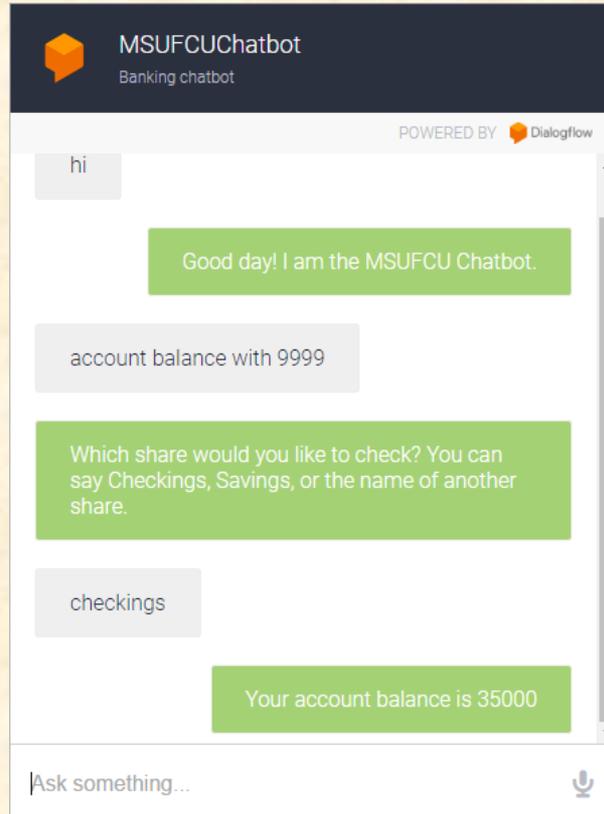
- Convenient
- Easy and fast
- 24/7 support



Team MSUFCU Alpha Presentation

e.

Web App



The screenshot displays a chatbot interface for MSUFCU. At the top, the header identifies the chatbot as "MSUFCUChatbot" and "Banking chatbot", powered by Dialogflow. The chat history shows a user saying "hi", followed by the chatbot's response: "Good day! I am the MSUFCU Chatbot." The user then asks for the "account balance with 9999". The chatbot responds with a question: "Which share would you like to check? You can say Checkings, Savings, or the name of another share." The user replies "checkings", and the chatbot provides the final response: "Your account balance is 35000". At the bottom, there is a text input field with the placeholder "Ask something..." and a microphone icon for voice input.

The Capstone Experience

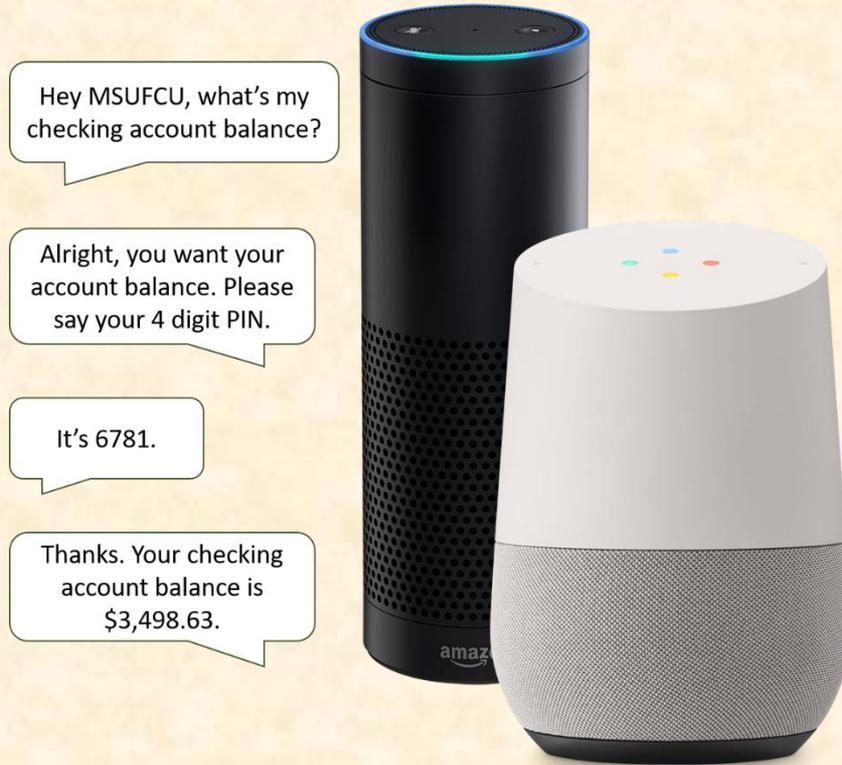




Team MSUFCU Beta Presentation

Team MSUFCU Beta Presentation

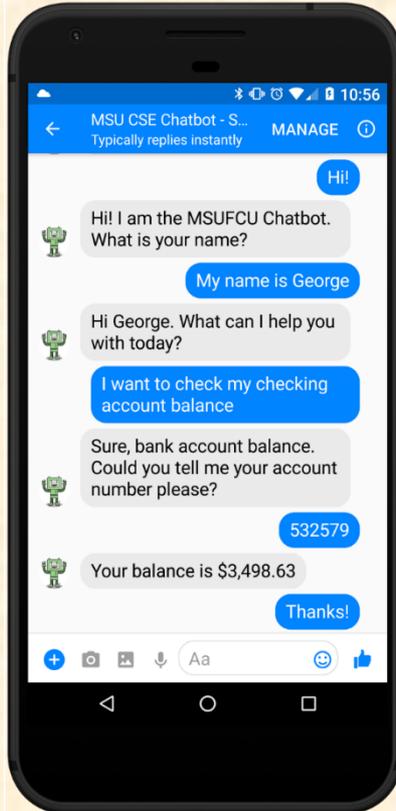
Google Assistant and Alexa



Team MSUFCU Beta Presentation

e.

Facebook Messenger



- Convenient
- Easy and fast
- 24/7 support



and Alexa



CU Beta Presentation

4

Google Assistant and Alexa

Hey MSUFCU, what's my checking account balance?

Alright, you want your account balance. Please say your 4-digit PIN.

It's 6781.

Thanks. Your checking account balance is \$3,498.63.



Capstone Experience

Team MSUFCU Beta Presentation

4

Team MSUFCU Beta Presentation

Team MSUFCU Beta Presentation

e.

Web App

The screenshot displays the MSUFCU website's homepage. At the top left is the MSUFCU logo with the tagline "Building Dreams Together". Navigation links include "Locations", "Careers", "Live Chat", "Open an Account", and "Sign In". A dark green navigation bar contains "LOANS", "ACCOUNT", "SERVICES", "BUSINESS", and "RESOURCES".

In the center, an Amazon Echo device is shown with four blue speech bubbles containing the following text:

- "Alexa, what's my account balance?"
- "Alexa, what time does MSUFCU open today?"
- "Alexa, I can't access my bank account."
- "Alexa, show me my last 5 transactions."

Below the Echo device is the text "With Alexa".

On the right side, a "Chatbot" window is open, titled "MSUFCUChatbot Banking chatbot" and "POWERED BY Dialogflow". The chat history shows:

- User: "Hi"
- Chatbot: "Hello! I am the MSUFCU Chatbot."
- User: "What is routing number"
- Chatbot: "The routing number for MSUFCU is 272479663."

The chat input field at the bottom contains the text "Ask something..." and a microphone icon.

The Capstone Experience





Team MSUFCU
Design Day

MICHIGAN STATE
UNIVERSITY

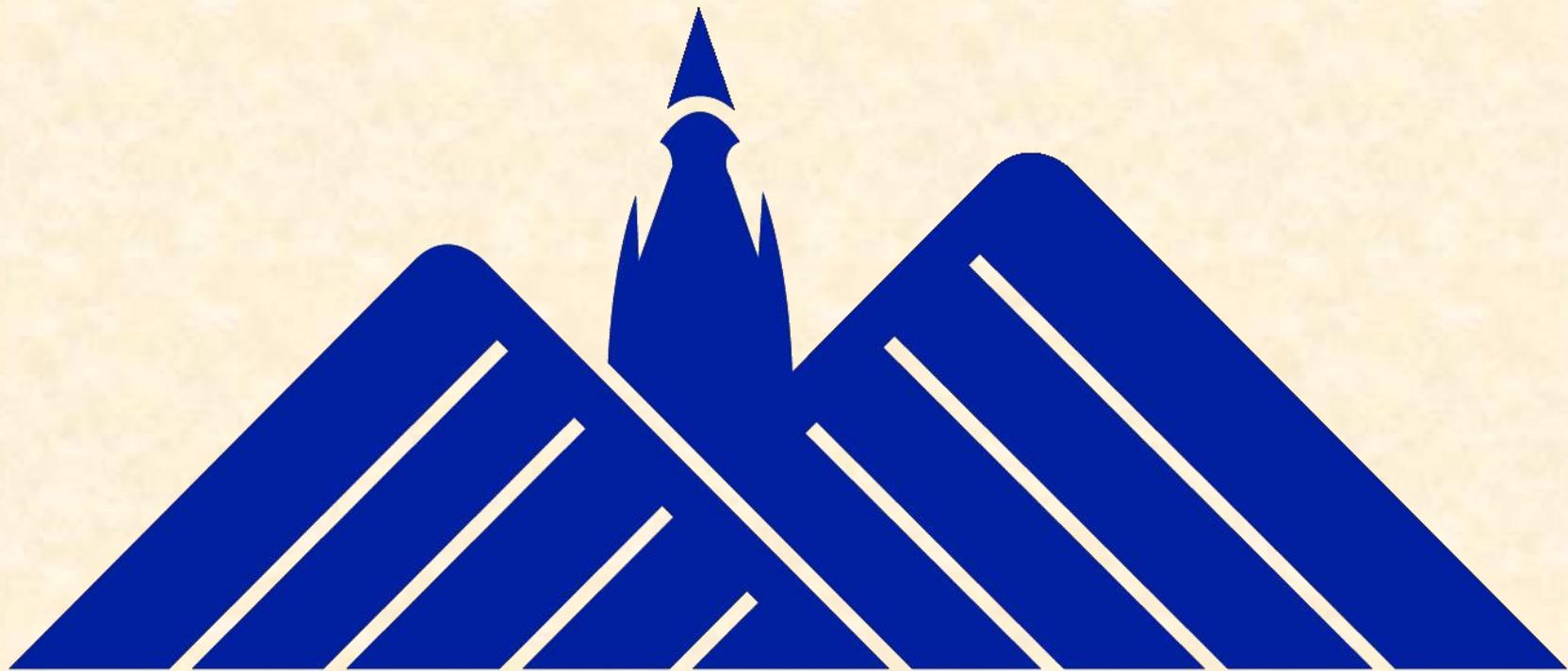
The Capstone Experience

Team Phoenix Group

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



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WELCOME TO THE PHOENIX GROUP

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Delivery

[VIEW PRODUCTS](#)

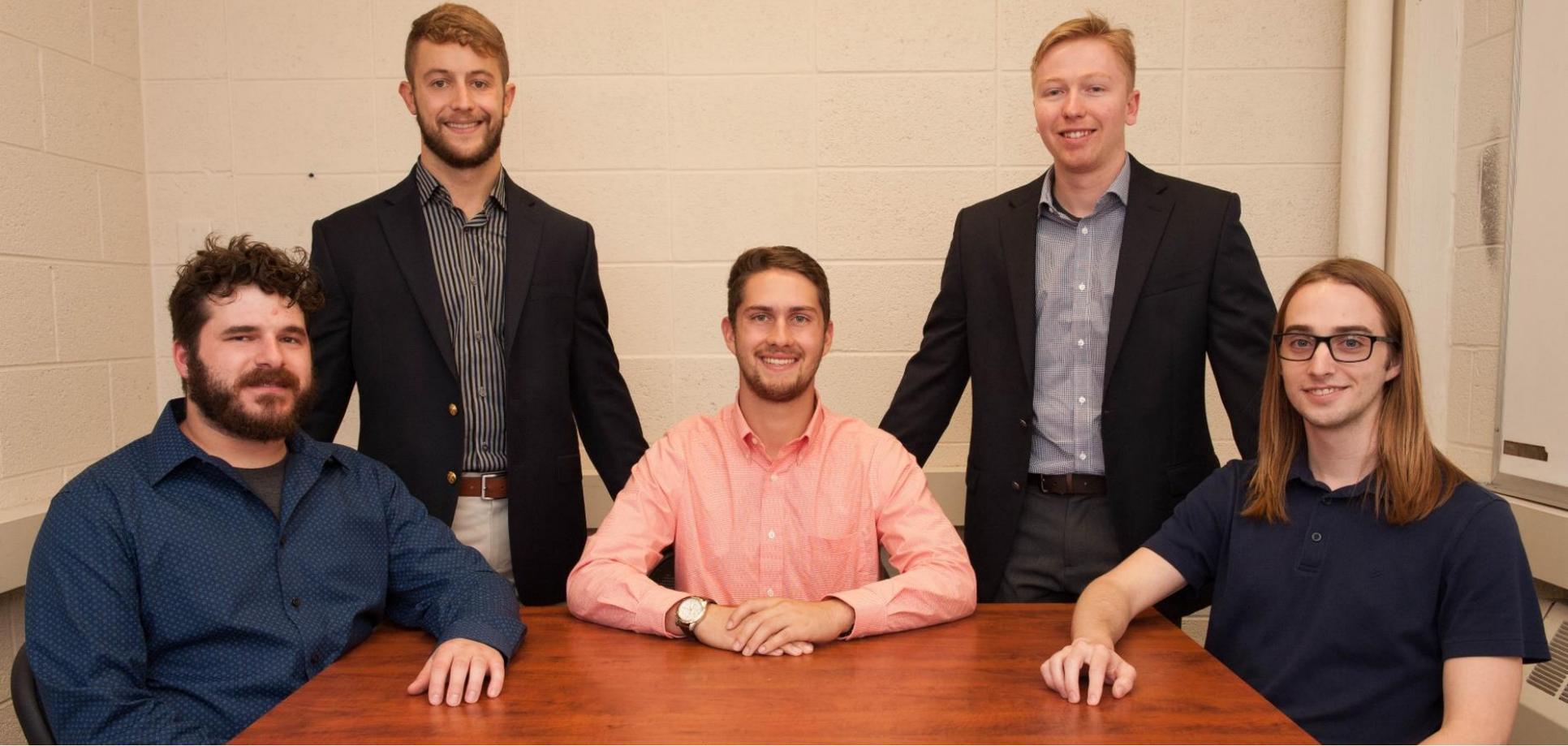
Team Phoenix Group Project Overview

OPEN v2.0: Smart Order Picking

- Functionalities
 - Enhance Warehouse Order Picking Process
 - Using Bluetooth Low-Energy Devices
- Features
 - Create Windows Tablet-Based Pick Ticket
 - Display Geolocation-Based Warehouse Map
 - Provide Bin Locations and Route Planning
 - Support Real-Time Shelf Counts
 - Handle Bar Codes
- Technologies
 - Microsoft Windows Presentation Foundation (WPF)
 - Microsoft .NET Framework
 - Microsoft C#
 - Microsoft Visual Studio 2015
 - Bluetooth Low Energy Devices
 - MySQL Server
 - Bar Code Scanning Technologies



O'Fallon, Missouri



Team Phoenix Group

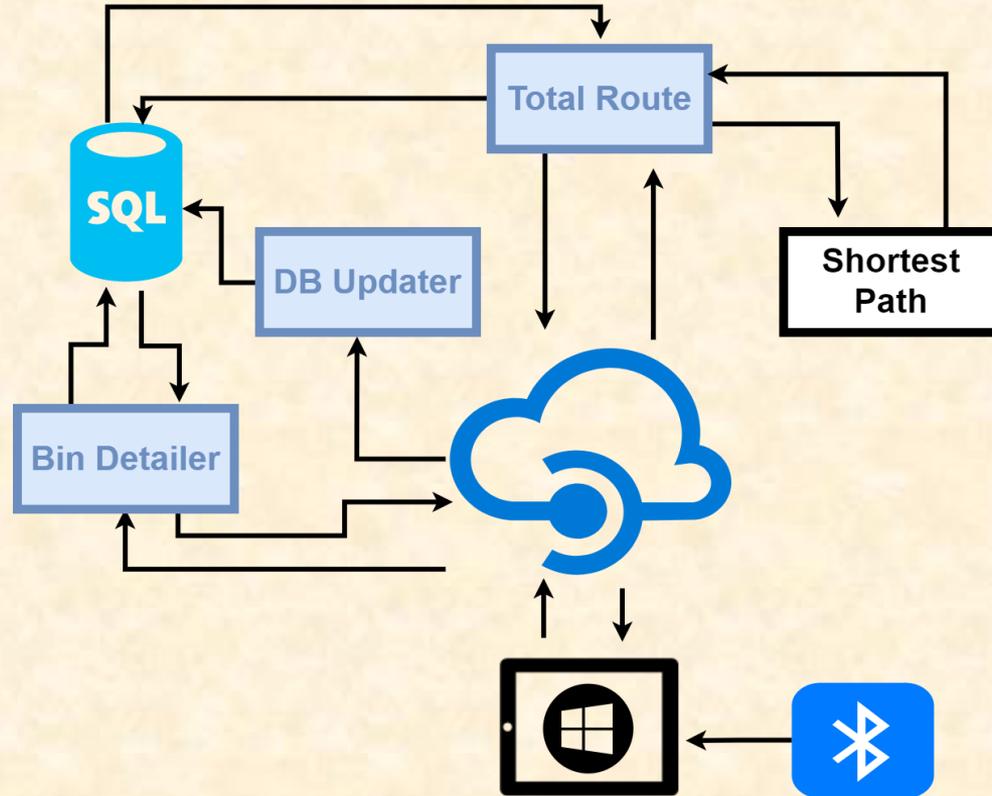
Charlie Deneau, Evan Brazen, Bryce Corey, Austin Rix, Austin Littley

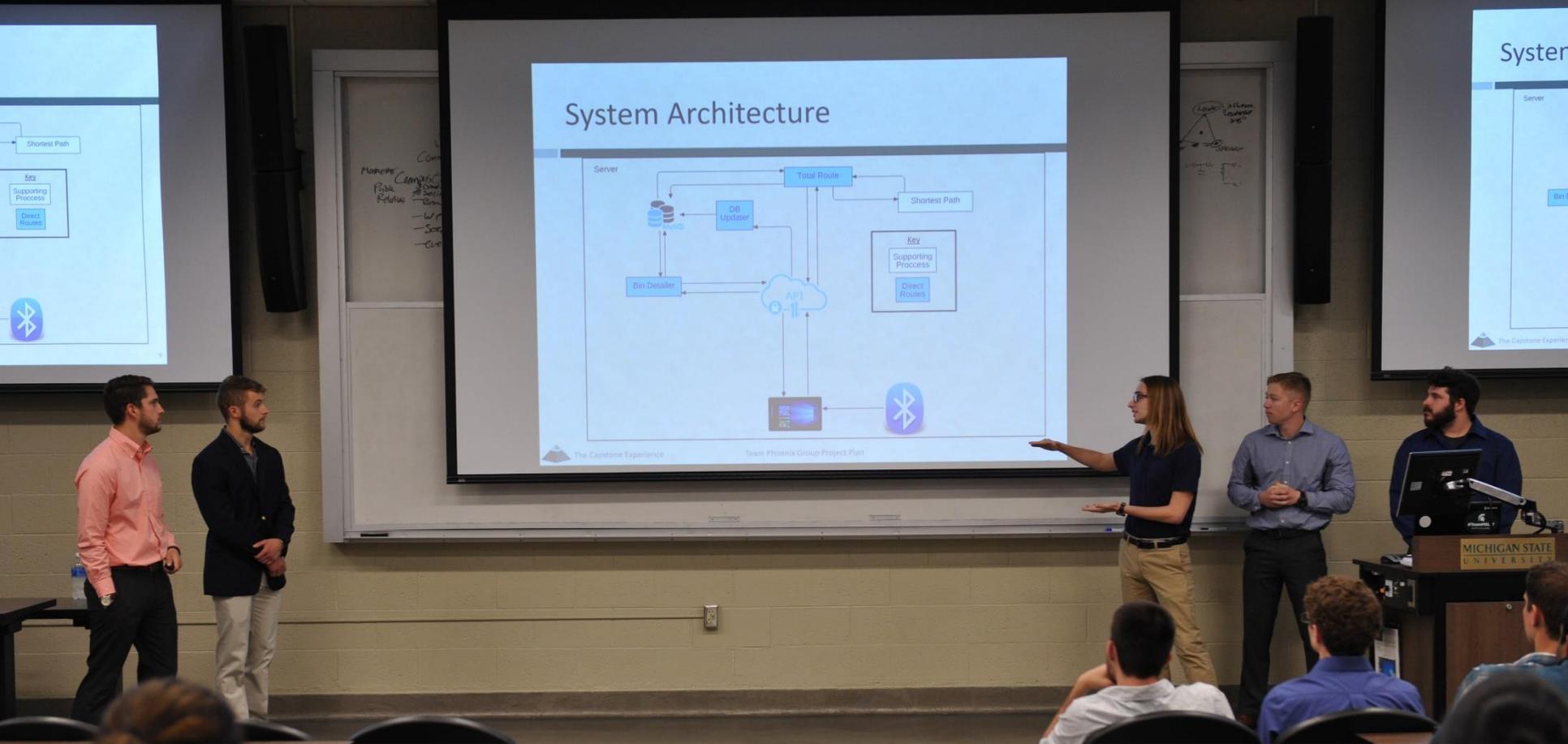


Team Phoenix Group Project Plan Presentation

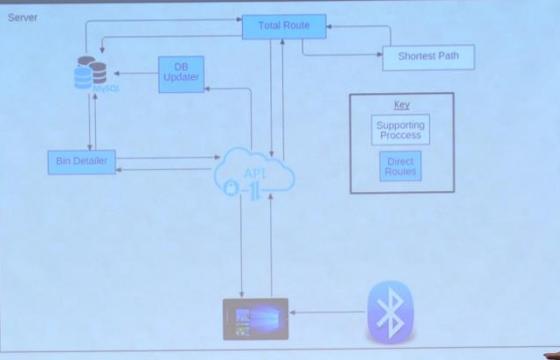
Team Phoenix Group Project Plan Presentation

Architecture Diagram





System Architecture



Team Phoenix Group
Project Plan Presentation

Team Phoenix Group Project Plan Presentation

Screen Mockup

OP.EN

Receiving
Fulfillment
Inventory
Tools
Finance

Shipping
Mgr Offices

START

Order Printing
Quality Control
Deployment
PG
WAR
RENTAL

Item	Location	Quantity	Actions
PS9145 Power Supply	Aisle 86 Bin 5	1	Skip Item
SC3485 Scanner	Aisle 4 Bin 8	4	Move to Front of Queue
PS9145 Power Supply	Aisle 86 Bin 5	2	Move to Front of Queue
			Return to Item

5:10 PM
9/9/2017





Team Phoenix Group Alpha Presentation

Team Phoenix Group Alpha Presentation

e.

Administration Panel

The screenshot displays the Grid Administration Panel interface. At the top, there are configuration fields for Rows (125), X Dimension (ft) (250), Cell Dimension X (ft) (2), and Select Dimension X (ft) (0.0164). Below these are fields for Cols (125), Y Dimension (ft) (250), Cell Dimension Y (ft) (2), and Select Dimension Y (ft) (-0.0167). A 'Generate' button is located to the left of the Cols field. To the right of the configuration fields are radio buttons for 'DESELECT' and 'SELECT', and a dropdown menu for 'HIDE ENTITY' and 'SHOW ENTITY'. There are also buttons for '100%', 'Export Grid', and 'Add Entity'.

Below the configuration fields, there are sections for 'Import Grid' and 'Import Image'. The 'Import Grid' section has a 'Choose File' button and the filename 'testGridAtterGrid_7_grid'. The 'Import Image' section has a 'Choose File' button and the filename 'WarehouseMap.JPG', along with 'Load Grid' and 'Upload Grid' buttons.

The main area of the interface is a grid visualization. On the left side of the grid, there is a list of items with 'edit' and 'delete' buttons next to them:

- 1 edit delete
- 2 edit delete
- 3 edit delete
- 4 edit delete
- 5 edit delete
- 6 edit delete
- 7 edit delete
- 8 edit delete
- 9 edit delete
- 10 edit delete
- 11 edit delete
- 12 edit delete
- Cage edit delete
- Order edit delete
- start edit delete
- Exceptions edit delete
- Quality edit delete
- Shipping edit delete
- mgr edit delete
- reviewing edit delete

The grid itself shows a complex layout of colored blocks (red, blue, and white) representing different entities. Labels like 'Cage', 'Order Printing', 'Exceptions', and 'Quality Control' are visible on the grid. There are also various numerical values and small icons scattered across the grid.



Team Phoenix Group Alpha Presentation

e.

Map Order Fulfillment

The screenshot shows a tablet interface for a warehouse management system. The main display is a grid-based floor plan with a green path starting from the left and moving through various aisles. A sidebar on the left contains navigation options: Receiving, Fulfillment, Inventory, Tools, Finance, and Development. Below the floor plan is a table with item details and a 'Collapse Ticket' button.

Item Name	Item Location	Item Quantity	
Swipe Reader	Aisle 45 Bin 3	2	Move to Front of Queue
Power Cord	Aisle 3 Bin 4	4	Move to Front of Queue
Digit Pad	Aisle 10 Bin 1	36	Move to Front of Queue
USB Cable	Aisle 33 Bin 3	12	Move to Front of Queue

At the bottom right of the tablet screen, the system tray shows the time as 5:10 PM and the date as 9/9/2017.



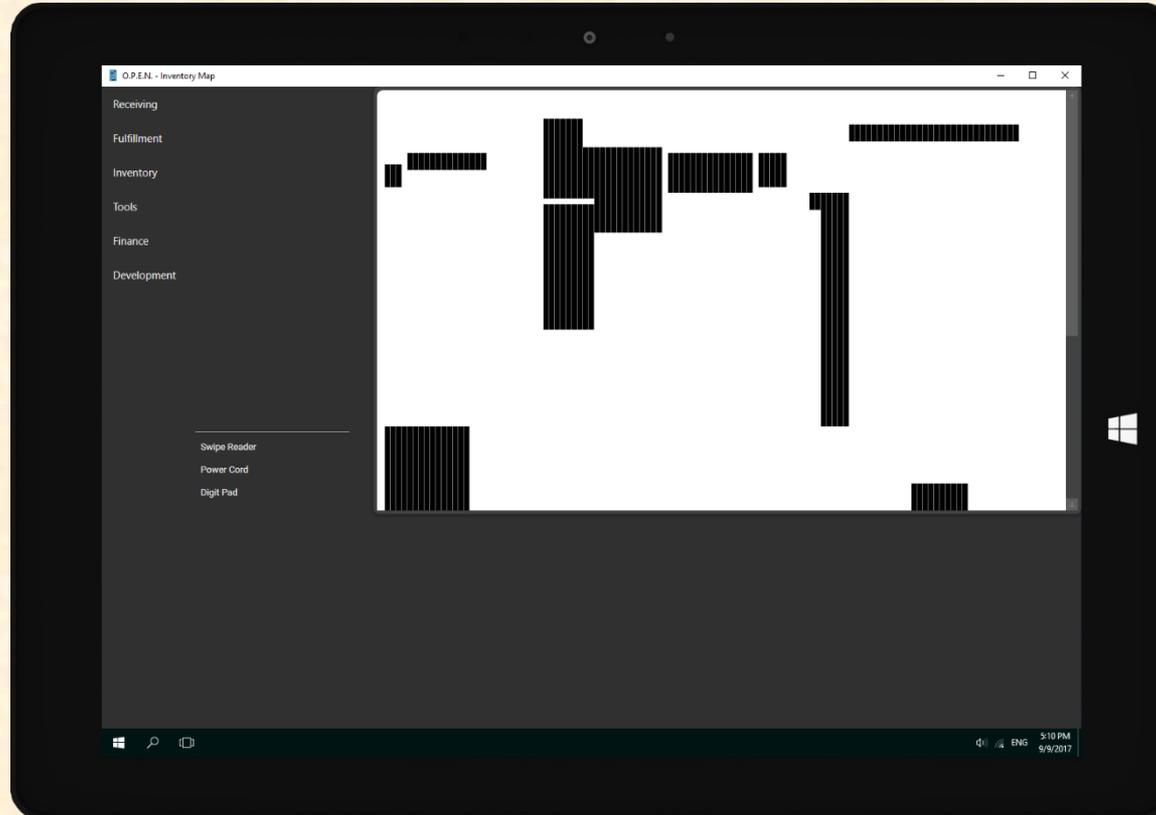


Team Phoenix Group
Alpha Presentation

Team Phoenix Group Alpha Presentation

e.

Inventory Map





Team Phoenix Group Beta Presentation

Team Phoenix Group Beta Presentation

Administration Panel

The screenshot displays the Grid Administration Panel interface. At the top, there are configuration fields for Rows, X Dimension (ft), Cell Dimension X (ft), and Select Dimension X (ft). Below these are fields for Cols, Y Dimension (ft), Cell Dimension Y (ft), and Select Dimension Y (ft). A 'Generate' button is located to the left of the Cols field. To the right of the configuration fields are radio buttons for 'DESELECT' and 'SELECT', and a dropdown menu for 'HIDE ENTITY' and 'SHOW ENTITY'. Further right are buttons for '100%' (likely a zoom level), 'Export Grid', and 'Add Entity'.

Below the configuration fields is the 'Import Grid' section, which includes a 'Choose File' button and the filename 'testGridAfterGrid_7_grid'. The 'Import Image' section includes a 'Choose File' button and the filename 'WarehouseMap.JPG', along with 'Load Grid' and 'Upload Grid' buttons.

The main area of the interface is a grid layout. On the left side of the grid, there is a list of items with 'edit' and 'delete' buttons next to them:

- 1 edit delete
- 2 edit delete
- 3 edit delete
- 4 edit delete
- 5 edit delete
- 6 edit delete
- 7 edit delete
- 8 edit delete
- 9 edit delete
- 10 edit delete
- 11 edit delete
- 12 edit delete
- Cage edit delete
- Order edit delete
- start edit delete
- Exceptions edit delete
- Quality edit delete
- Shipping edit delete
- mgr edit delete
- reviewing edit delete

The grid itself contains various colored blocks and labels, including 'Cage', 'Order Printing', 'Exceptions', 'Quality Control', and 'Equipment'. There are also numerical labels and arrows indicating relationships or dimensions within the grid.





Team Phoenix Group Beta Presentation



Team Phoenix Group
Design Day

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UNIVERSITY

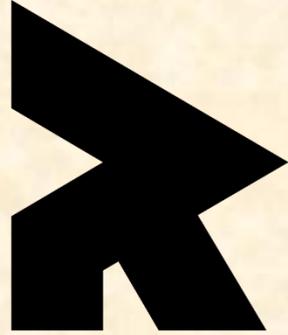
The Capstone Experience

Team Rook

Department of Computer Science and Engineering
Michigan State University
Fall 2017



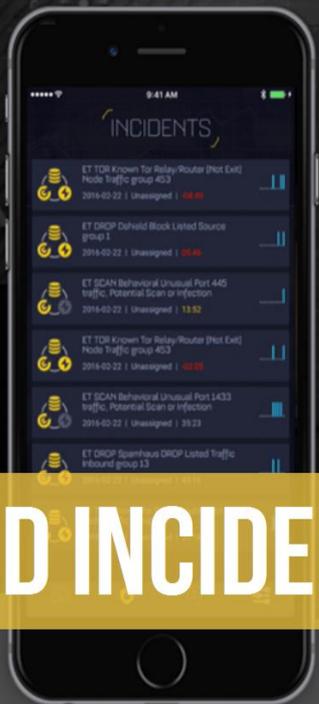
*From Students...
...to Professionals*



ROOK SECURITY



- HOME
- WHO WE ARE
- WHAT WE DO
- RESOURCES
- CAREERS
- CONTACT



WAR ROOM™

THE ONE-CLICK FORCE MULTIPLIER

Extending the FORCE+ platform, War Room™ provides real-time incident and crisis management for your entire team.



UNIFIED INCIDENT MANAGEMENT

Team Rook Project Overview

Cloud Security Event Processing and Alerting Platform

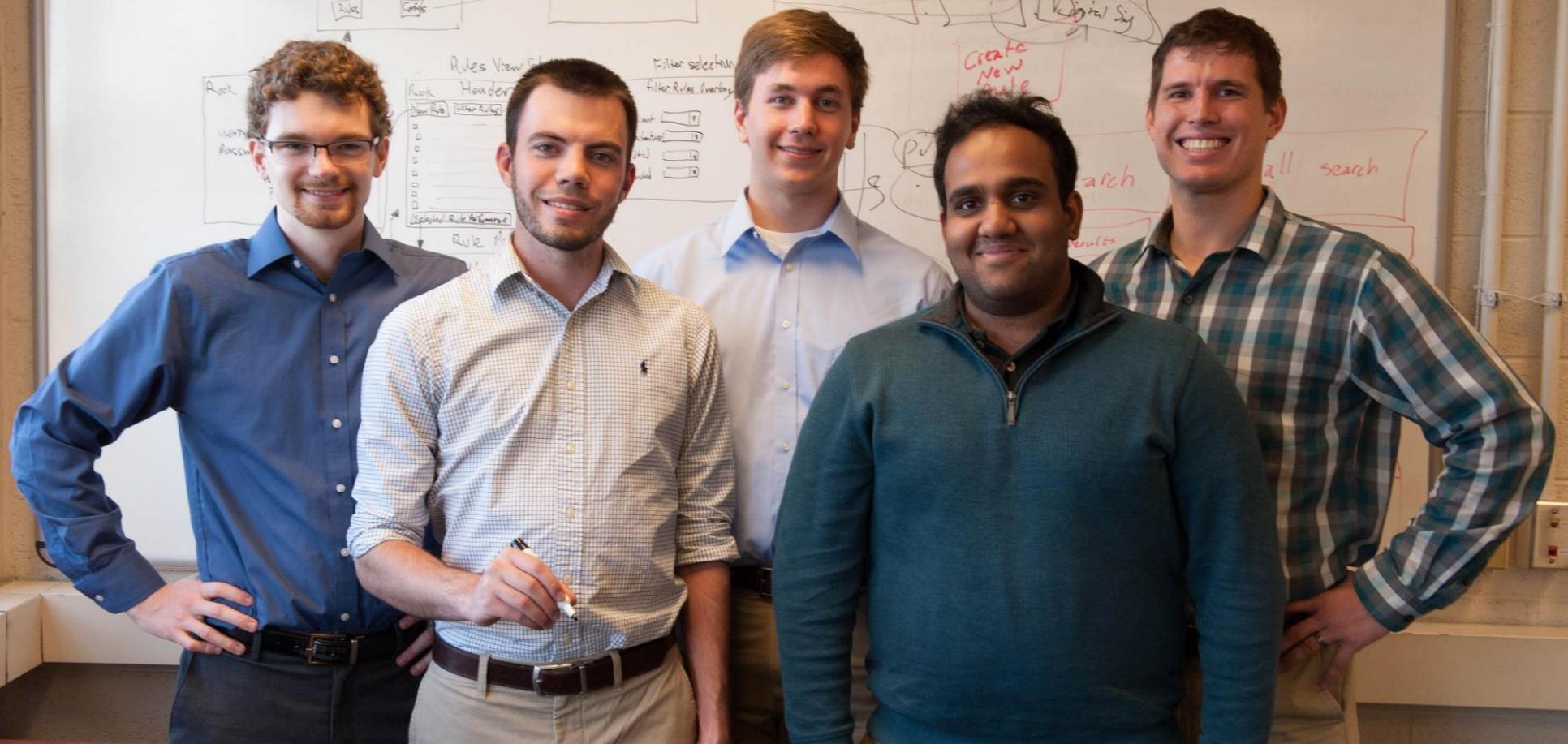
- Functionalities
 - Analyze Cyber Security Events
 - Using a Serverless Architecture
 - That Scales to Millions of Events Per Day
- Features
 - Design and Build a Web App
 - Support Management of Correlation Rules
 - Edit Existing Rules
 - Examine Performance of New Rules
 - Detect and Notify When Alerts or Rules Triggered
 - Accommodate Increasing Scale Using Amazon Cloud
 - Integrate with Rook's Force Platform
- Technologies
 - Amazon Athena
 - Amazon Simple Email Services (SES)
 - Amazon Lambda
 - Amazon S3
 - Elasticsearch
 - Ubuntu 16.04
 - Python / Django
 - CSS / HTML / JavaScript / JSON
 - RESTful Web Services



ROOK
SECURITY
Indianapolis, Indiana

The Capstone Experience





Team Rook

Jake Fenton, Brian Jones, Alex Fall, Kaushik Sridasyam, Bradley Baker

Team Rook Project Plan Presentation

ROOK SECURITY

Update Rule

Rule name:

Architechure: ▼

Occurances until alert: ▲ ▼

Rule specification json



Profiles

Screen Mockup: Client Profiles



Client Profile

Current Rules For Client

<input type="checkbox"/>	Rule	Who To Contact	Last Breach
<input type="checkbox"/>	Malicious Event	bobby@gsmsat.com	23/06/2016
<input type="checkbox"/>	Ball Breaching Packet	support@rook.com	14/20/NOV2017
<input type="checkbox"/>	Too many Requests	alan@theman.com	22/30/APR/22

Client Contacts



The Capstone Experience

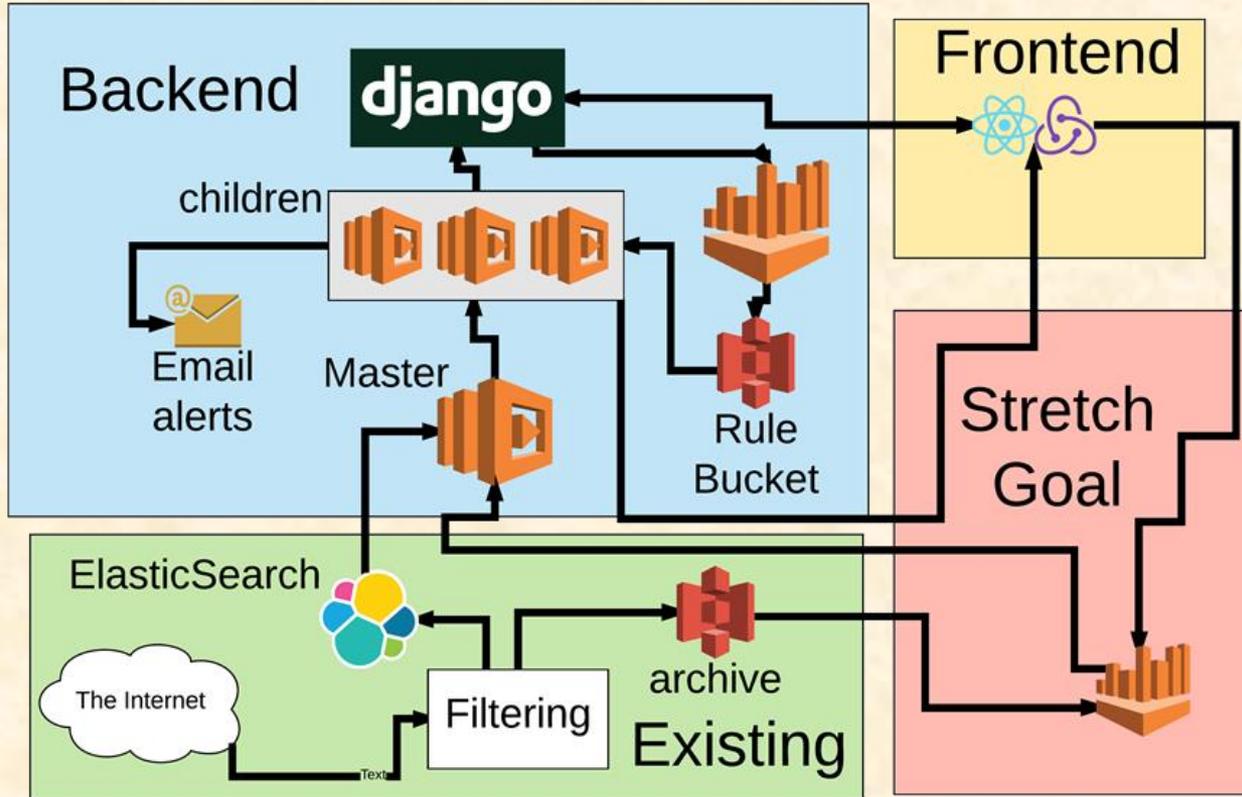
Team Rook Project Plan

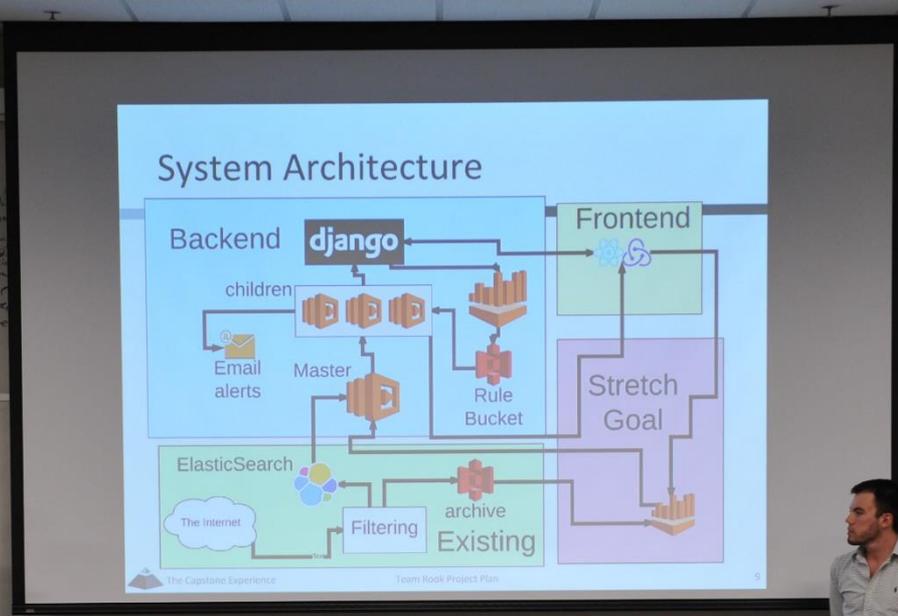
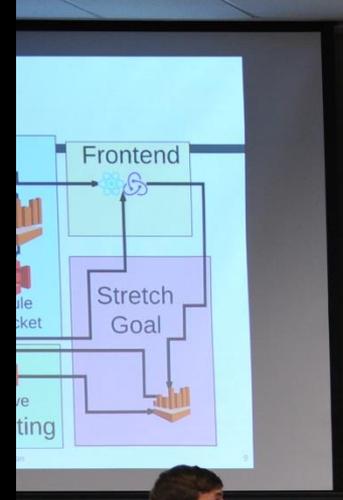
Team Rook Project Plan Presentation

Team Rook Project Plan Presentation

e.

Architecture Diagram





Team Rook Project Plan Presentation

Team Rook Project Plan Presentation

Screen Mockup



Client Profile

Add Rule

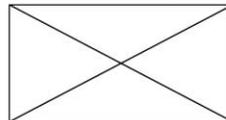
Edit Rule

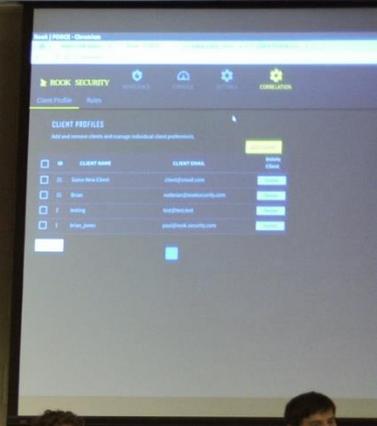
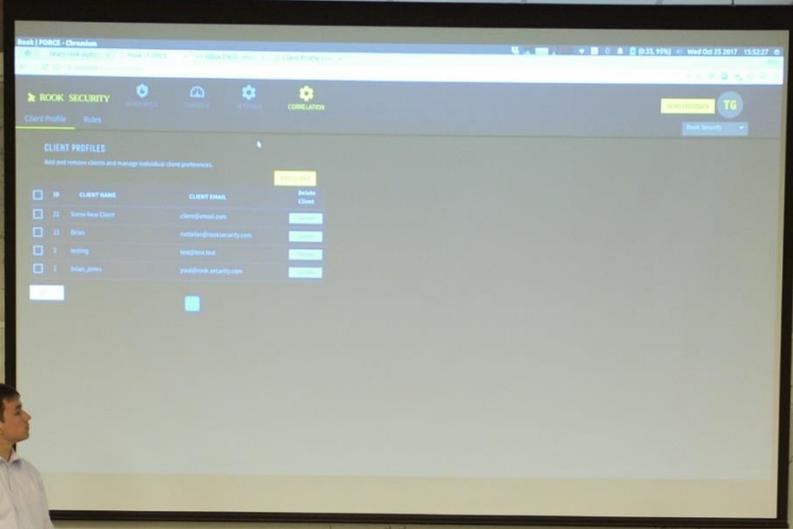
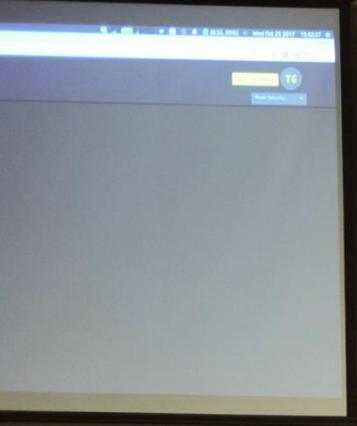
Delete Rule

Current Rules For Client

<input type="checkbox"/>	▼ Rule	▼ Who To Contact	▼ Last Broke
<input checked="" type="checkbox"/>	Malicious Event	bobbyD@gmail.com	20:00DEC2016
<input checked="" type="checkbox"/>	Bad Smelling Packet	support@rook.com	14:30NOV207
<input checked="" type="checkbox"/>	Too many Requests	stan@theman.com	22:30APR22

Client Contacts





Team Rook Alpha Presentation

Team Rook Alpha Presentation

User Interface – Client Profile View

CUSTOMER SETTINGS

Customer Name:
Example Inc.

Email:
contact@example.org

Index Date Format:
YYY:MM:DD

Local DB Name:
local.db

Whitelist by IP or domain

Add

- notathreat.org Remove
- 11.22.33.44 Remove

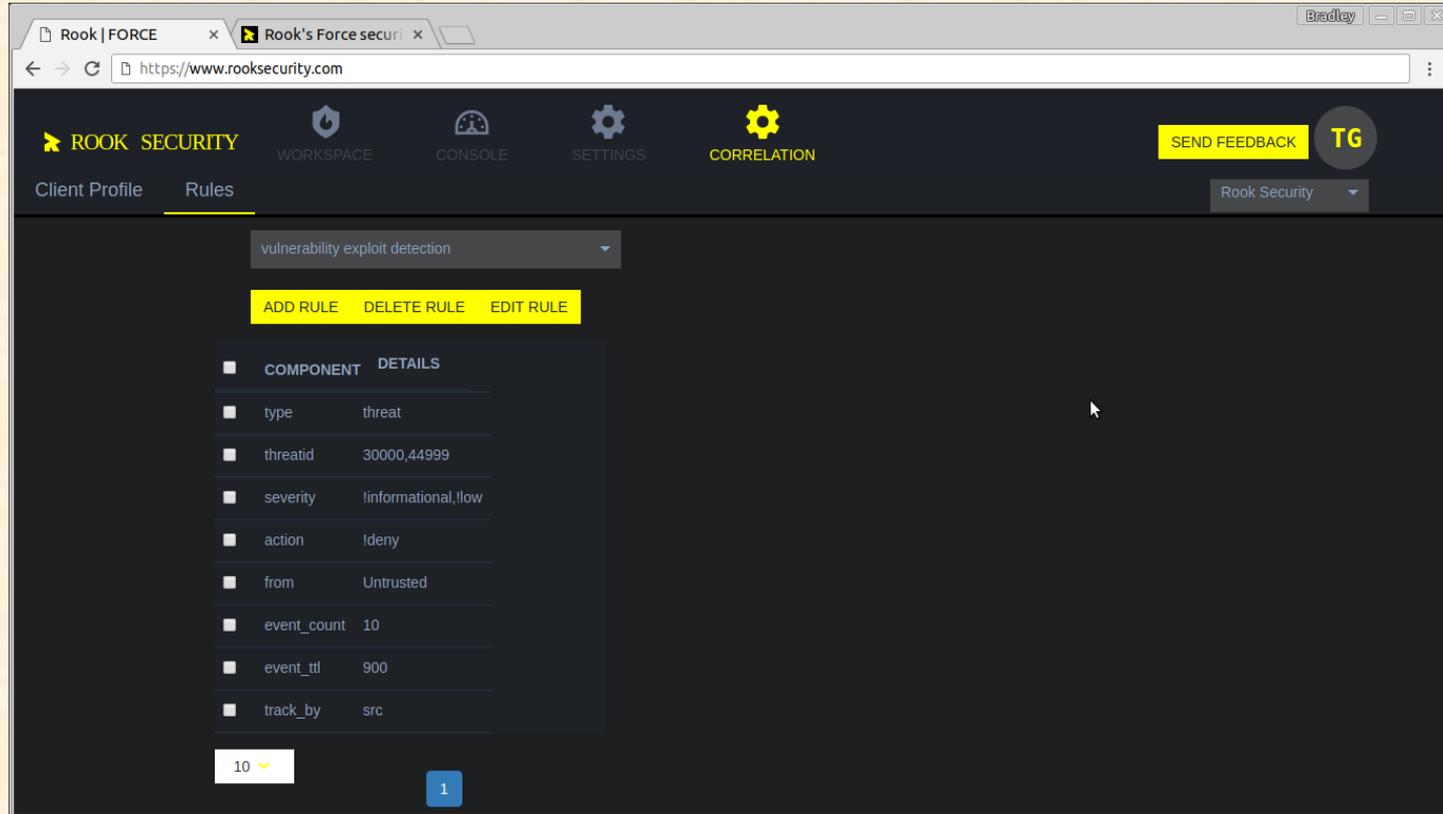
CANCEL SAVE CHANGES



Team Rook Alpha Presentation

e.

User Interface – Rule View



The screenshot displays the Rook Security web interface. The browser address bar shows the URL <https://www.rooksecurity.com>. The navigation menu includes Rook Security, Workspace, Console, Settings, and Correlation. A 'SEND FEEDBACK' button and a 'TG' profile icon are also visible. The main content area shows the 'Rules' section for a 'vulnerability exploit detection' rule. Below the rule name are buttons for 'ADD RULE', 'DELETE RULE', and 'EDIT RULE'. A table displays the rule's configuration details:

COMPONENT	DETAILS
type	threat
threatid	30000,44999
severity	!informational,!low
action	!deny
from	Untrusted
event_count	10
event_ttl	900
track_by	src

At the bottom of the interface, there is a dropdown menu set to '10' and a blue button with the number '1'.





Team Rook
Alpha Presentation

Team Rook Alpha Presentation

e.

Client Profile Page

The screenshot shows a web browser window with the URL `localhost:8082/correlation`. The application interface is dark-themed and includes a navigation bar with icons for Workspace, Console, Settings, and Correlation. The 'Correlation' section is active, and the 'Client Profile' sub-page is selected. Below the navigation, there is a heading 'CLIENT PROFILES' and a description: 'Add and remove clients and manage individual client preferences.' A yellow 'ADD CLIENT' button is positioned above a table of client profiles. The table has columns for 'CLIENT NAME', 'CLIENT EMAIL', and 'Delete Client / Modify'. Each row contains a client name, an email address, and two buttons: 'Delete' (grey) and 'EDIT' (yellow). At the bottom of the table, there is a dropdown menu set to '10' and a blue button with the number '1'.

CLIENT NAME	CLIENT EMAIL	Delete Client	Modify
multi-firewall client	multi@firewall.com	Delete	EDIT
some new boring client	asdfklafs@asdfksd.com	Delete	EDIT
new customer	cust@email.com	Delete	EDIT
full stack test	moo@cow.com	Delete	EDIT
good	good@er.com	Delete	EDIT
some new profile	new@profile.com	Delete	EDIT





Team Rook Beta Presentation

Team Rook Beta Presentation

Add/Edit Client Modal

CUSTOMER SETTINGS

Customer Name:

Customer Full Name:

Email:

Incidents Index:

Index Date Format:

Local DB Name:

Whitelist by IP or domain

- google.com
- 192.168.1.1

Meraki

- Client Name
- Connections to Known Bad URI
- OS Exploit attempt



Team Rook Beta Presentation

e.

Rules Page

The screenshot shows a web browser window with the URL `localhost:8082/correlation`. The application interface is dark-themed and includes a navigation bar with icons for ROOK SECURITY, WORKSPACE, CONSOLE, SETTINGS, and CORRELATION (the active page). A user profile icon labeled 'TG' is in the top right. Below the navigation, there are tabs for 'Client Profile' and 'Rules'. A dropdown menu shows 'Meraki' as the selected client profile, with an 'ADD' button below it. The main content area displays a table of rules:

TITLE	DELETE	EDIT
Connections to Known Bad URI	DELETE	EDIT
OS Exploit attempt	DELETE	EDIT
Known-bad activity	DELETE	EDIT
Policy Violation	DELETE	EDIT
Malware Infection Detected	DELETE	EDIT

At the bottom of the table, there is a pagination control showing '5' items and a list of page numbers: 1, 2, 3, 4, 5, with a right arrow.





Team Rook Beta Presentation

Team Rook Beta Presentation

e.

Add/Edit Rule Modal

The screenshot displays a web browser window with the URL `localhost:8082/correlation`. The browser's address bar shows the page title "Rook | FORCE" and the user name "Bradley". The main content area is titled "ROOK SECURITY" and features a sidebar with navigation options: "Client Profile" and "Rules". The "Rules" section is active, showing a list of rules with a search bar and an "ADD" button. The rules listed include "Connections to Known Bad URI", "OS Exploit attempt", "Known-bad activity", "Policy Violation", "Malware Infection Detected", "Indicator of Compromise", "test5", "test4", "Protocol Exploit attempt", and "Exploit attempt".

The "EDIT RULE" modal is open, displaying the following fields:

- title**: Connections to Known Bad URI
- type**: meraki
- module**: ids-alerts
- alert_message**: BLACKLIST URI*
- direction**: egress
- event_count**: 1
- event_ttl**: 9
- track_by**: src_ip

At the bottom of the modal, there are two buttons: "CANCEL" and "EDIT RULE".





Team Rook
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Spectrum Health

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

SPECTRUM HEALTH





Search



Advanced Search



Who We Are

Patients & Visitors

Medical Services

Quality

Locations

Online Services

Health Information

Find a Doctor

One of the Best in the U.S.

We are one of the top children's hospitals for care in cancer, nephrology and urology.



MyHealth

Manage your health information from a secure online account.

Enroll

Sign-in

Locations

Select Type of Location



Excellence Recognized

SEARCH COMPARE

Find a Doc

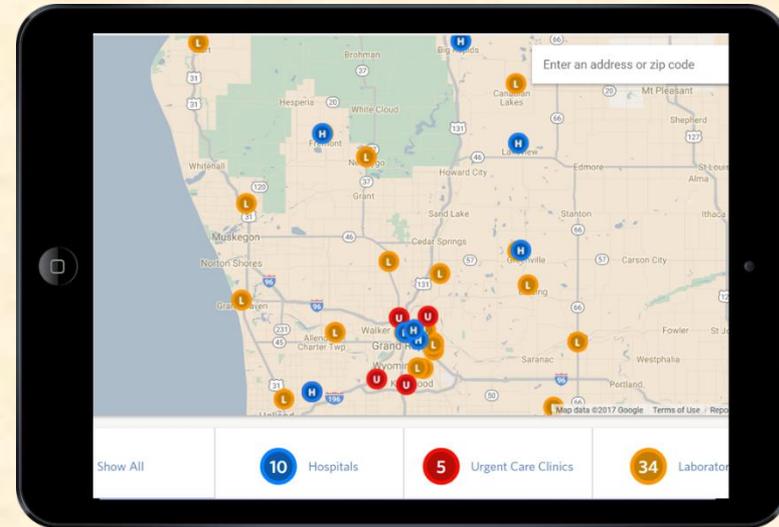


Nationally Recognized

Team Spectrum Health Project Overview

Spectrum Health Symptom Checker

- Functionalities
 - Recommend Spectrum Health Services to Patients
 - Based on Symptoms They Provide
- Features
 - Design and Build Web and Mobile Apps
 - Match Keywords with Symptoms
 - Recommend Health Service
 - eVisit
 - Urgent Care
 - Emergency Room
 - Enable Urgent Care Visit
 - Give Nearest Location
 - Reserve Place in Line
 - Leverage Machine Learning
 - Provide Administrative App
- Technologies
 - CSS / HTML / JavaScript / PHP
 - Apple iPads and iPhones (iOS) / Swift
 - Google Android Tablets and Phones / Java
 - Microsoft C# / .NET
 - Entity Framework Core
 - Microsoft SQL Server



SPECTRUM HEALTH

Grand Rapids, Michigan





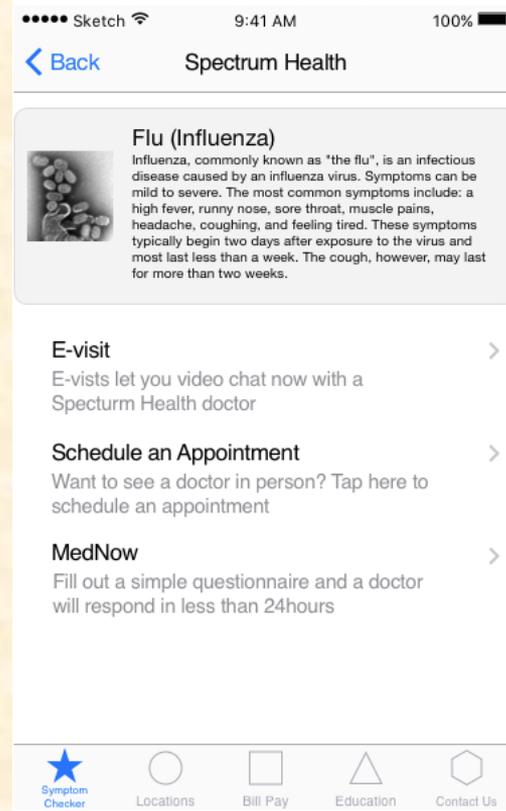
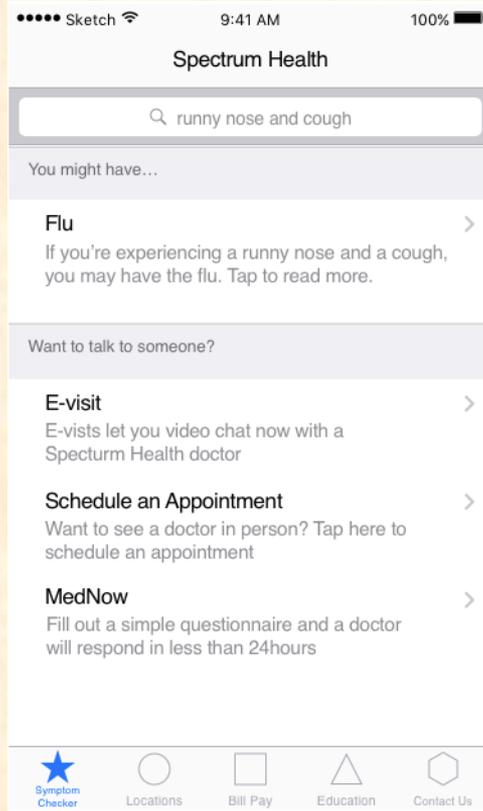
Team Spectrum Health

Silas Brumwell, Jose Hernandez, Morgan Muyskens, Josh Miles, Chris McGrath

Team Spectrum Health Project Plan Presentation

e.

Screen Mockup





Screen Mockup: Android Application

SPECTRUM HEALTH

- SYMPTOM CHECKER
- PAY MY BILL
- CONTACT US
- CAREERS
- EDUCATION CHECKER

Enter what symptoms you're experiencing:

I have a cough and a runny nose

Based on your symptoms, we suggest:

Visiting a nearby Spectrum Health Urgent Care Facility.

Nearby Locations

Hold my place in line

Spectrum Health Project Plan

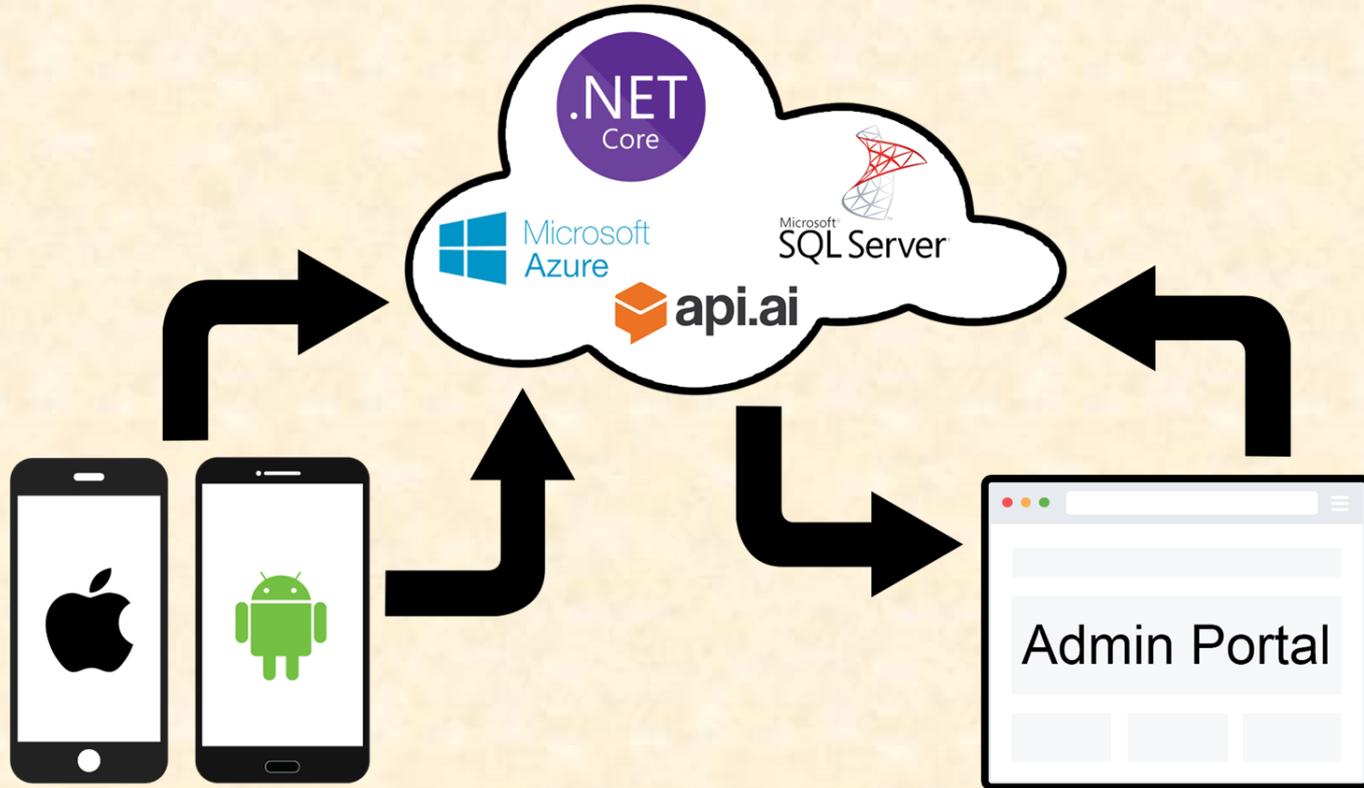
Q14 -
 mixed trait
 H_2O potash
 Calciz -
 Climate ch
 Why does it
 react? H_2O

Team Spectrum Health
 Project Plan Presentation

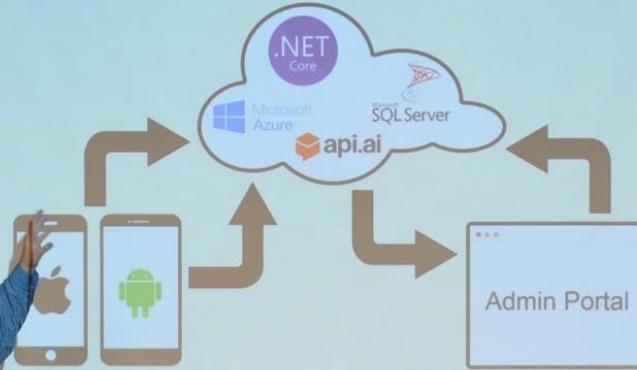
MICHIGAN STATE UNIVERSITY

Team Spectrum Health Project Plan Presentation

Architecture Diagram



System Architecture



The Capstone Experience

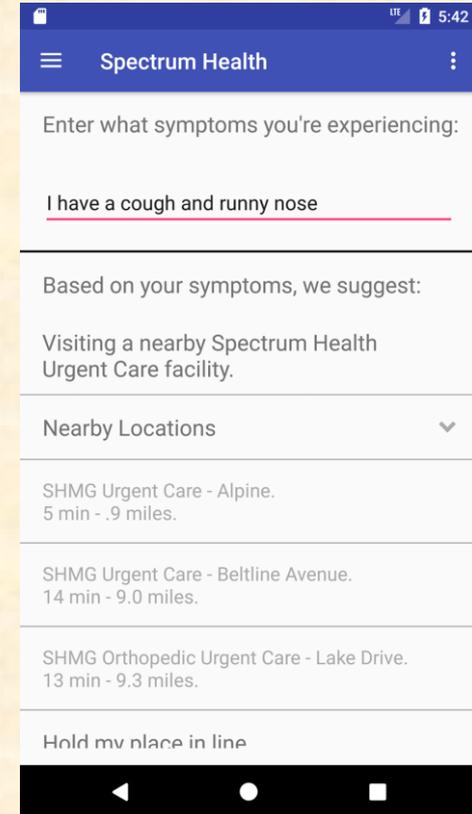
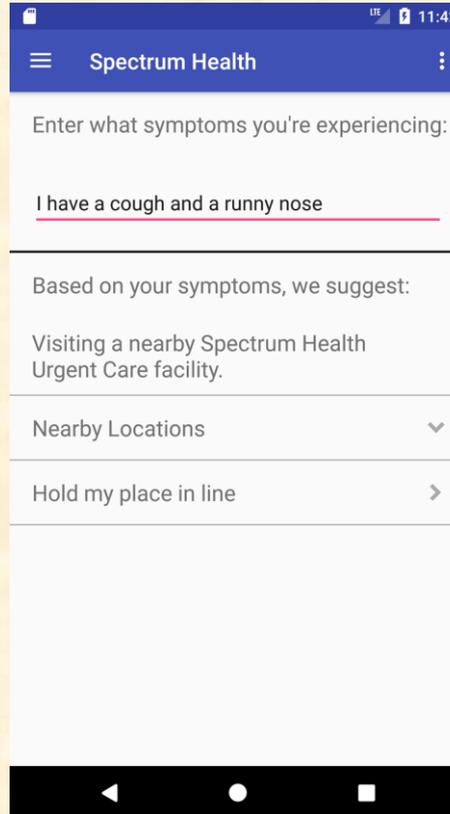
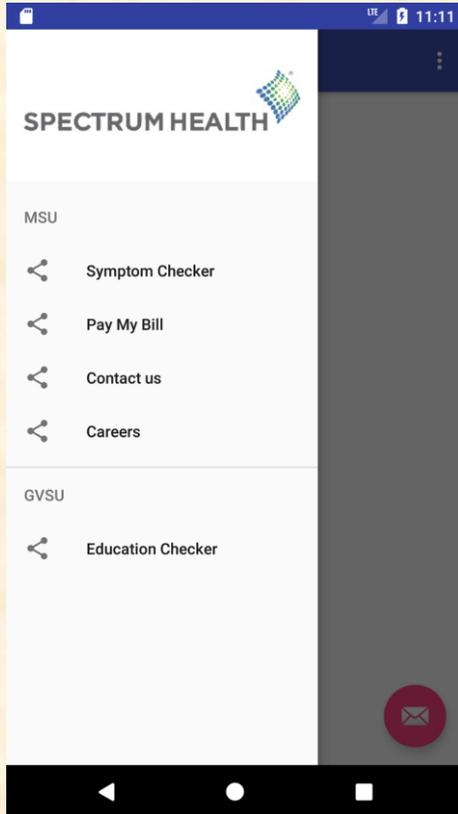
Spectrum Health Project Plan

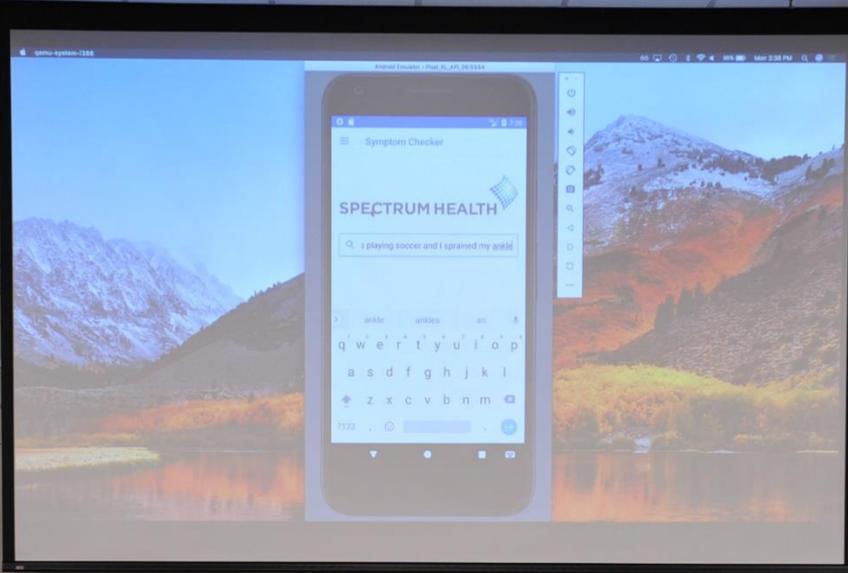
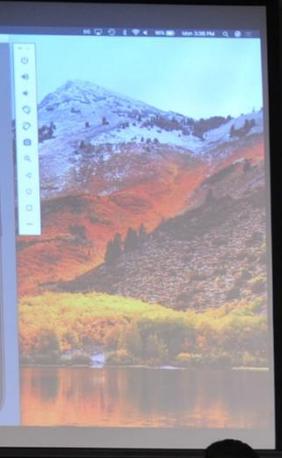
Team Spectrum Health Project Plan Presentation

Team Spectrum Health Project Plan Presentation

e.

Screen Mockup





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of.

Q1 - 10/12
Review
Primary

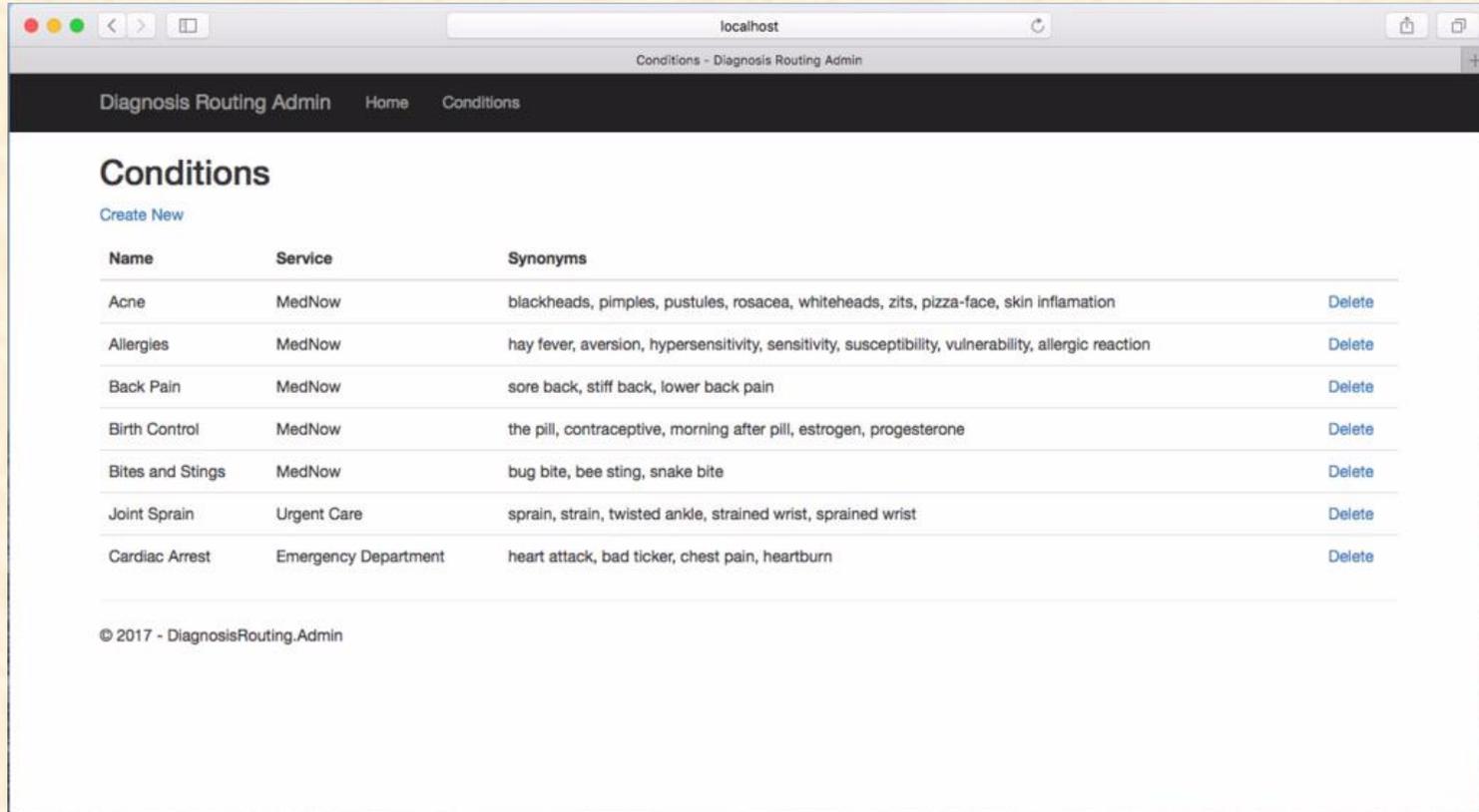


Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

e.

Admin Portal



The screenshot shows a web browser window at localhost displaying the 'Conditions - Diagnosis Routing Admin' interface. The page has a dark header with navigation links for 'Diagnosis Routing Admin', 'Home', and 'Conditions'. Below the header, the title 'Conditions' is followed by a 'Create New' link. A table lists various medical conditions with columns for Name, Service, Synonyms, and a Delete button. The conditions listed are Acne, Allergies, Back Pain, Birth Control, Bites and Stings, Joint Sprain, and Cardiac Arrest. At the bottom of the page, there is a copyright notice: '© 2017 - DiagnosisRouting.Admin'.

Name	Service	Synonyms	
Acne	MedNow	blackheads, pimples, pustules, rosacea, whiteheads, zits, pizza-face, skin inflammation	Delete
Allergies	MedNow	hay fever, aversion, hypersensitivity, sensitivity, susceptibility, vulnerability, allergic reaction	Delete
Back Pain	MedNow	sore back, stiff back, lower back pain	Delete
Birth Control	MedNow	the pill, contraceptive, morning after pill, estrogen, progesterone	Delete
Bites and Stings	MedNow	bug bite, bee sting, snake bite	Delete
Joint Sprain	Urgent Care	sprain, strain, twisted ankle, strained wrist, sprained wrist	Delete
Cardiac Arrest	Emergency Department	heart attack, bad ticker, chest pain, heartburn	Delete

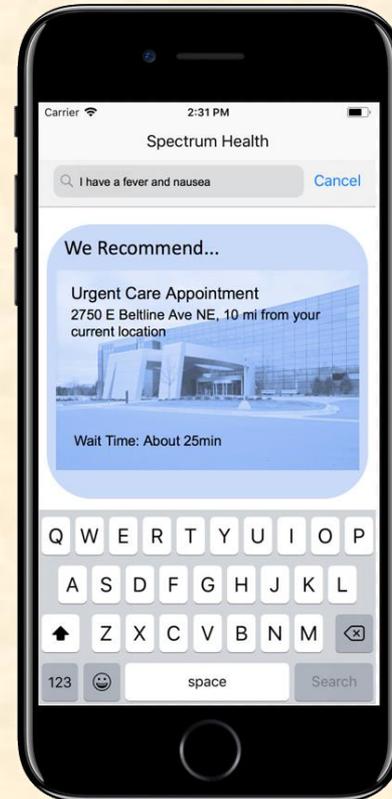
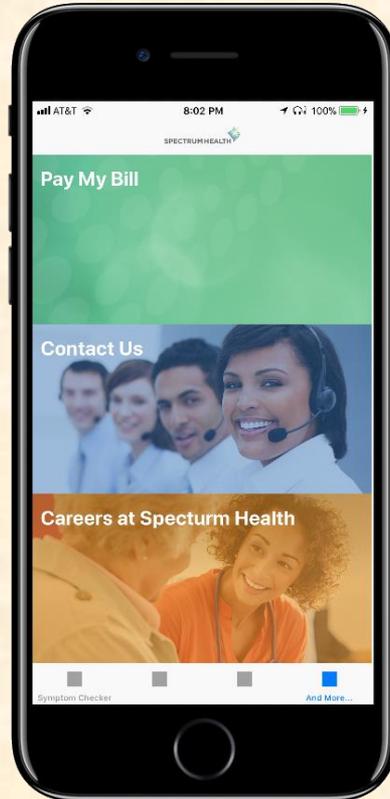
© 2017 - DiagnosisRouting.Admin



Team Spectrum Health Alpha Presentation

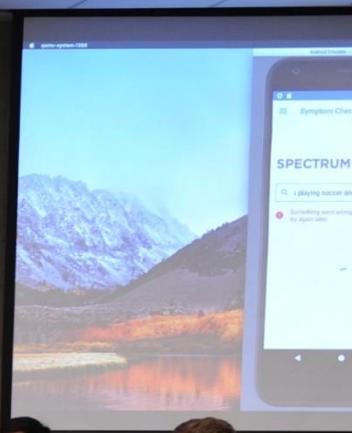
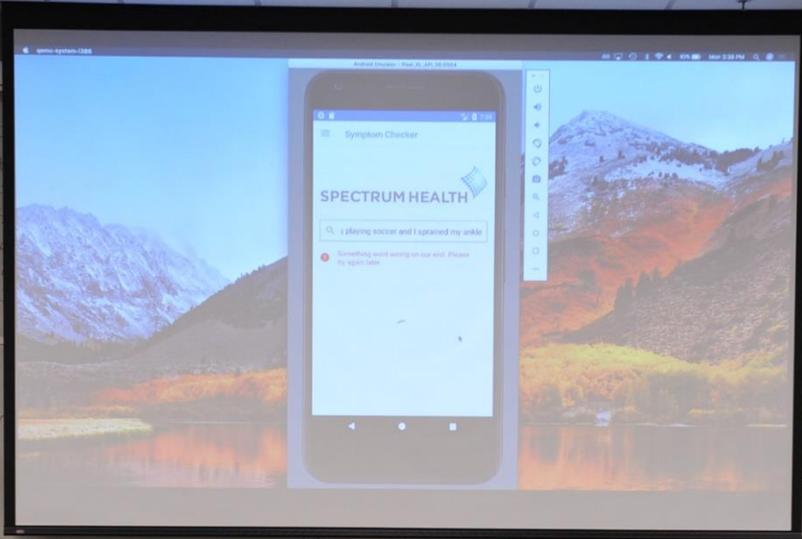
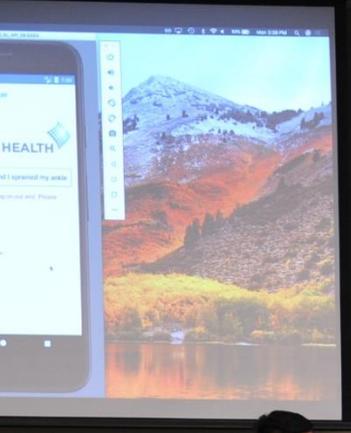
e.

iPhone App



The Capstone Experience





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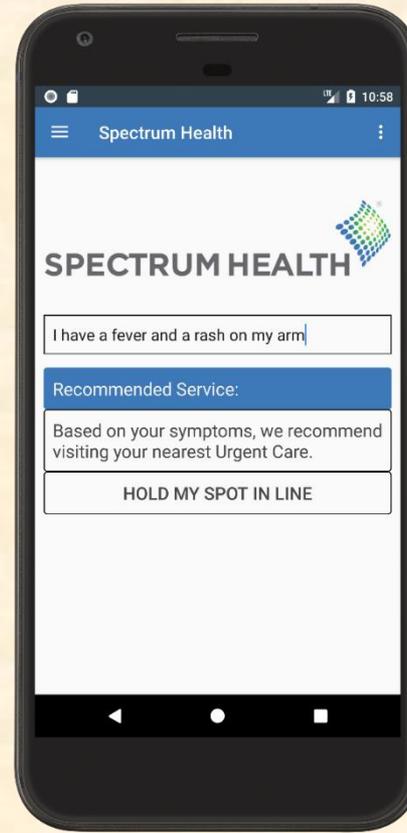
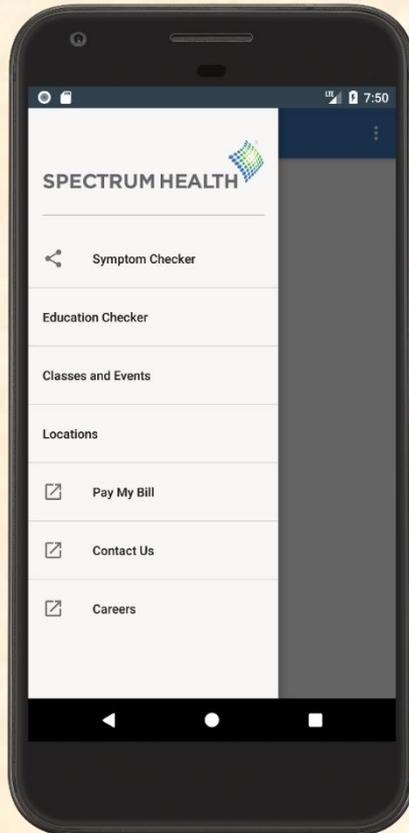
11-10/12
Ravi
Anthony

Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

e.

Android Application



The Capstone Experience



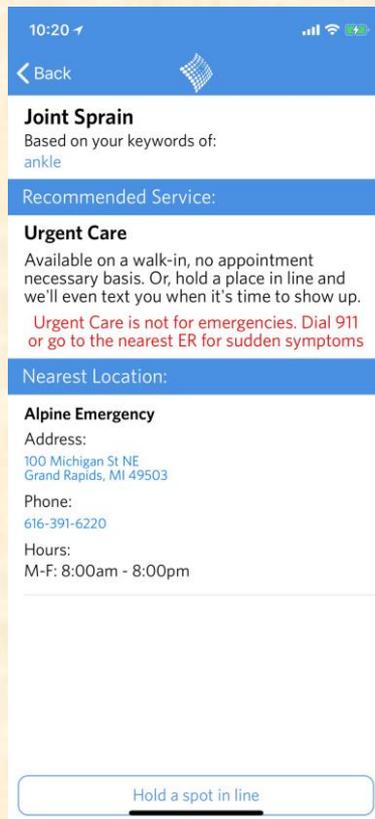
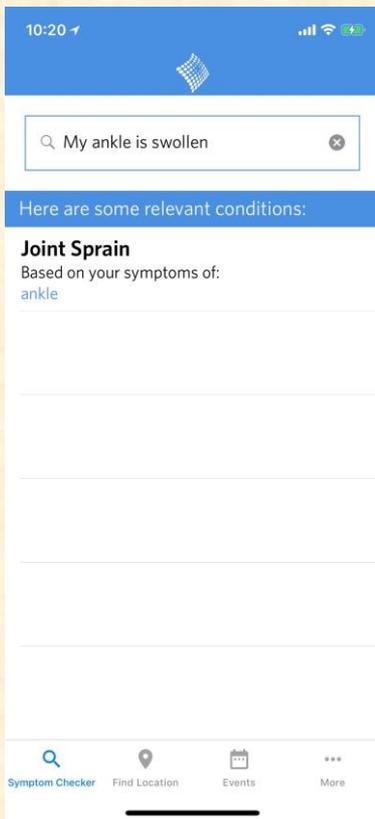


Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

e.

iOS Application



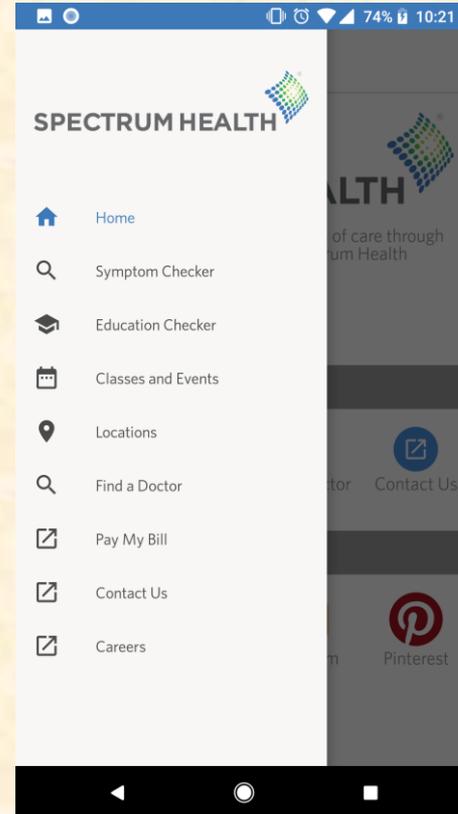
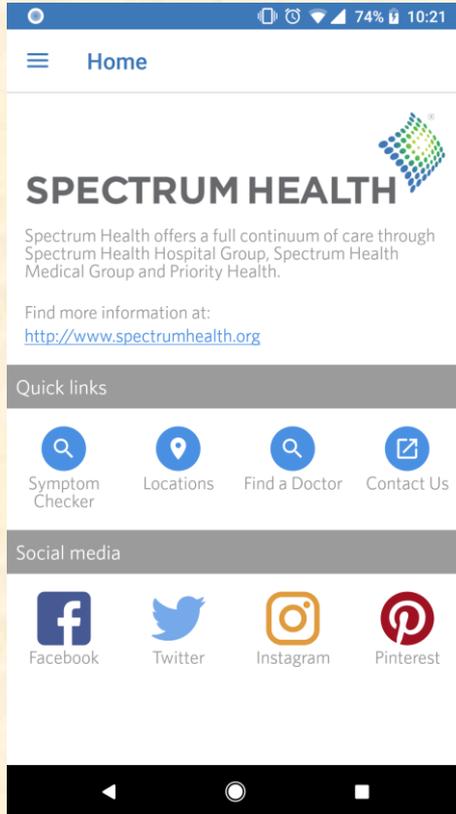
The Capstone Experience



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e.

Android Application





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Team Spectrum Health Beta Presentation

e.

Admin Portal – View Conditions

Diagnosis Routing Admin Home Conditions

Conditions

[Create New](#)

Name	Service	Synonyms	
Allergies	MedNow	hay fever, aversion, hypersensitivity, sensitivity, susceptibility, vulnerability, allergic reaction	Edit Delete
Back Pain	MedNow	sore back, stiff back, lower back pain	Edit Delete
Birth Control	MedNow	the pill, contraceptive, morning after pill, estrogen, progesterone	Edit Delete
Bites and Stings	MedNow	bug bite, bee sting, snake bite	Edit Delete
Cardiac Arrest	Emergency Department	heart attack, bad ticker, chest pain, heartburn	Edit Delete
Acne	MedNow	blackheads, pimples, pustules, rosacea, whiteheads, zits, pizza-face, skin inflammation	Edit Delete
Joint Sprain	Urgent Care	sprain, strain, twisted ankle, strained wrist, sprained wrist	Edit Delete
Alcohol Problem	Emergency Department	severe diarrhea	Edit Delete

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Team Spectrum Health
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Symantec

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



Symantec



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Eliminate the Password

Improve ease of use without sacrificing security




Single sign-on with
strong authentication


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Access Control


User
Directory

[Request a Call](#)

Symantec gives you deep visibility and a single point of control for accessing data through a comprehensive solution that provides advanced information protection.

Passwordless Authentication

For network, online, or mobile apps

Extend Passwordless Authentication

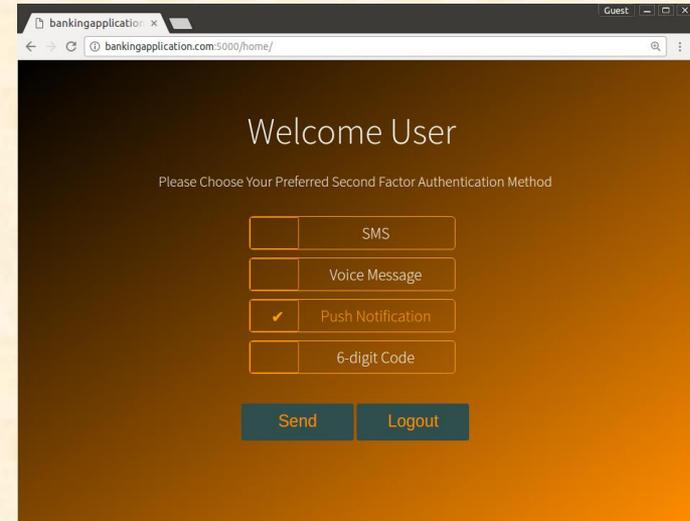
To all cloud-based apps

Team Symantec

Project Overview

Secure Application Layer API Proxy

- Functionalities
 - Provide RESTful API to Symantec's Multi-Factor System VIP
 - Via a Proxy Layer in Front of Native SOAP Layer
 - So Any RESTful Framework Can Integrate with VIP
- Features
 - Focus on User Centric Services
 - Management APIs
 - Authentication APIs
 - Query APIs
 - Preserve Parity Between SOAP and REST APIs
 - Implement a Versioning Scheme
 - Include "Jurisdiction Hash" (JHASH) as Path Parameter
 - Deliver Integration Tests
- Technologies
 - Symantec VIP and VIP Access Manager.
 - Simple Object Access Protocol (SOAP) Web Services
 - Representational State Transfer (REST) Web Services
 - StrongLoop / Node.js



Mountain View, California

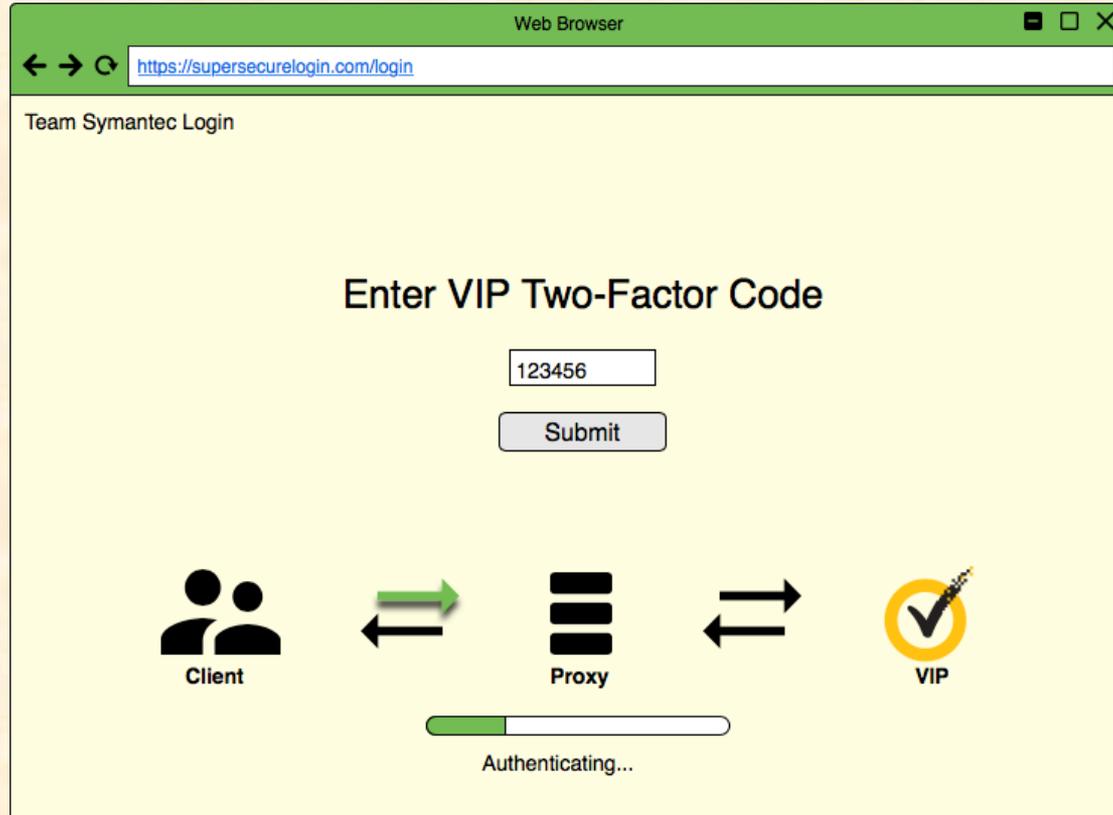


Team Symantec

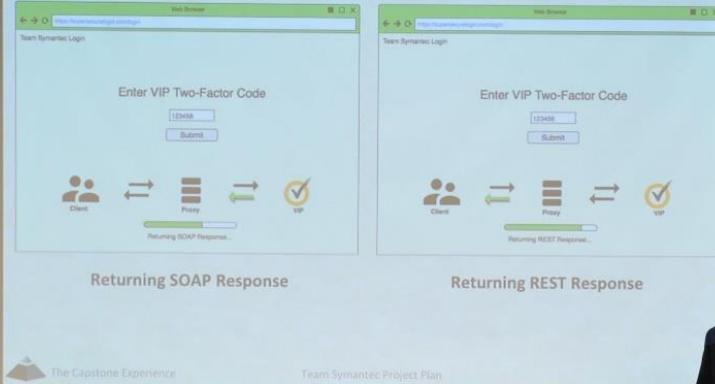
Steven Kneiser, Yili Luo, Jacob Carl, Lauren Allswede, TJ Kelly

Team Symantec Project Plan Presentation

Screen Mockup



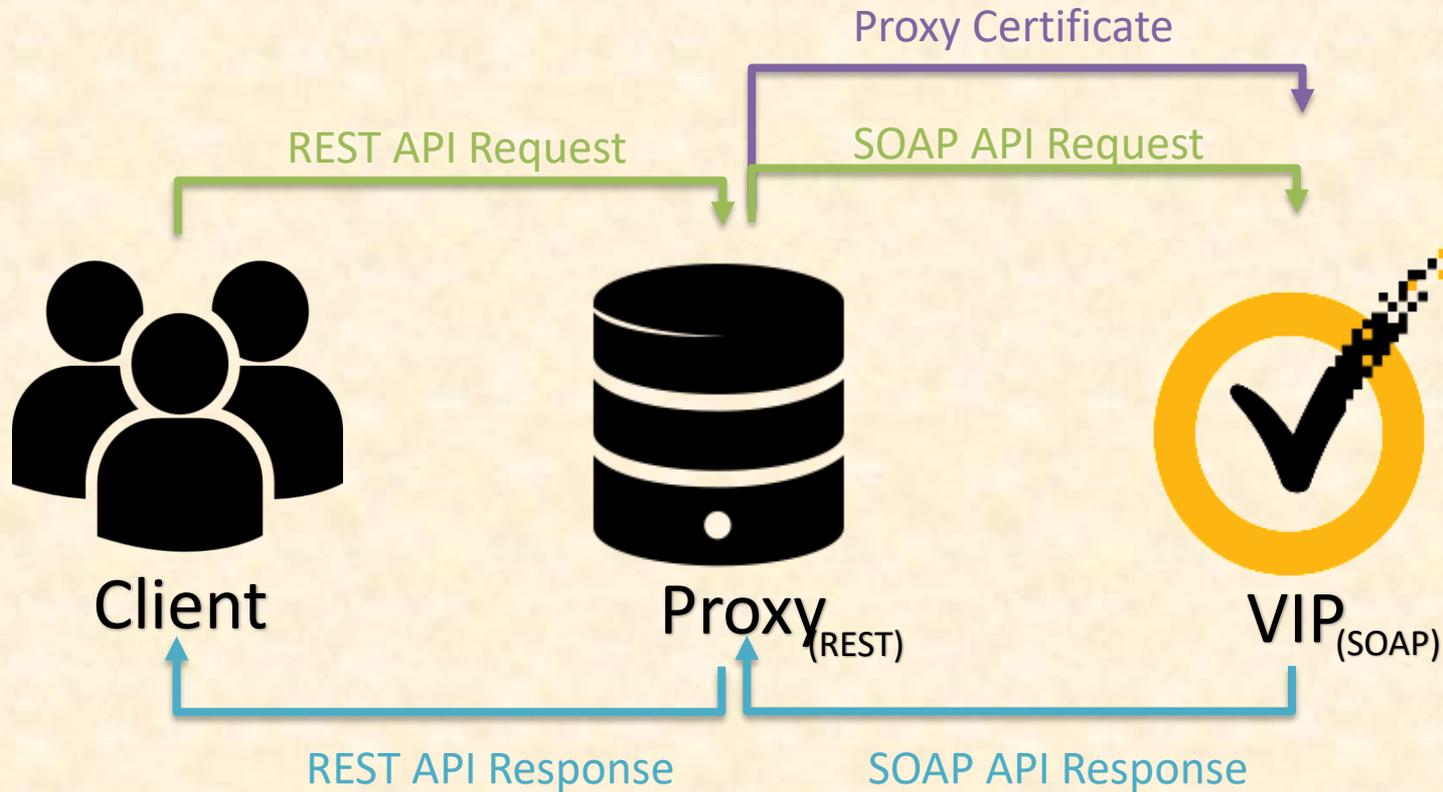
Screen Mockup: Converting SOAP to REST



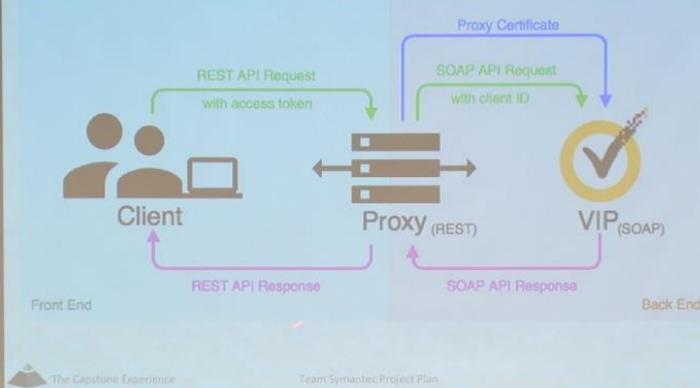
Team Symantec Project Plan Presentation

Team Symantec Project Plan Presentation

Architecture Diagram



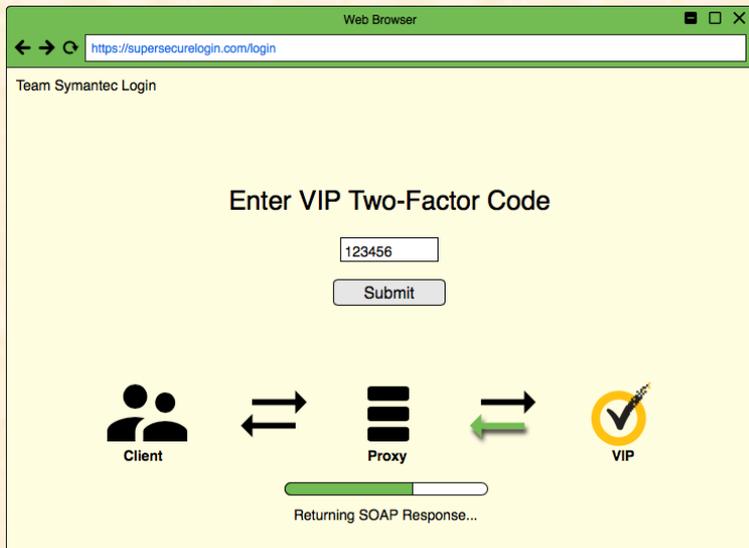
System Architecture



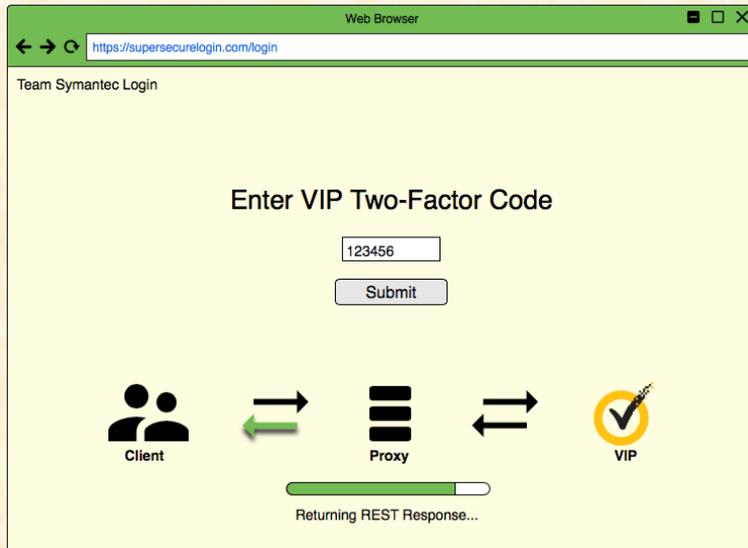
Team Symantec
Project Plan Presentation

Team Symantec Project Plan Presentation

Screen Mockup

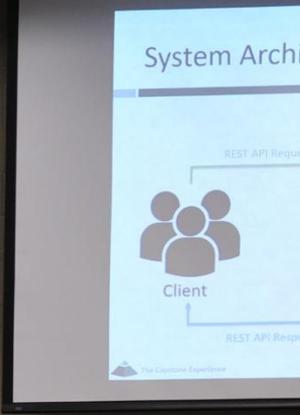
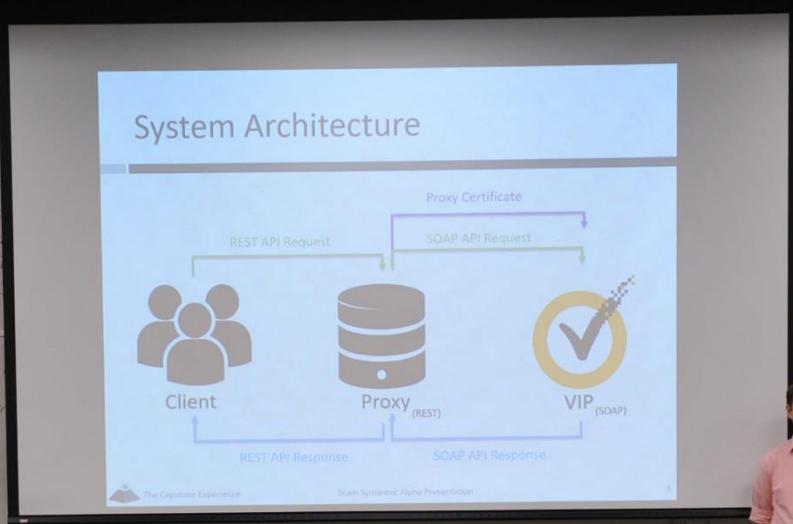
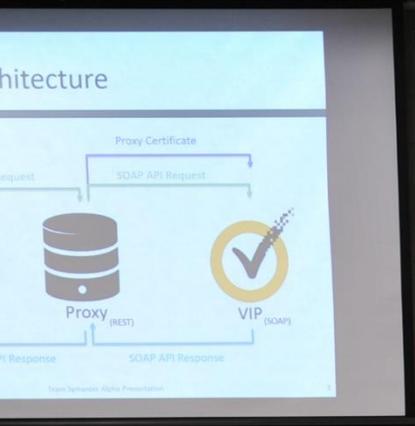


Returning SOAP Response



Returning REST Response





Team Symantec
Alpha Presentation

Team Symantec Alpha Presentation

e.

Entering One-Time Password (OTP)

OTP Verification x

localhost/otp.html?email=

Security Code Verification

Please enter Security Code from your VIP credential.

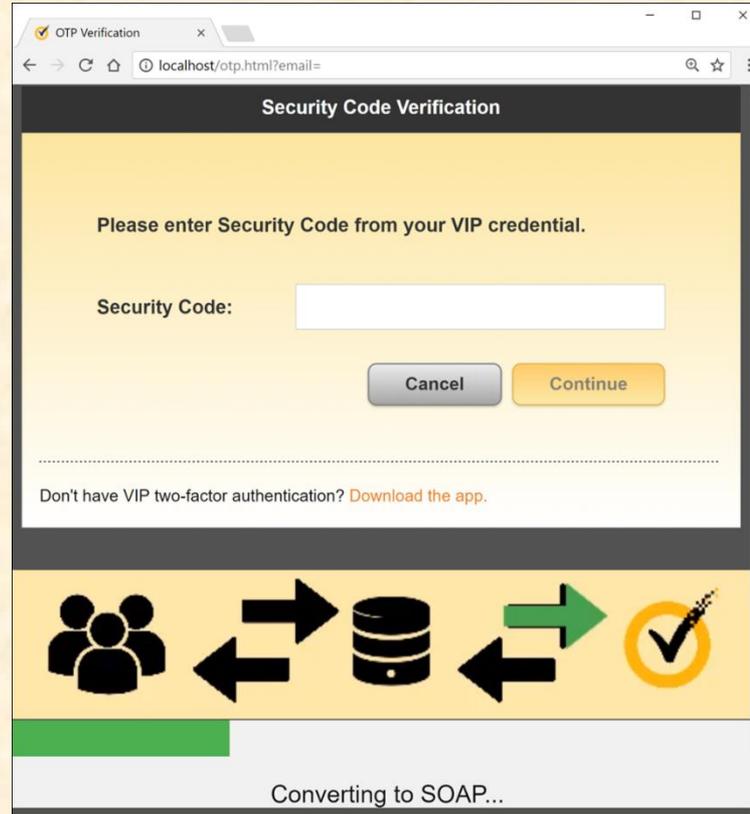
Security Code:

Don't have VIP two-factor authentication? [Download the app.](#)



Team Symantec Alpha Presentation

Translation Process





Team Symantec Alpha Presentation

Team Symantec Alpha Presentation

e.

Final JSON Body



The screenshot shows a web browser window titled "Login Confirmation" with the URL "localhost:51088/confirmation.html?email=caojirh&otp=0167...". The page content includes a "Success" header, a large green checkmark, and a "JSON Response" section. The JSON response is a list of 13 items, with the first item being a JSON object containing various fields and their values.

```
1. {  
2.   "credentialIdField": "SYM286142563",  
3.   "credentialTypeField": 0,  
4.   "credentialTypeFieldSpecified": true,  
5.   "transactionIdField": null,  
6.   "pushDetailField": null,  
7.   "authContextField": null,  
8.   "requestIdField": "1234567890",  
9.   "statusField": "AAA=",  
10.  "statusMessageField": "Success",  
11.  "detailField": null,  
12.  "detailMessageField": null  
13. }
```

Restart





Team Symantec Beta Presentation

Team Symantec Beta Presentation

e.

Login Screen

App Login

localhost:51088

Sign In

Username:

Password:

New User? [Create an Account.](#)

[Forgot your password?](#)

Enabled by:



Symantec
Validation &
ID Protection

[Sign In](#)

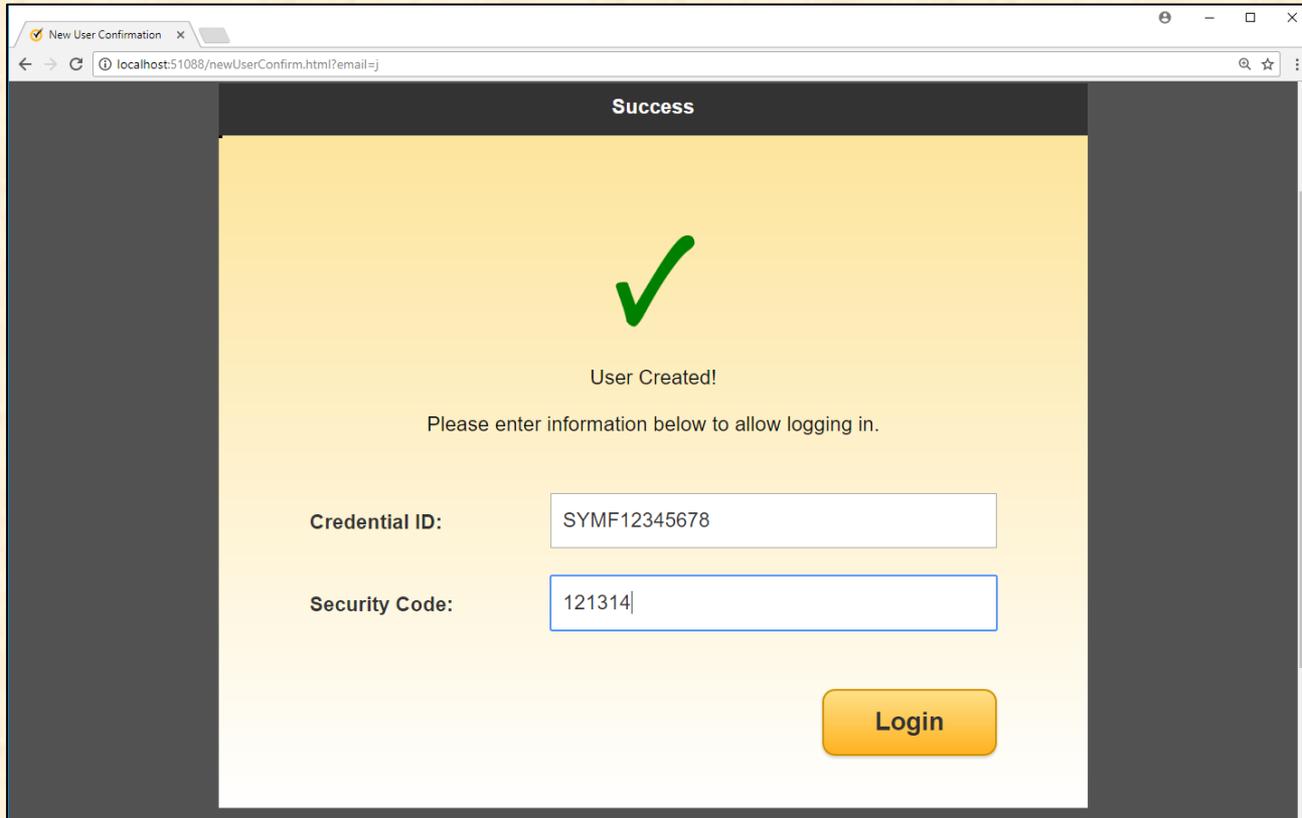
See [Help](#) for assistance.
If you don't have your sign-in information, contact your administrator.



Team Symantec Beta Presentation

e.

Add Credentials Page



New User Confirmation x

localhost:51088/newUserConfirm.html?email=j

Success



User Created!

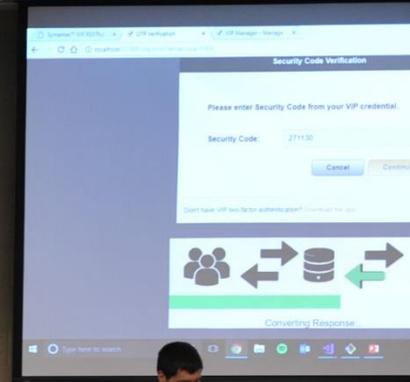
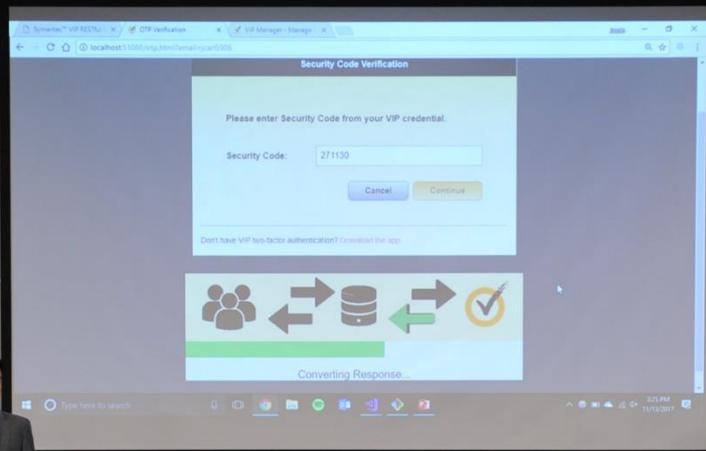
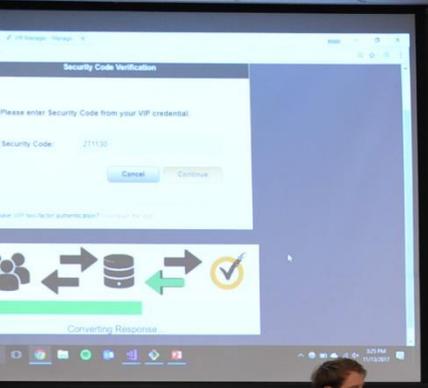
Please enter information below to allow logging in.

Credential ID:

Security Code:

Login





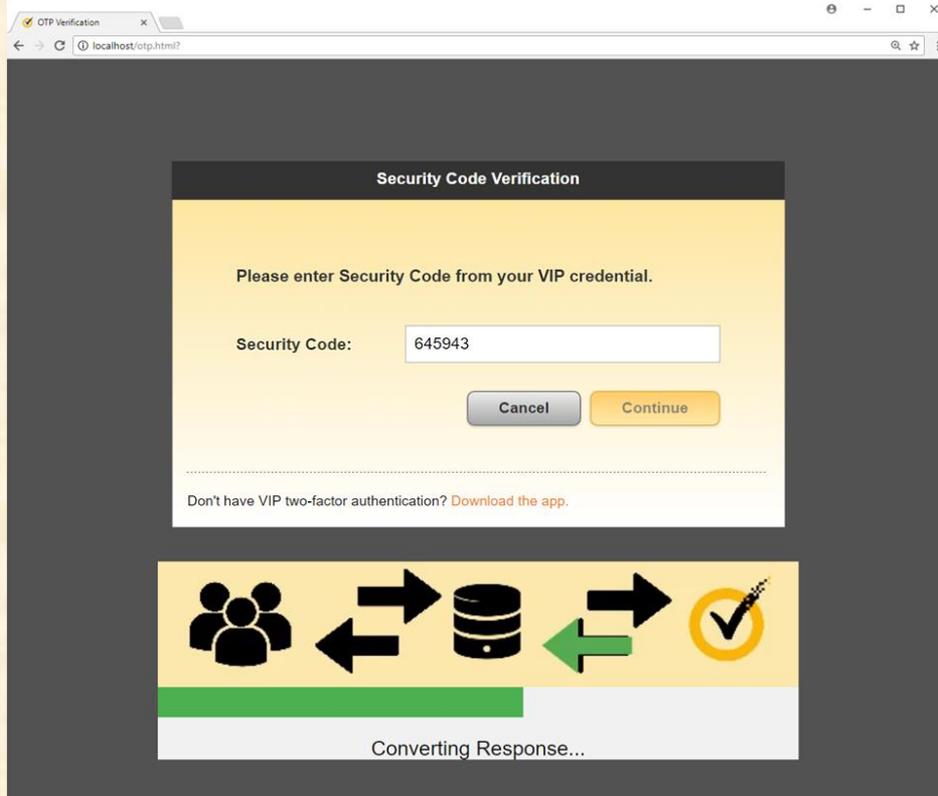
MICHIGAN STATE UNIVERSITY

Team Symantec Beta Presentation

Team Symantec Beta Presentation

e.

Translation Process



The screenshot shows a web browser window titled "OTP Verification" with the address bar displaying "localhost/otp.html?". The main content area is a "Security Code Verification" dialog box. It contains the following text and elements:

- Security Code Verification** (Title)
- Please enter Security Code from your VIP credential.
- Security Code:
-
- Don't have VIP two-factor authentication? [Download the app.](#)

Below the dialog box is a progress bar and a diagram illustrating the translation process. The diagram consists of four icons in a row: a group of people, a database cylinder, a checkmark in a circle, and a checkmark in a circle. Arrows indicate a flow from left to right between the first three icons, and a final arrow points from the database icon to the checkmark icon. A green bar is positioned below the first three icons, and the text "Converting Response..." is centered below the progress bar.



MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team TechSmith

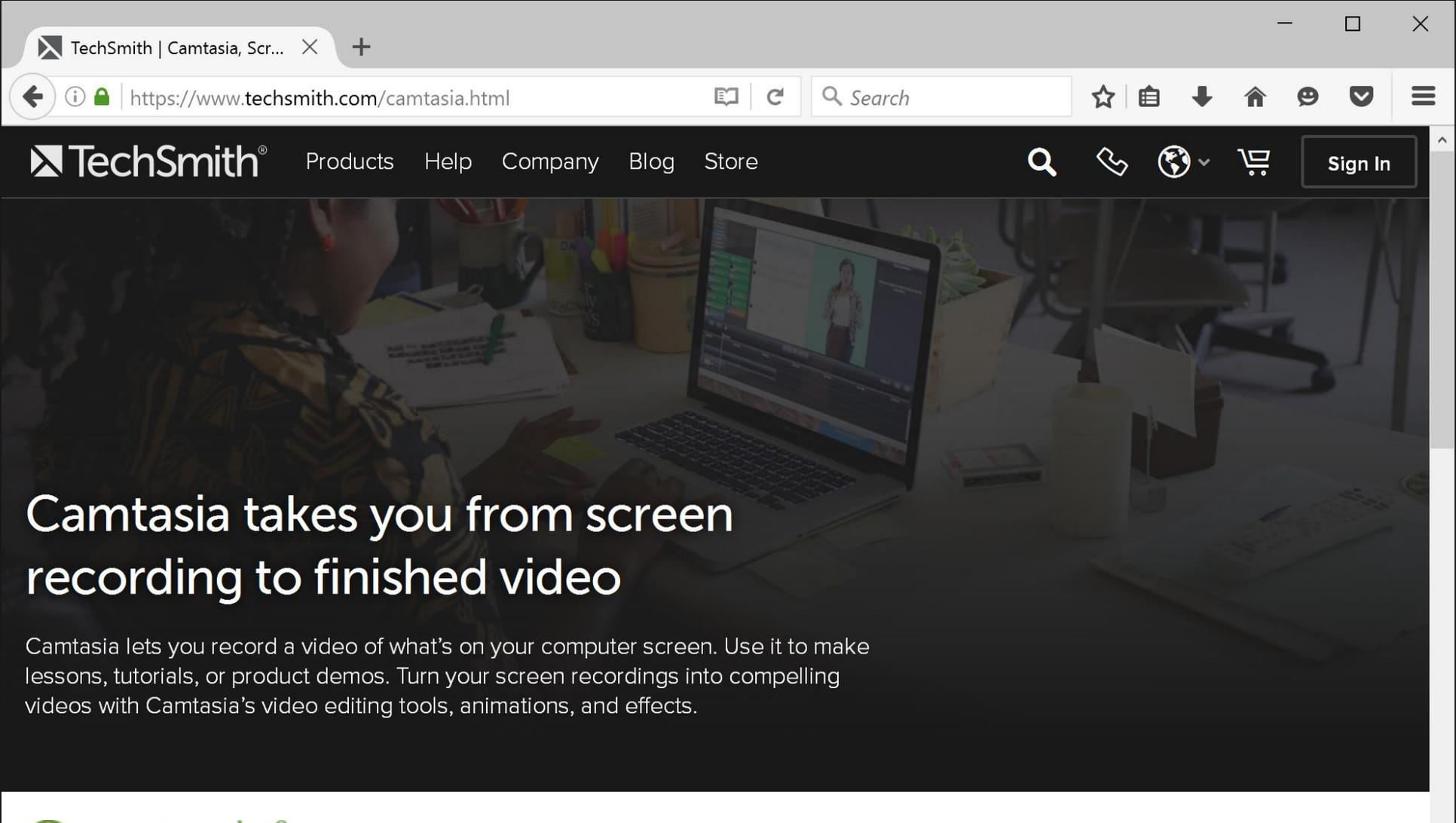
Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

The logo icon consists of a solid black square with a white diagonal line running from the top-left corner to the bottom-right corner, forming an 'X' shape.

TechSmith®



Camtasia takes you from screen recording to finished video

Camtasia lets you record a video of what's on your computer screen. Use it to make lessons, tutorials, or product demos. Turn your screen recordings into compelling videos with Camtasia's video editing tools, animations, and effects.

Team TechSmith Project Overview

TechSmith Director

- Functionalities
 - Explore Creating Video Scenes
 - With a User Friendly Voice Input Interface
 - Using Newer Cloud-Bases APIs
- Features
 - Design and Build a Web App
 - Support Natural Language Voice Input
 - “I’d like a beach background for my video.”
 - “Let’s place a man on the beach.”
 - “I’d like the man to walk along the beach.”
 - Leverage Microsoft Azure Cloud Computing
 - Store User and Project Information
 - Process Utterances (Voice Input)
 - Implement Speech to Text
 - Apply Natural Language Processing
 - Send Projects to Other Users for Feedback
- Technologies
 - Microsoft Azure Cloud Computing
 - Bing Image Search
 - SoundCloud API (For Music)
 - CSS / HTML / JavaScript
 - ASP.Net MVC or Node.js
 - Natural Language Processing (NLP)
 - SQL Database





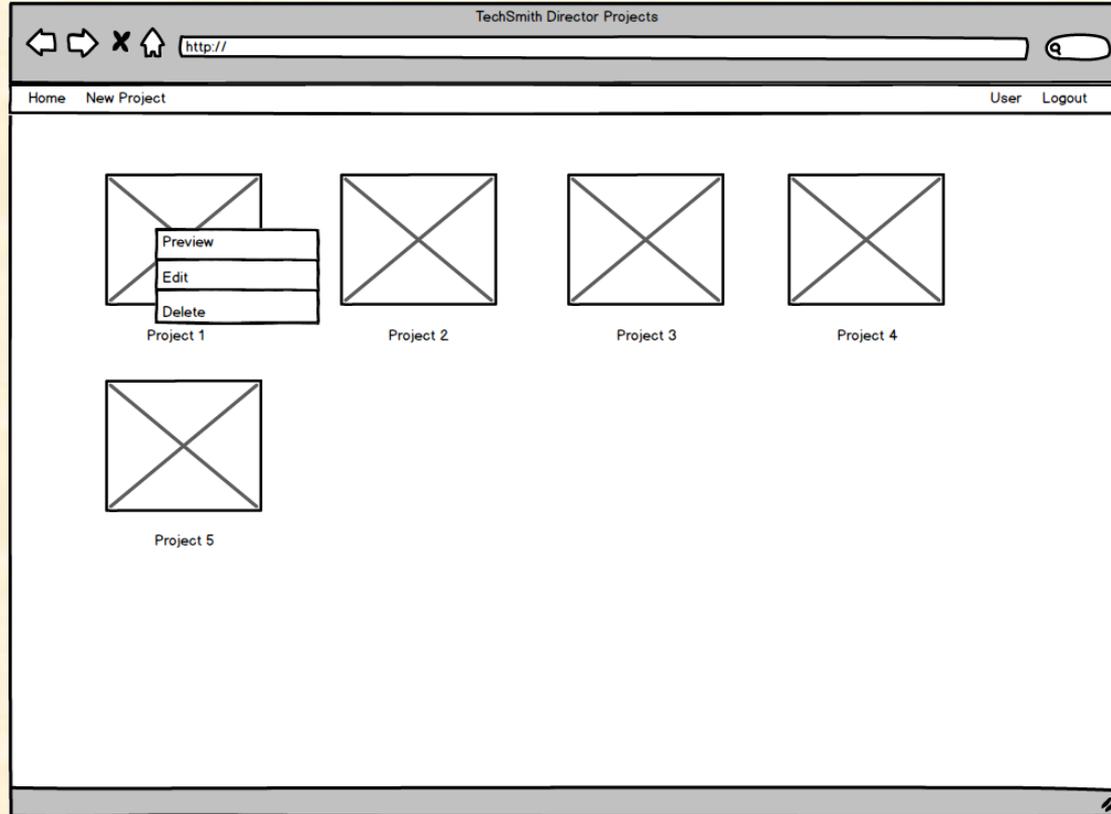
Team TechSmith

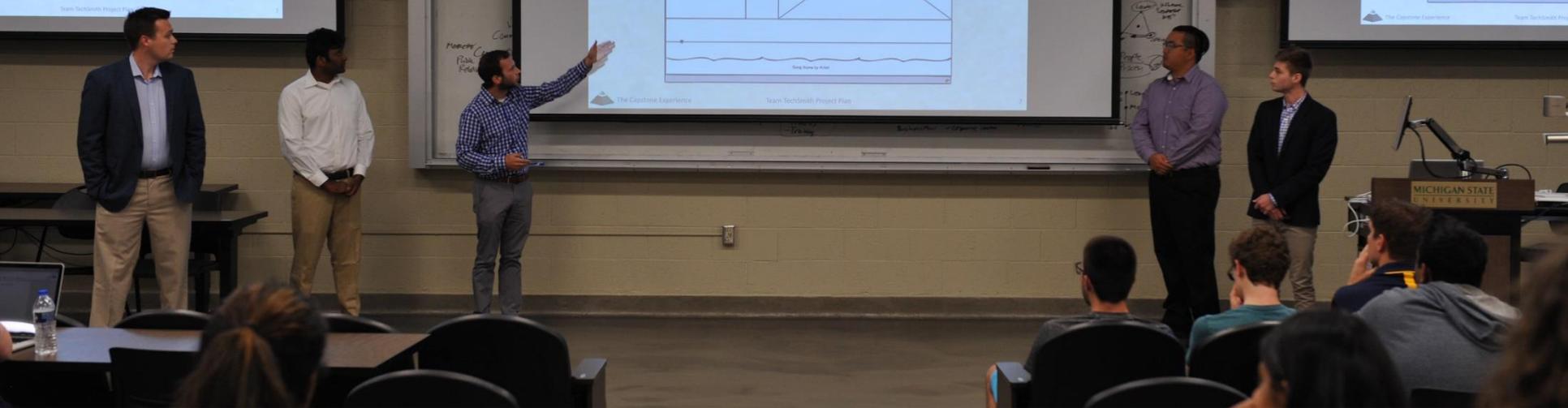
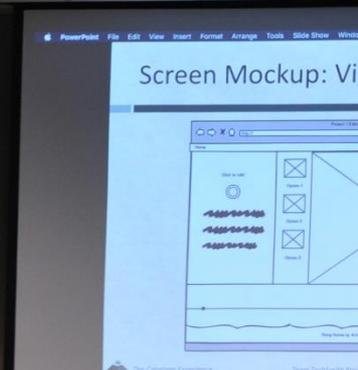
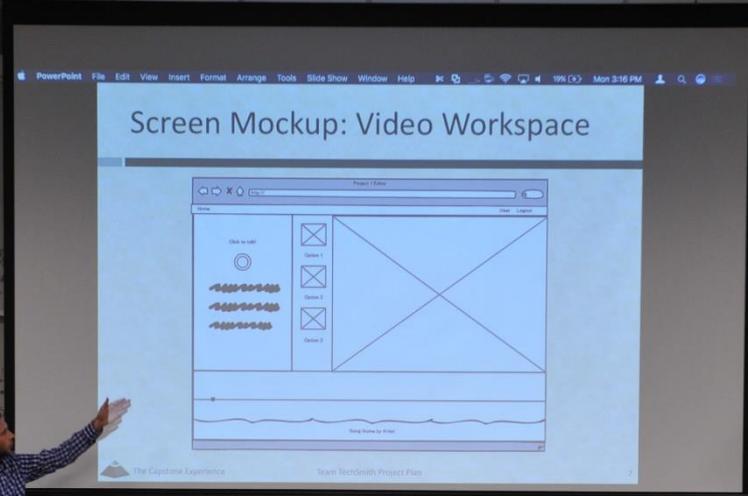
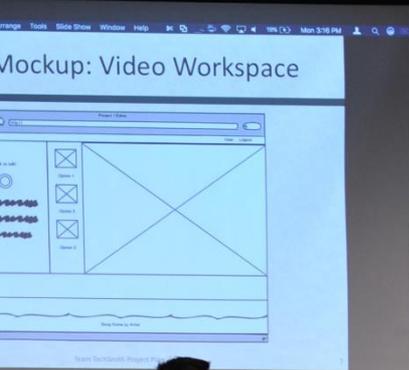
Joe Freedman, Pranay Kandru, Kevin Ahn, Jake Heisey, Jared Ballance

Team TechSmith Project Plan Presentation

e.

Screen Mockup

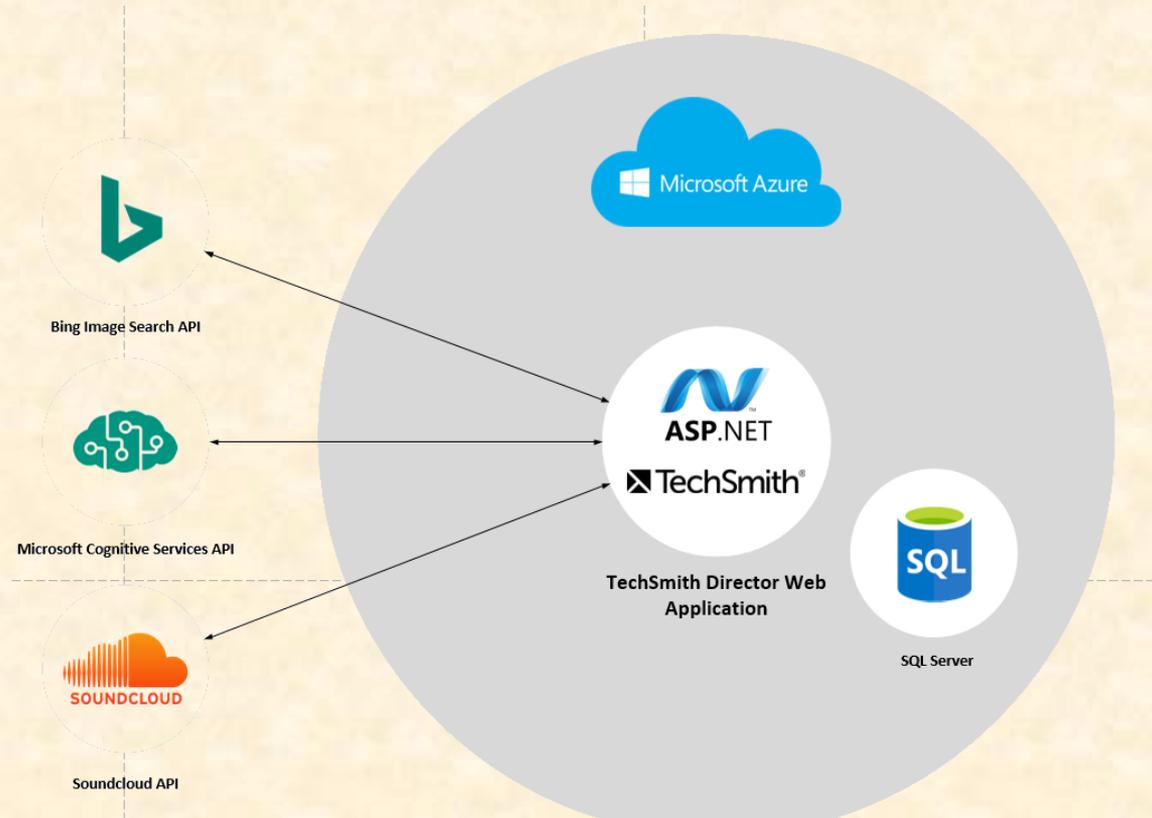


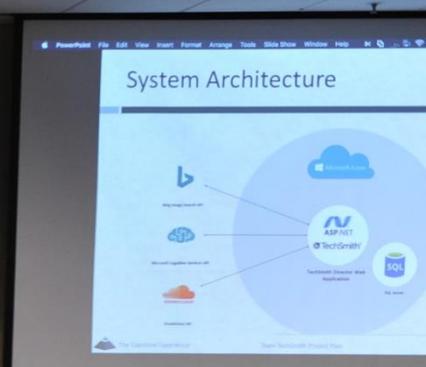
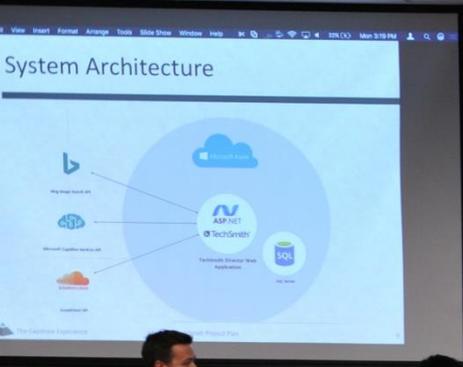


Team TechSmith Project Plan Presentation

Team TechSmith Project Plan Presentation

Architecture Diagram



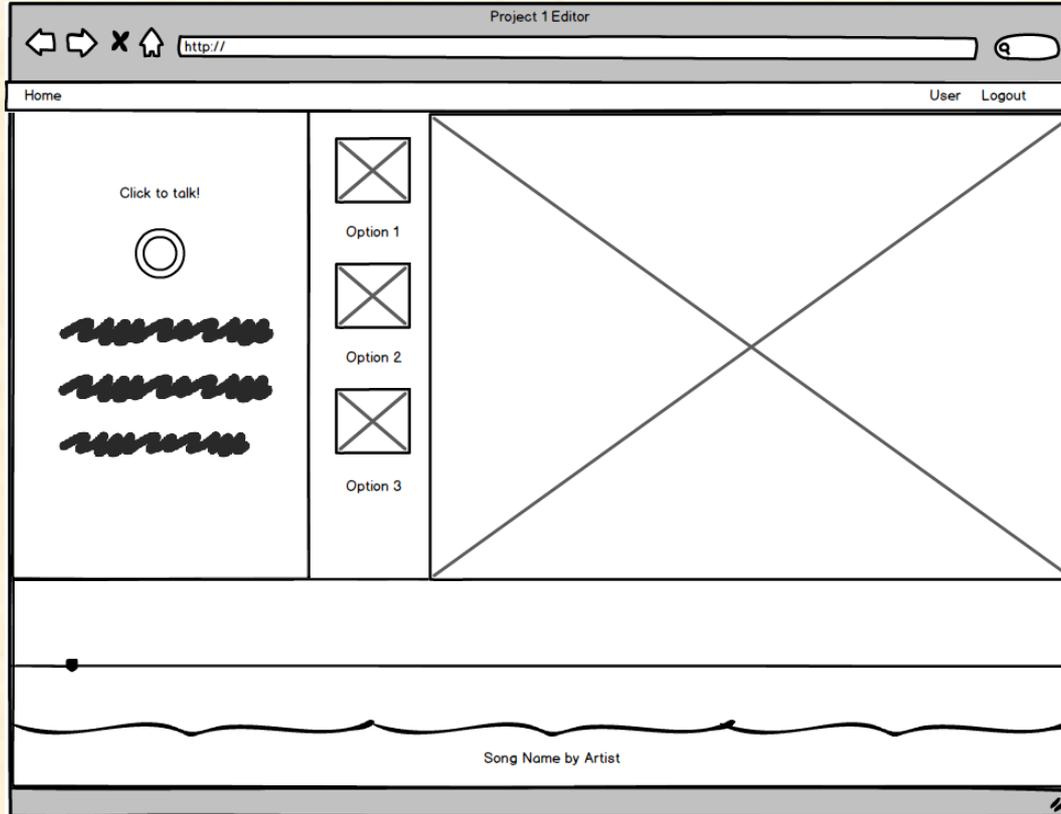


Team TechSmith Project Plan Presentation

Team TechSmith Project Plan Presentation

e.

Screen Mockup





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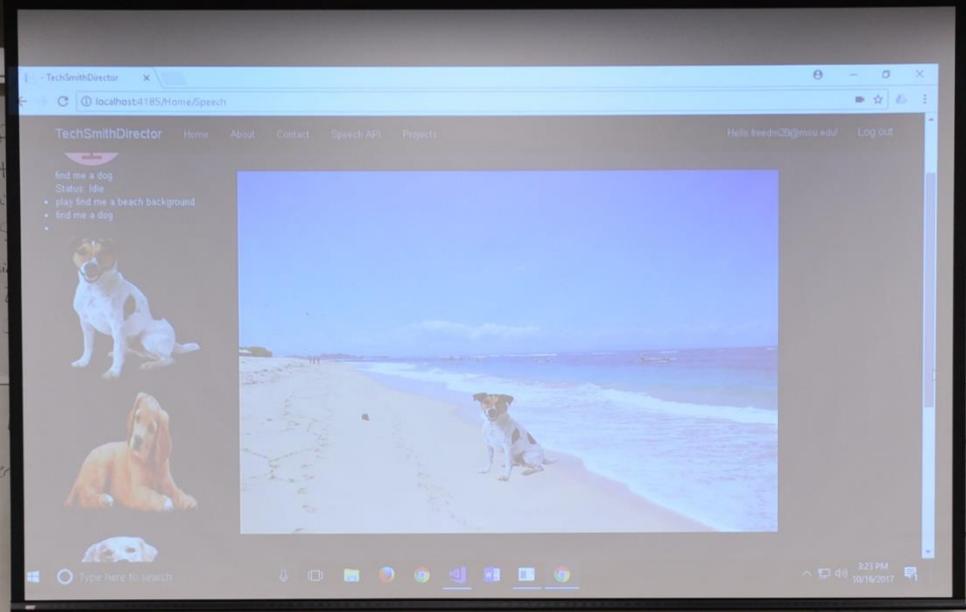


Diagram of a sphere with dashed lines and a box below it.

01 - 10/12
 Review
 Anthony

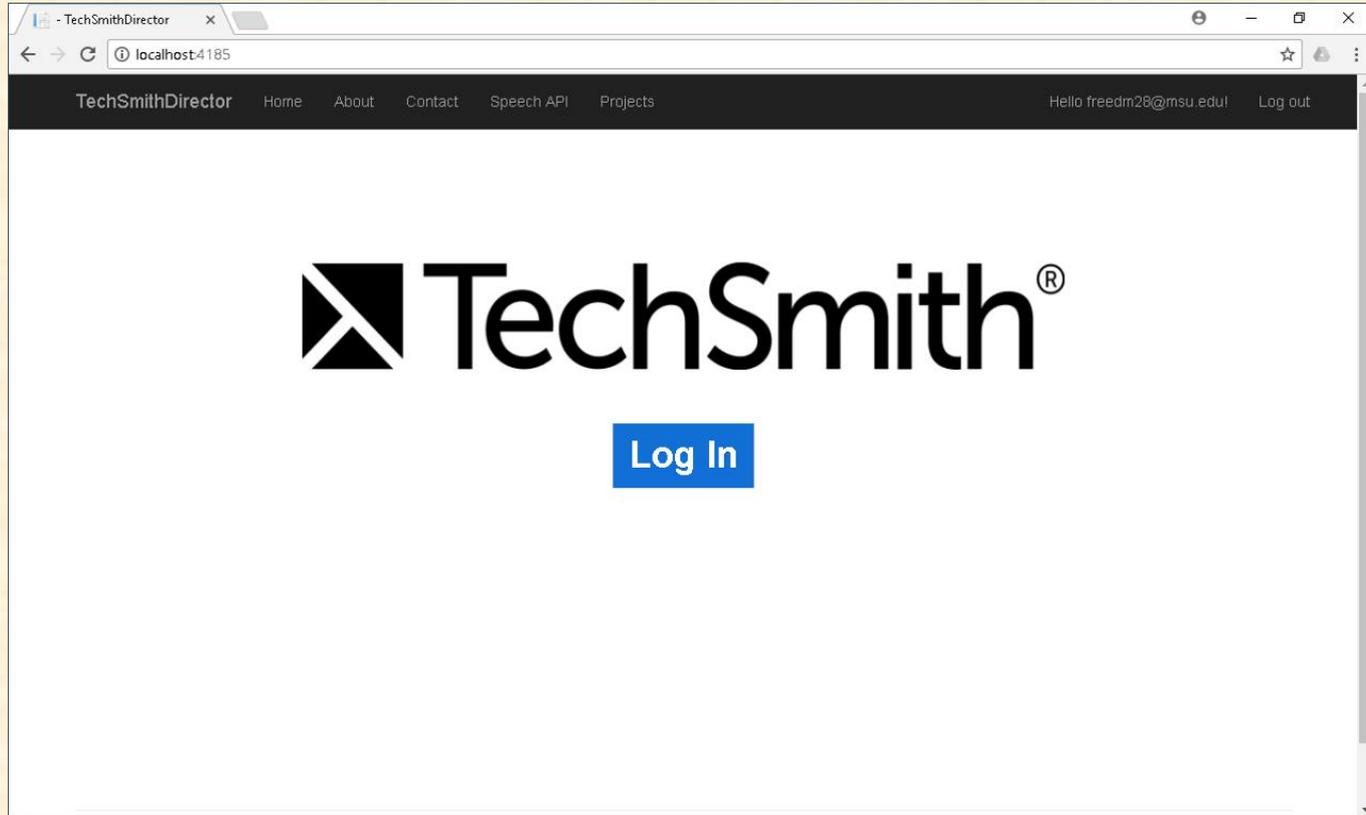


Team TechSmith Alpha Presentation

Team TechSmith Alpha Presentation

e.

Login Page



The Capstone Experience



Team TechSmith Alpha Presentation

e.

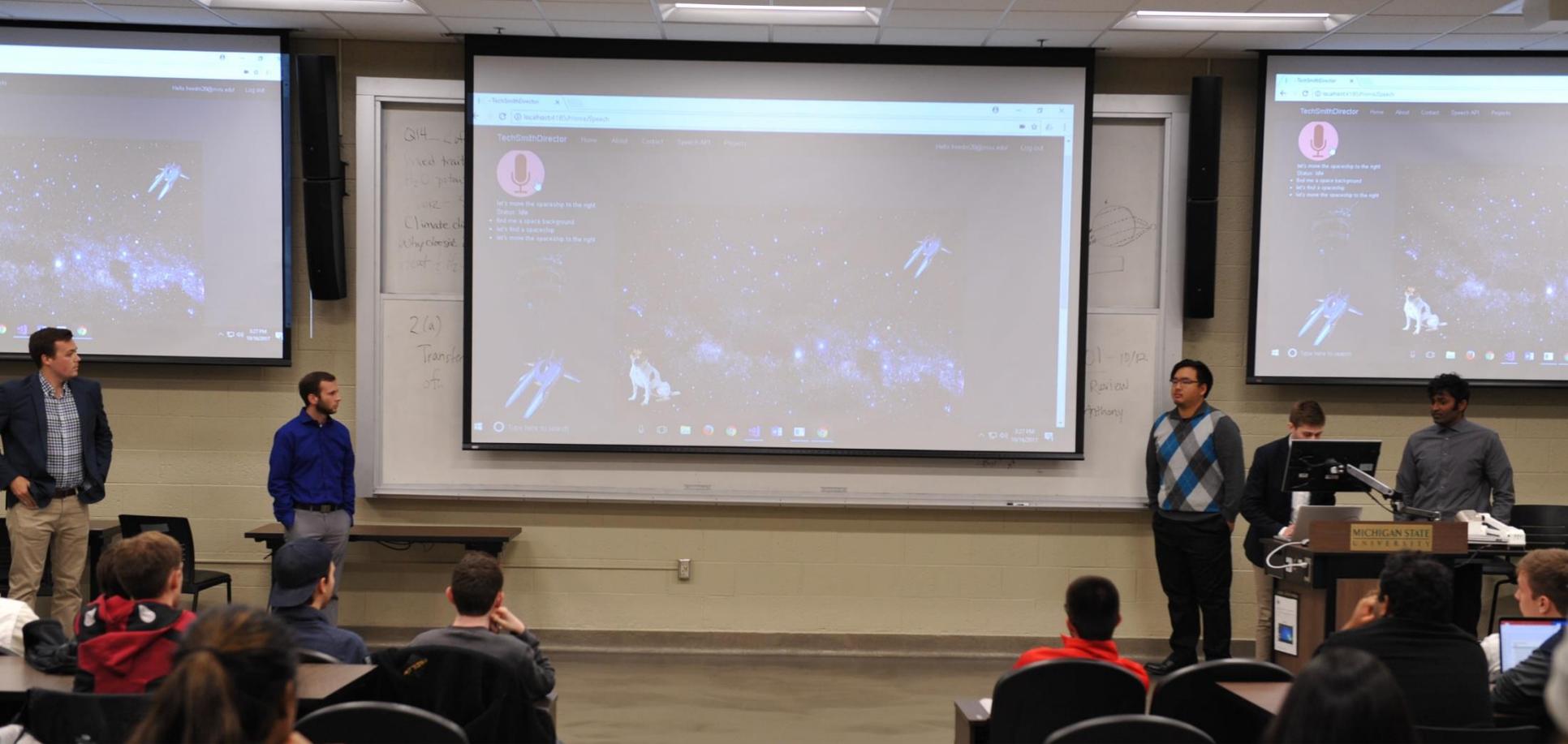
Projects Page

The screenshot shows a web browser window with the following elements:

- Browser Tab:** Home Page - TechSmith | x
- Address Bar:** localhost:4185/Home/Projects
- Navigation Bar:** TechSmithDirector | Home | About | Contact | Speech API | Projects | Hello freedrn28@msu.edu | Log out
- Main Content:**
 - Section Header:** Projects Page
 - Action:** Create Project (blue button)
 - Project Cards:**
 - Graduation:** Yellow folder icon, title "Graduation", buttons "Open" (blue) and "Delete" (red).
 - Man on a Beach:** Yellow folder icon, title "Man on a Beach", buttons "Open" (blue) and "Delete" (red).
 - Football:** Yellow folder icon, title "Football", buttons "Open" (blue) and "Delete" (red).
 - Solar Eclipse:** Yellow folder icon, title "Solar Eclipse", buttons "Open" (blue) and "Delete" (red).
- Footer:** © 2017 - TechSmithDirector

The Capstone Experience





Team TechSmith Alpha Presentation

Team TechSmith Alpha Presentation

e.

Video Editor Page

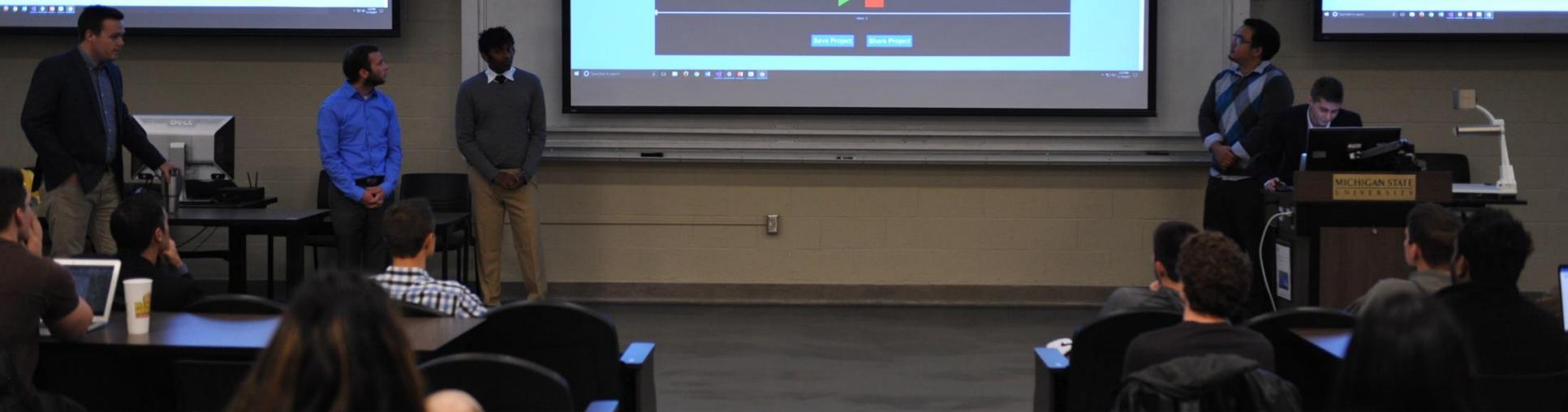
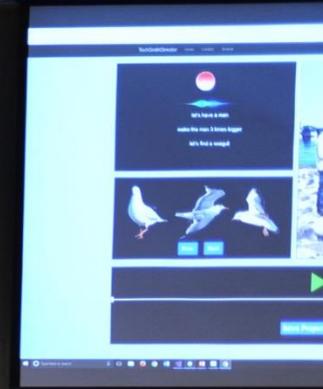
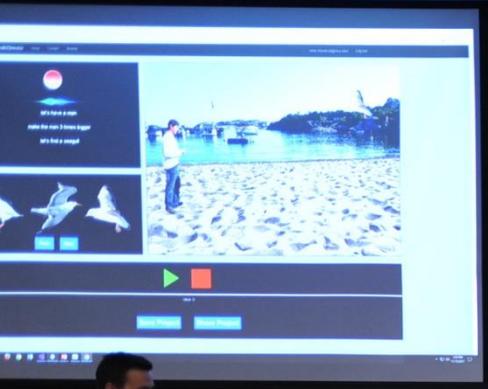
TechSmithDirector Home About Contact Speech API Projects Hello freedm28@msu.edu Log out

find me a man with a hat
Status: Idle

- find me a beach background
- find me a man with a hat
-

The Capstone Experience



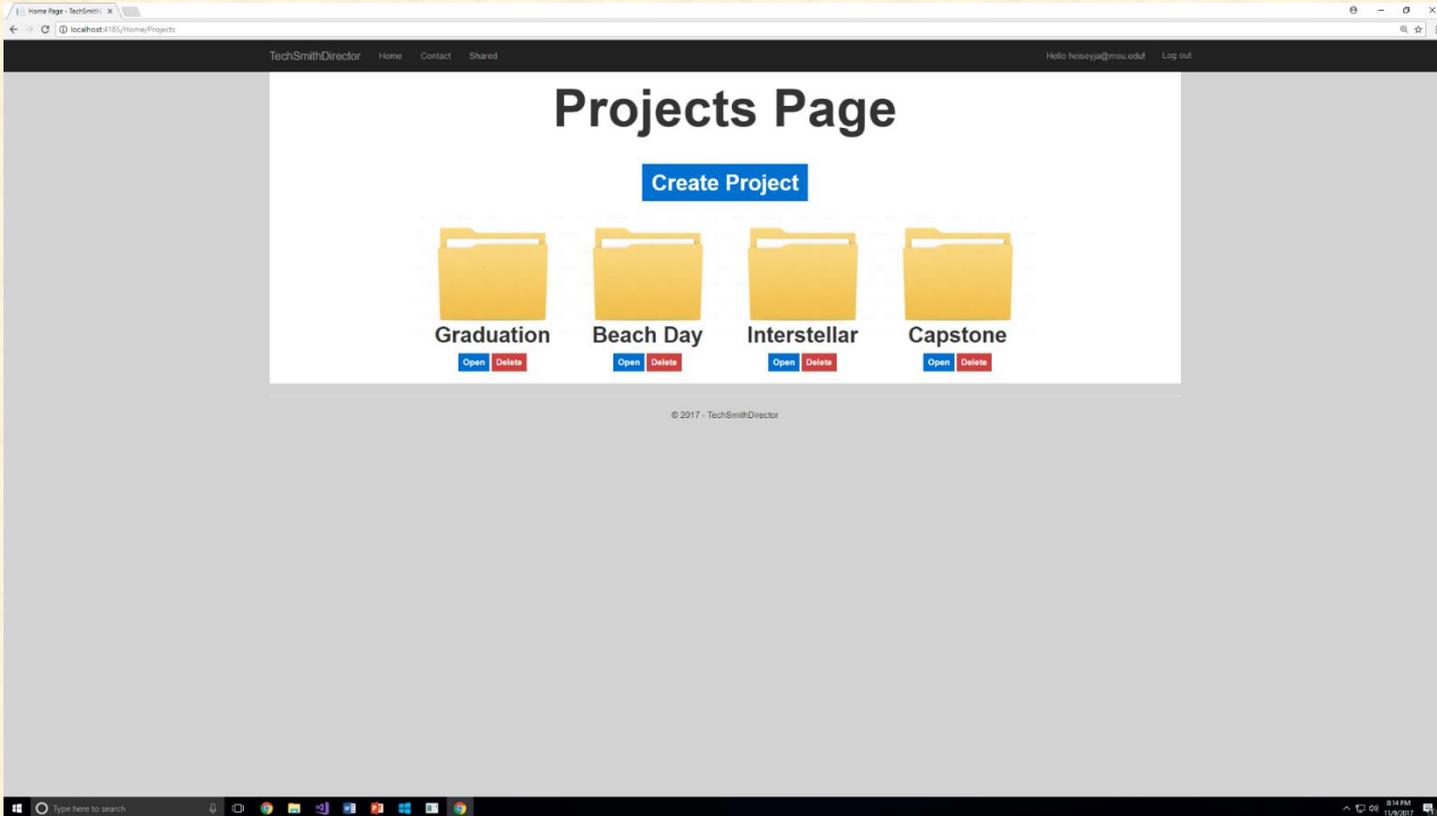


Team TechSmith Beta Presentation

Team TechSmith Beta Presentation

e.

Projects Page



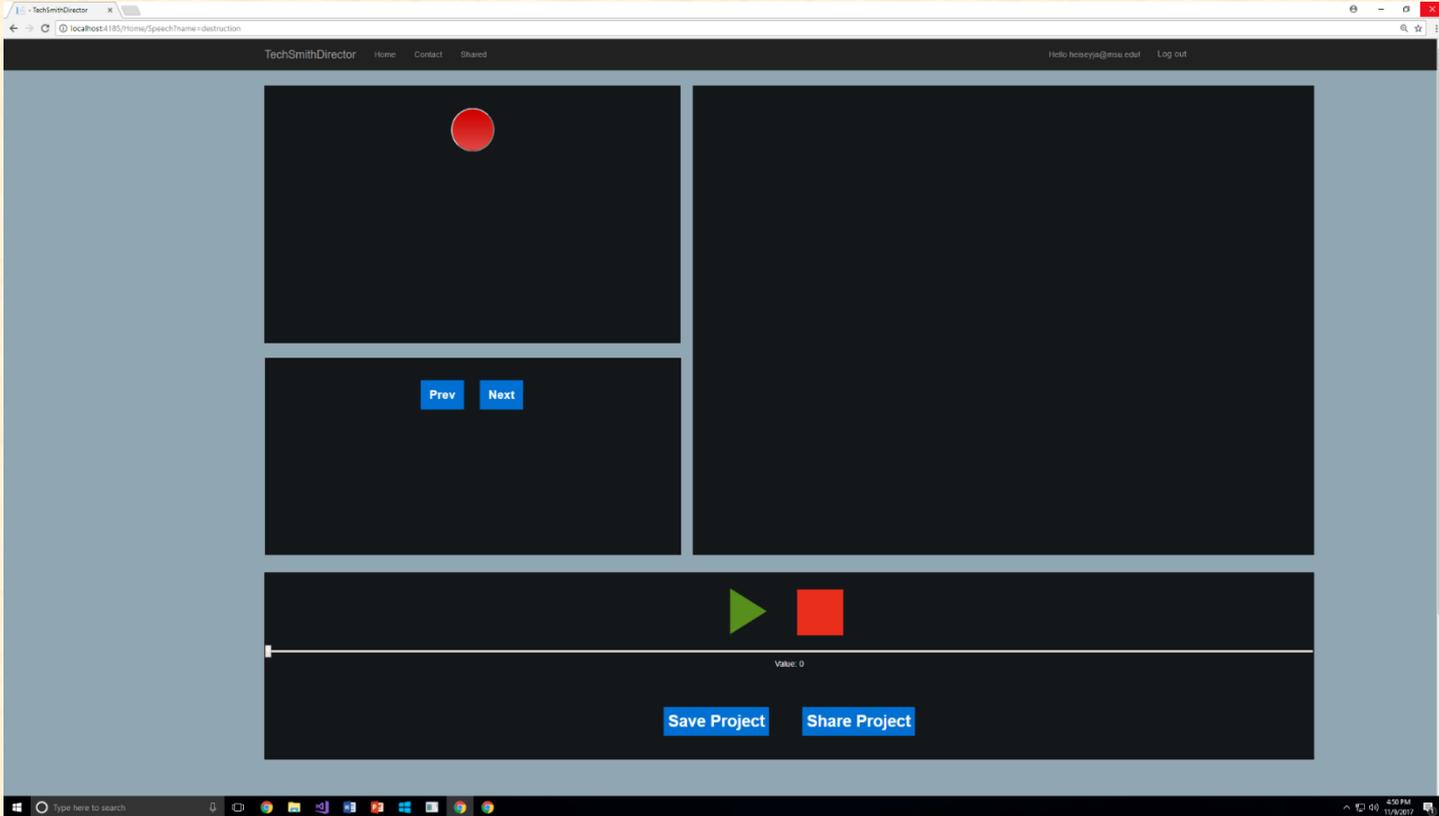
The screenshot shows a web browser window displaying the 'Projects Page' of TechSmithDirector. The page has a dark navigation bar at the top with the following items: 'TechSmithDirector', 'Home', 'Contact', 'Shared', 'Hello hoiseyja@msu.edu!', and 'Log out'. The main content area features a large white box with the title 'Projects Page' and a blue 'Create Project' button. Below this are four project folders, each with a yellow folder icon, a title, and 'Open' and 'Delete' buttons: 'Graduation', 'Beach Day', 'Interstellar', and 'Capstone'. At the bottom of the white box, the copyright notice '© 2017 - TechSmithDirector' is visible. The browser's address bar shows 'localhost:4185/Home/Projects'. The Windows taskbar at the bottom includes a search bar and various application icons.



Team TechSmith Beta Presentation

e.

Animation Editor Page



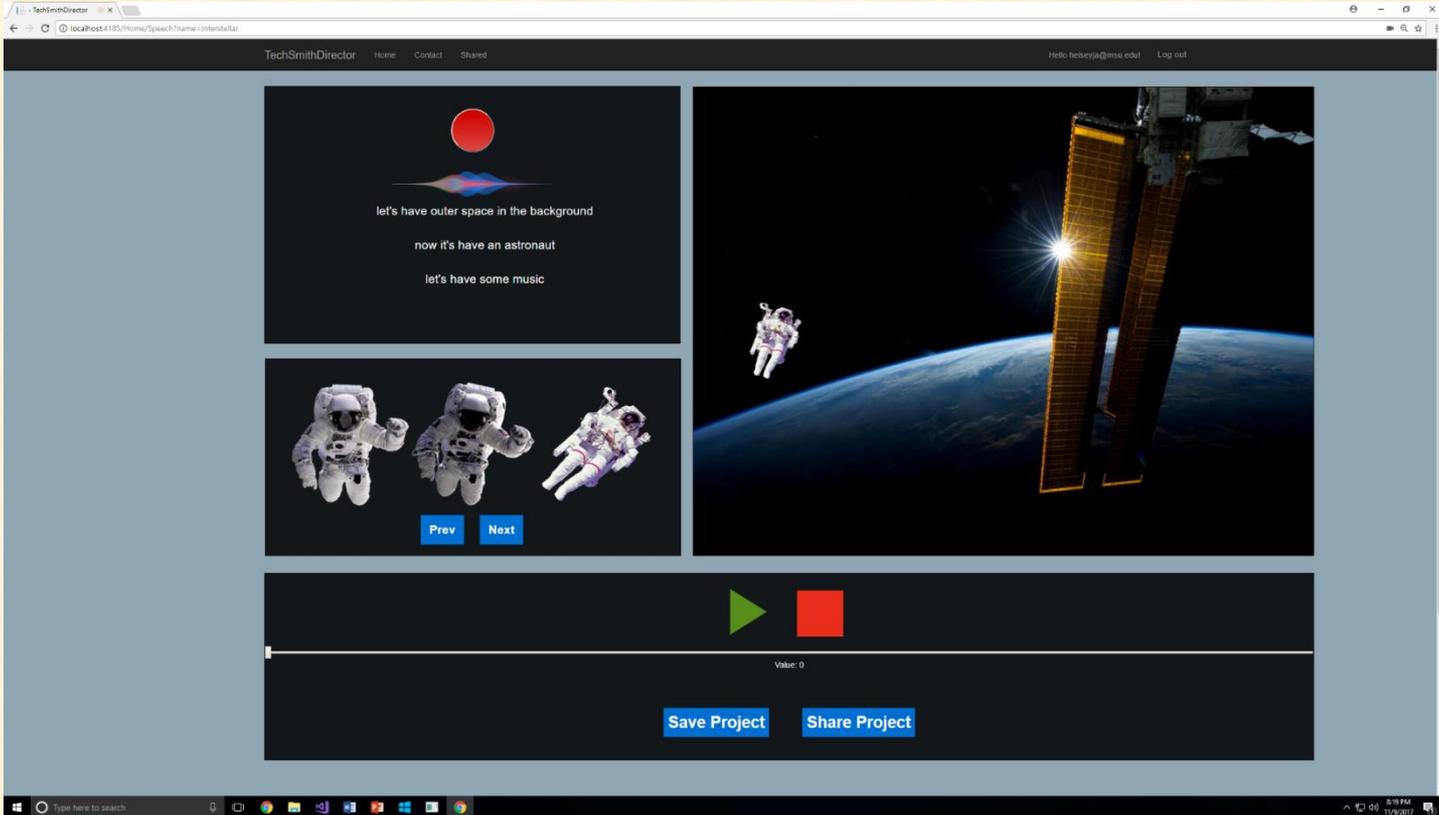


Team TechSmith Beta Presentation

Team TechSmith Beta Presentation

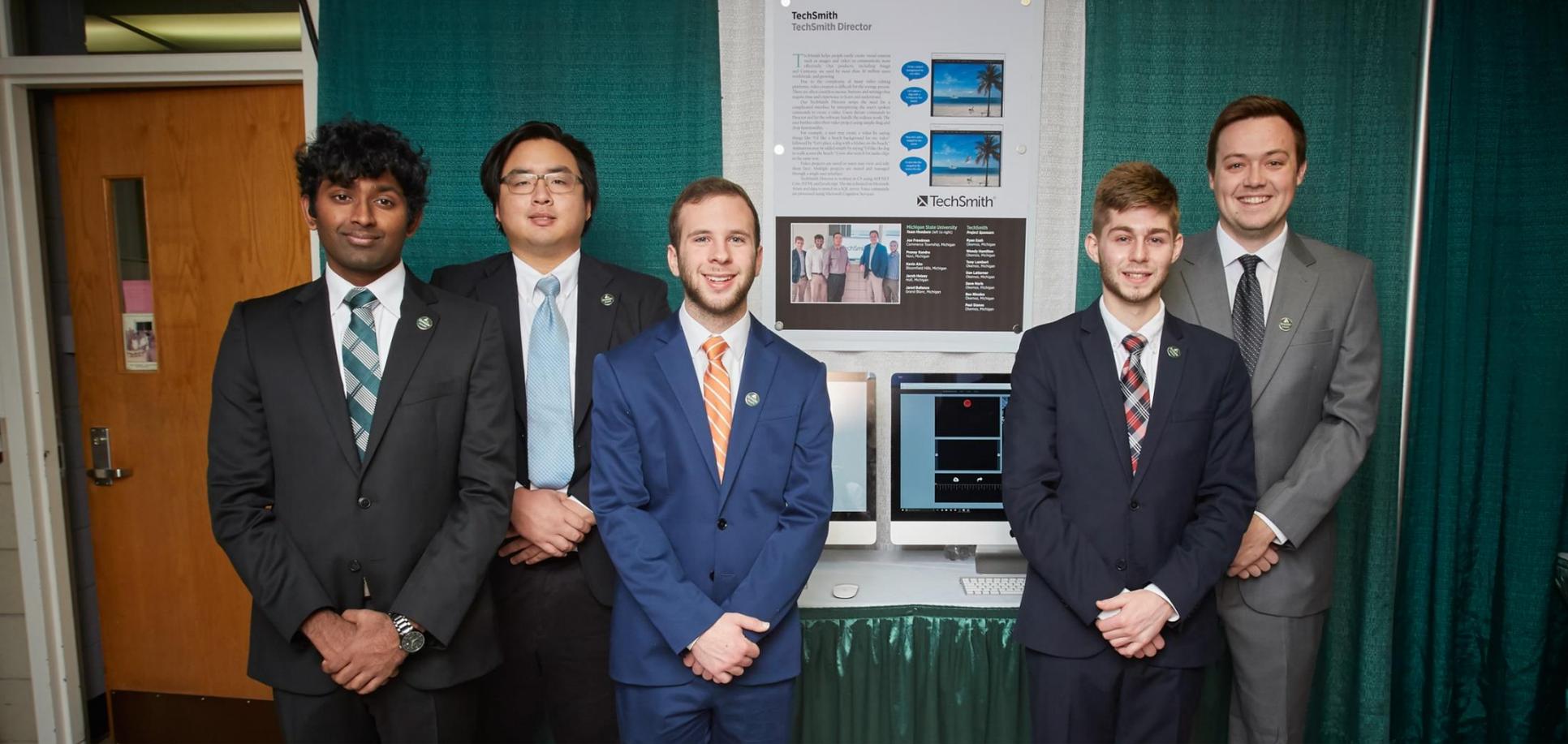
e.

Animation Editor Page (Active)



The Capstone Experience





TechSmith TechSmith Director

TechSmith helps people create great content that is engaging, effective, and easy to use. We are proud to be a part of the TechSmith family, and we are excited to be part of the TechSmith family.

The TechSmith family includes TechSmith, Camtasia, and TechSmith Online. We are proud to be a part of the TechSmith family, and we are excited to be part of the TechSmith family.

TechSmith is a leading provider of software for creating, managing, and distributing content. We are proud to be a part of the TechSmith family, and we are excited to be part of the TechSmith family.



TechSmith

<p>Michigan State University</p> <p>Benjamin A. Smith</p> <p>Joe P. Smith</p> <p>Constance Smith</p> <p>Phyllis Smith</p> <p>John Smith</p> <p>Bob Smith</p> <p>Janet Smith</p> <p>David Smith</p> <p>Carol Smith</p>	<p>TechSmith</p> <p>Robert Smith</p> <p>John Smith</p> <p>Constance Smith</p> <p>Phyllis Smith</p> <p>John Smith</p> <p>Bob Smith</p> <p>Janet Smith</p> <p>David Smith</p> <p>Carol Smith</p>
--	---

Team TechSmith Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team TWO MEN AND A TRUCK

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



TWO MEN AND A TRUCK®

“Movers Who Care®”

We've changed our colors to honor those who have served our country this [Veterans Day](#).



[Franchising](#) [Careers](#) [About Us](#) [Press](#) [Contact](#) 877.263.6444



TWO MEN AND A TRUCK.
"Movers Who Care."

[FOR HOME](#)

[FOR BUSINESS](#)

[RESOURCES](#)

[REVIEWS](#)

[GET YOUR FREE QUOTE](#)



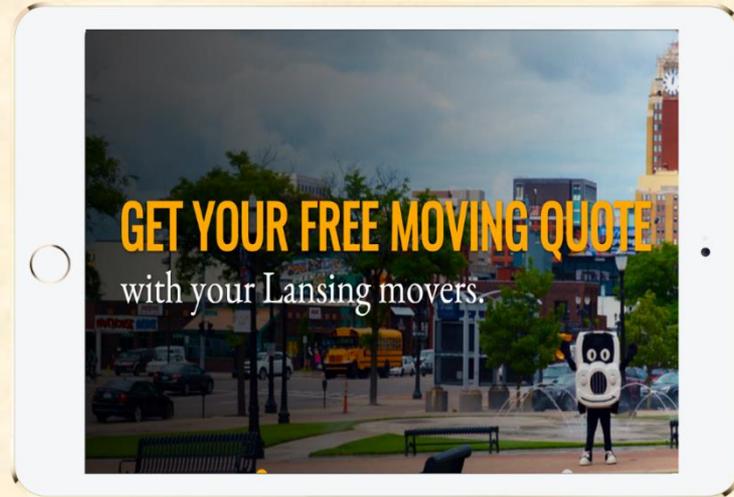
We're the

PROFESSIONALS YOU CAN TRUST

Team TWO MEN AND A TRUCK Project Overview

Online Moving Estimator

- Functionalities
 - Provide In-Home Moving Estimate
 - Online Using Web App
- Features
 - Design and Build Web App
 - Provide Chat and Video Conference
 - Determine Room Inventory
 - From Video
 - Automatically
 - Estimate Moving Cost
 - Compute Load / Weight / Space on Truck
 - Use TMaaT Existing Algorithm
 - Integrate with Existing Quick Estimate Module
- Technologies
 - CSS / HTML / JavaScript / PHP
 - Video Conferencing
 - Image Processing and Pattern Recognition



**TWO MEN
AND A
TRUCK®**

“Movers Who Care.™”

Lansing, Michigan





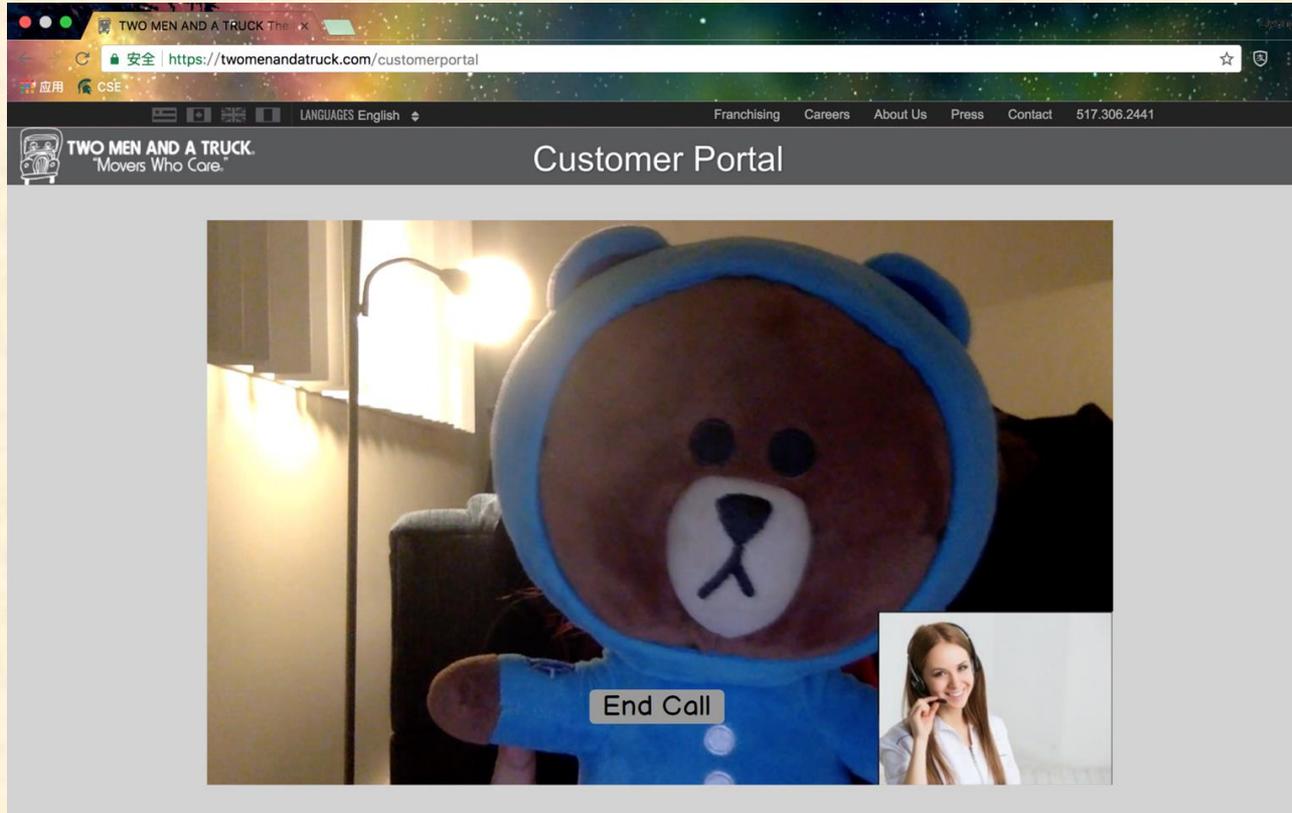
Team TWO MEN AND A TRUCK

Leon Ye, Clay Wilson, Daria Tarasova, James Williams, Kevin Dittman

Team TWO MEN AND A TRUCK Project Plan Presentation

e.

Screen Mockup



The Capstone Experience



Interface



11

Screen Mockup: Phone Interface



The Capstone Experience

Team Two Men and a Truck Project

11

Screen

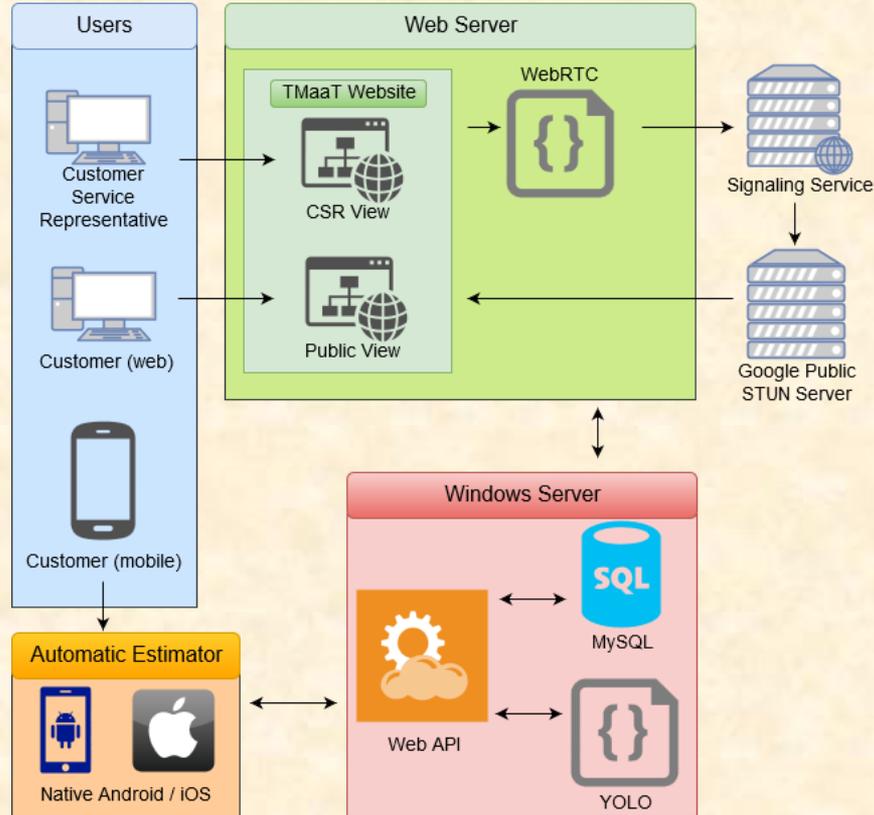


The Capstone Experience

Team TWO MEN AND A TRUCK Project Plan Presentation

Team TWO MEN AND A TRUCK Project Plan Presentation

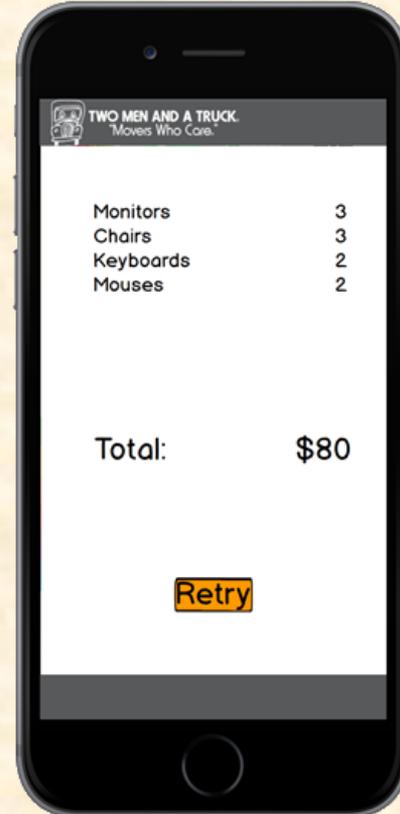
Architecture Diagram



Team TWO MEN AND A TRUCK Project Plan Presentation

e.

Screen Mockup



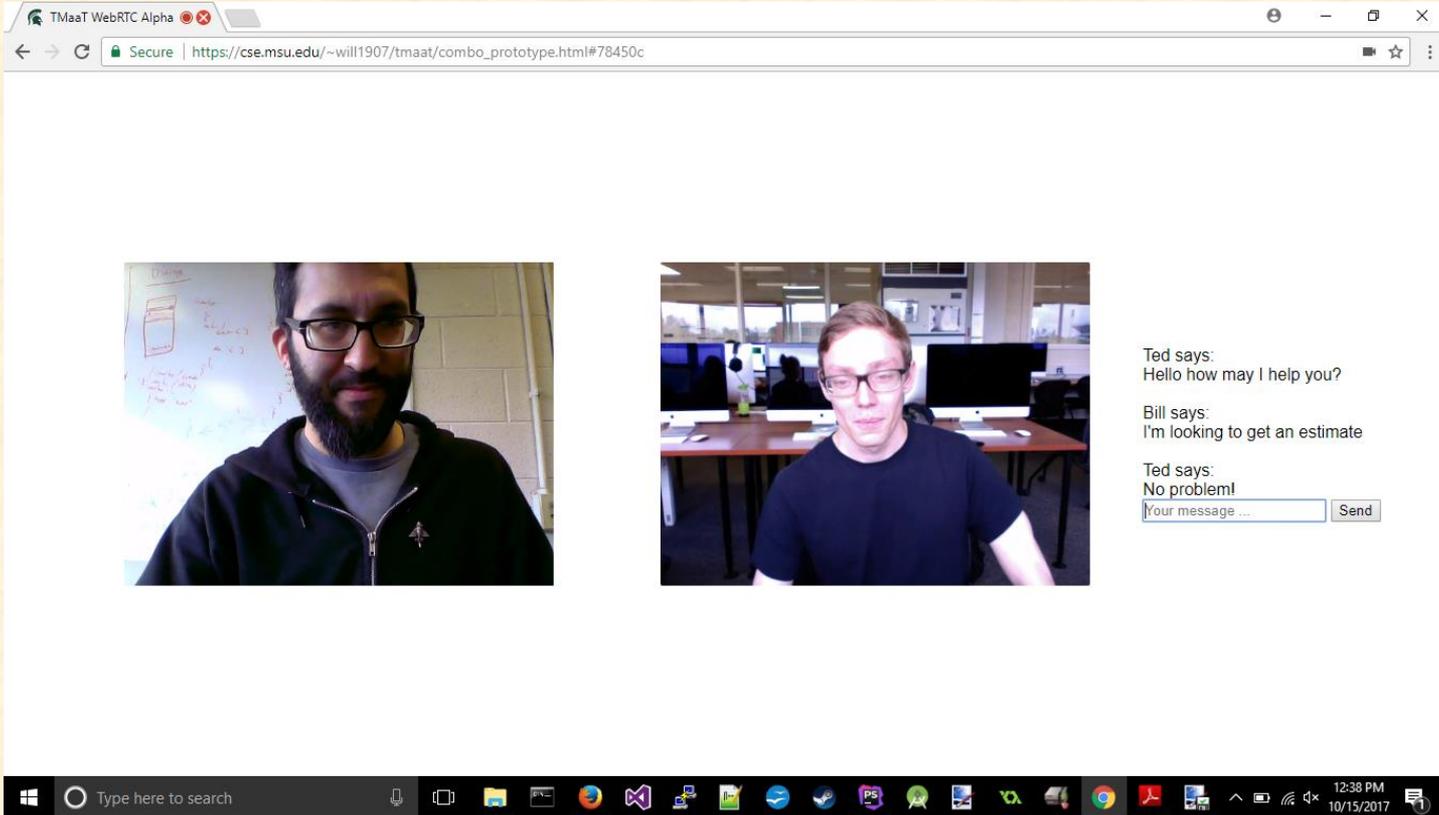


Team TWO MEN AND A TRUCK Alpha Presentation

Team TWO MEN AND A TRUCK Alpha Presentation

e.

Web Video Chat



The screenshot shows a web browser window titled "TMaT WebRTC Alpha" with the URL https://cse.msu.edu/~will1907/tmaat/combo_prototype.html#78450c. The browser displays a video chat interface with two video feeds. The left feed shows a man with a beard and glasses, wearing a dark hoodie, in front of a whiteboard with handwritten notes. The right feed shows a man with glasses wearing a black t-shirt in an office setting. To the right of the video feeds is a chat log with the following messages:

- Ted says:
Hello how may I help you?
- Bill says:
I'm looking to get an estimate
- Ted says:
No problem!

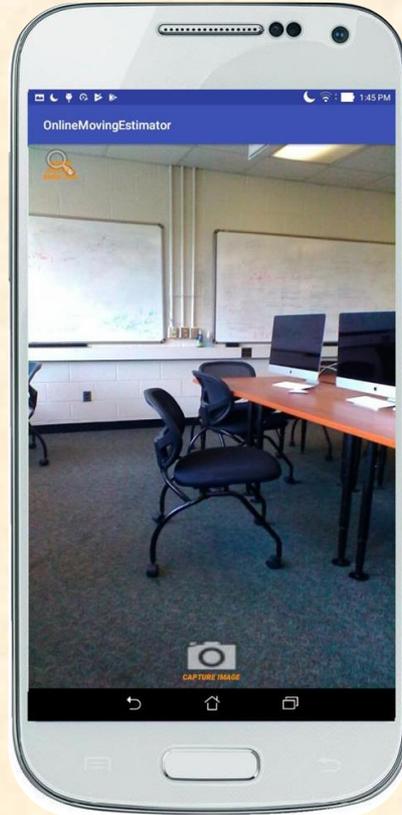
Below the chat log is a text input field containing "Your message ..." and a "Send" button. At the bottom of the browser window, the Windows taskbar is visible, showing the search bar, taskbar icons, and system tray with the time 12:38 PM and date 10/15/2017.



Team TWO MEN AND A TRUCK Alpha Presentation

e.

Android Mobile App



The Capstone Experience



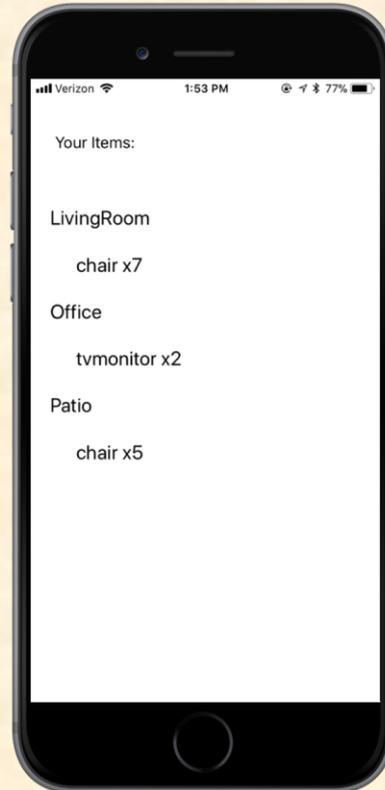


Team TWO MEN AND A TRUCK Alpha Presentation

Team TWO MEN AND A TRUCK Alpha Presentation

e.

iOS Mobile App





Team TWO MEN AND A TRUCK
Beta Presentation

Team TWO MEN AND A TRUCK Beta Presentation

e.

CSR Home Page

The screenshot shows a web browser window with the URL `https://dtarasogithub.io/TMAAT/Web_Application/csrHome.html`. The page title is "CSR Home". In the top right corner, there is a notification "Logged in as Kevin". The main content area is divided into three vertical panels, each with a title in an orange button:

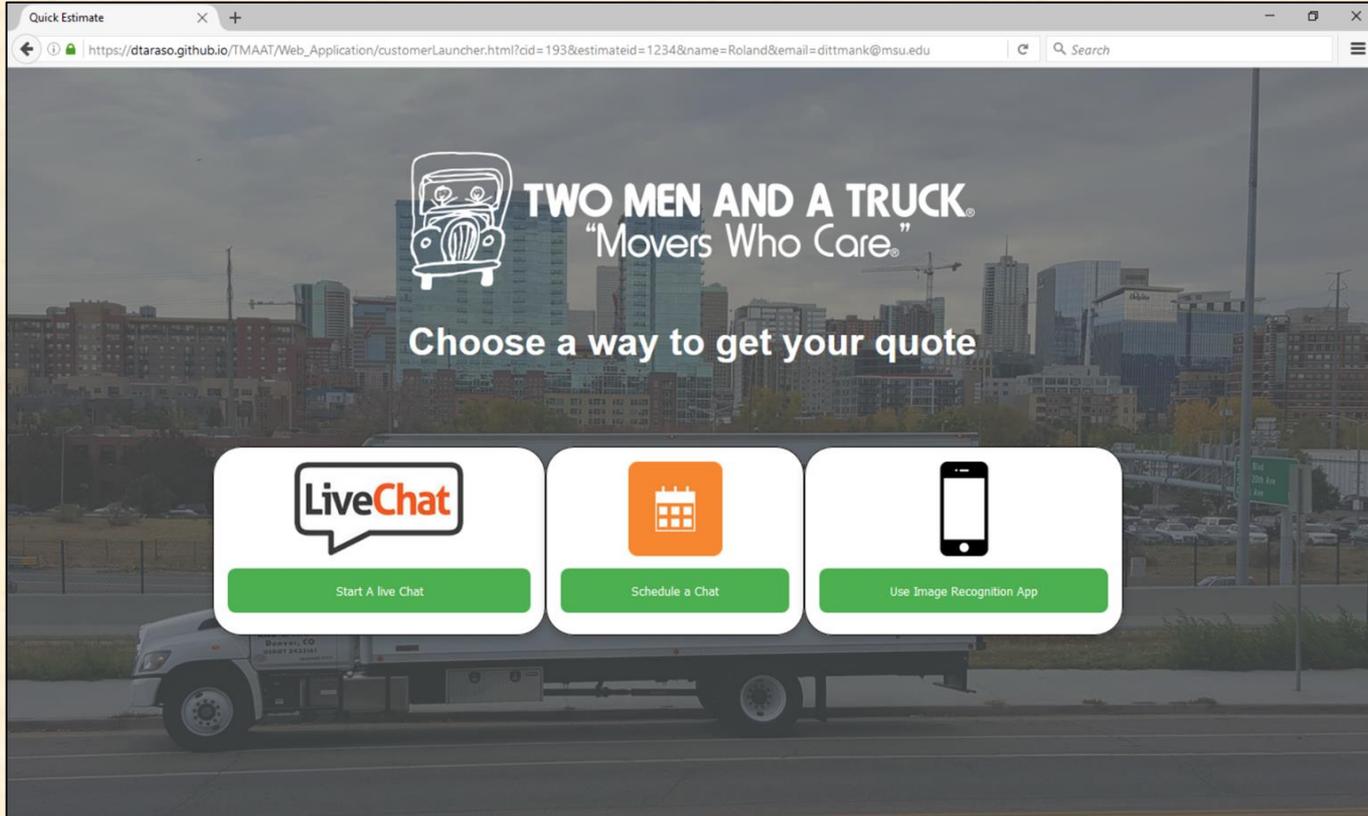
- Chat Queue:** Lists three names: Barry, Sarah, and Liyang.
- My Appointments:** Lists two appointments: "Roland on 11/16/2017, 10:30:00 AM" and "Daria on 11/14/2017, 12:00:00 PM".
- Appointment Requests:** Lists three requests: "Afternoon with Abigail", "Morning with Cole", and "Afternoon with Kyle".



Team TWO MEN AND A TRUCK Beta Presentation

e.

Customer Landing Page



The Capstone Experience





Team TWO MEN AND A TRUCK Beta Presentation

Team TWO MEN AND A TRUCK Beta Presentation

e.

Text / Video Chat Page

The screenshot displays a web browser window with the URL <https://www.twomenandatruck.com/livechat>. The page header features the Two Men and a Truck logo and the slogan "Movers Who Care." The main content area is split into two sections: a video call and a chat window. The video call shows a woman with long blonde hair smiling in the foreground, with a smaller inset of a man with glasses in the background. The chat window on the right shows a conversation:

- Daria: Hi
- James: Hi! I'm trying to get a moving quote.
- Daria: Yes, no problem. I can help you with your moving estimate.

At the bottom of the chat window, there is a text input field labeled "Your message ..." and a "Send" button.



TWO MEN AND A TRUCK® Online Moving Estimator

TWO MEN AND A TRUCK is the fastest growing third-party moving company in the country with more than 100 locations in 42 states and territories.

As the TWO MEN AND A TRUCK continues to expand to meet a growing customer base, if the customer base can grow 20% year-over-year, the business model is required, which makes this tool for TWO MEN AND A TRUCK an invaluable asset.

Our first use case for TWO MEN AND A TRUCK's Online Moving Estimator was the university's previous summer and team conference for all parties.

First, our other client data service enables a customer to connect with a TWO MEN AND A TRUCK agent who completes the estimate through video conferencing.

Secondly, our web application TWO MEN AND A TRUCK is used for the purpose of creating estimates for the customer and the agent.

Our web app for Online Moving Estimator is written in ASP.NET and JavaScript. The main web page uses the "Bootstrap" HTML to create the client registration form. The backend uses ASP.NET with a MySQL database. Our mobile app is written in Swift for iOS devices and Java for Android devices.



Michigan State University Members (left to right)

- Huang '16
- Wang '16
- Chen '16

TWO MEN AND A TRUCK Project Members

- John Chen

Team TWO MEN AND A TRUCK Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Union Pacific

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



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MyUPRR Login

CUSTOMERS

EMPLOYEES

SUPPLIERS

INVESTORS

MEDIA

ABOUT US

SEARCH

Union Pacific bridges are safe for the freight traffic they carry, as well as motorists and pedestrians. Our safety focus starts with more than 38,000 inspections annually to ensure the structural integrity for each bridge. For our employees, these inspections are more than just a job. **Learn more about UP's detailed inspection process.**



Steel Giants Promise Safe Passage

Team Union Pacific Project Overview

RailBuilder: The Great Race to Promontory

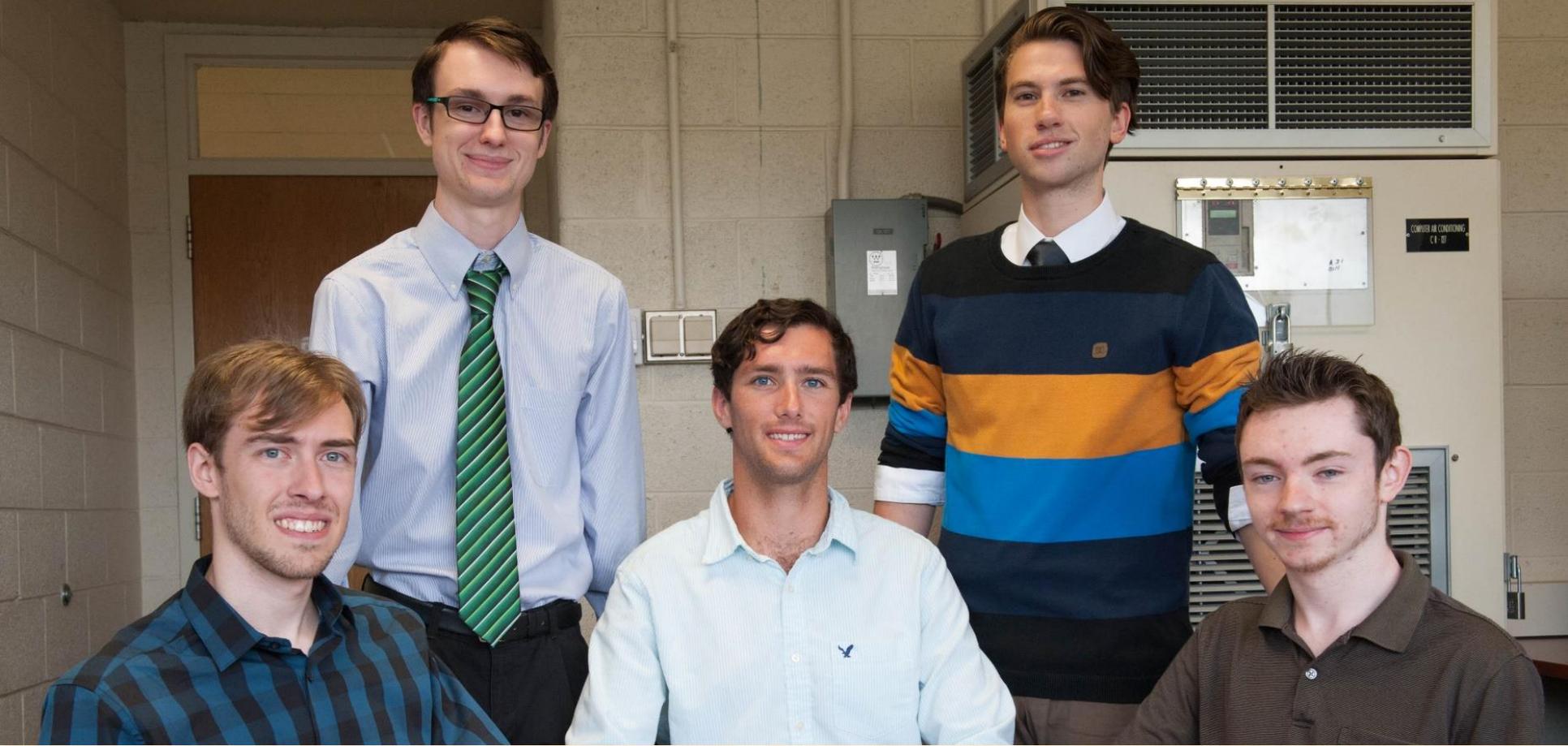
- Functionalities
 - Create Railroad Building Game
 - In 3D Representation of the World
- Features
 - Support Creation of Game Levels
 - Deploy as Microsoft Windows App
 - Include Topology and Land Classification
 - Place Scenery in Realistic Fashion
 - Use Terrain Grade and Elevation
 - Create Railroad Building Game
 - Between Two Locations in 3D
 - Using Limited Budget
 - Factoring Topology and Land Classification
 - Removing Scenery Where Rail is Laid
- Technologies
 - Unity Game Engine
 - Microsoft Windows
 - Microsoft C# / .NET
 - Apple iPads and iPhones (iOS) / Swift
 - Google Android Tablets and Phones / Java
 - ArcGIS Mapping Tools



BUILDING AMERICA®

Omaha, Nebraska
Okemos, Michigan





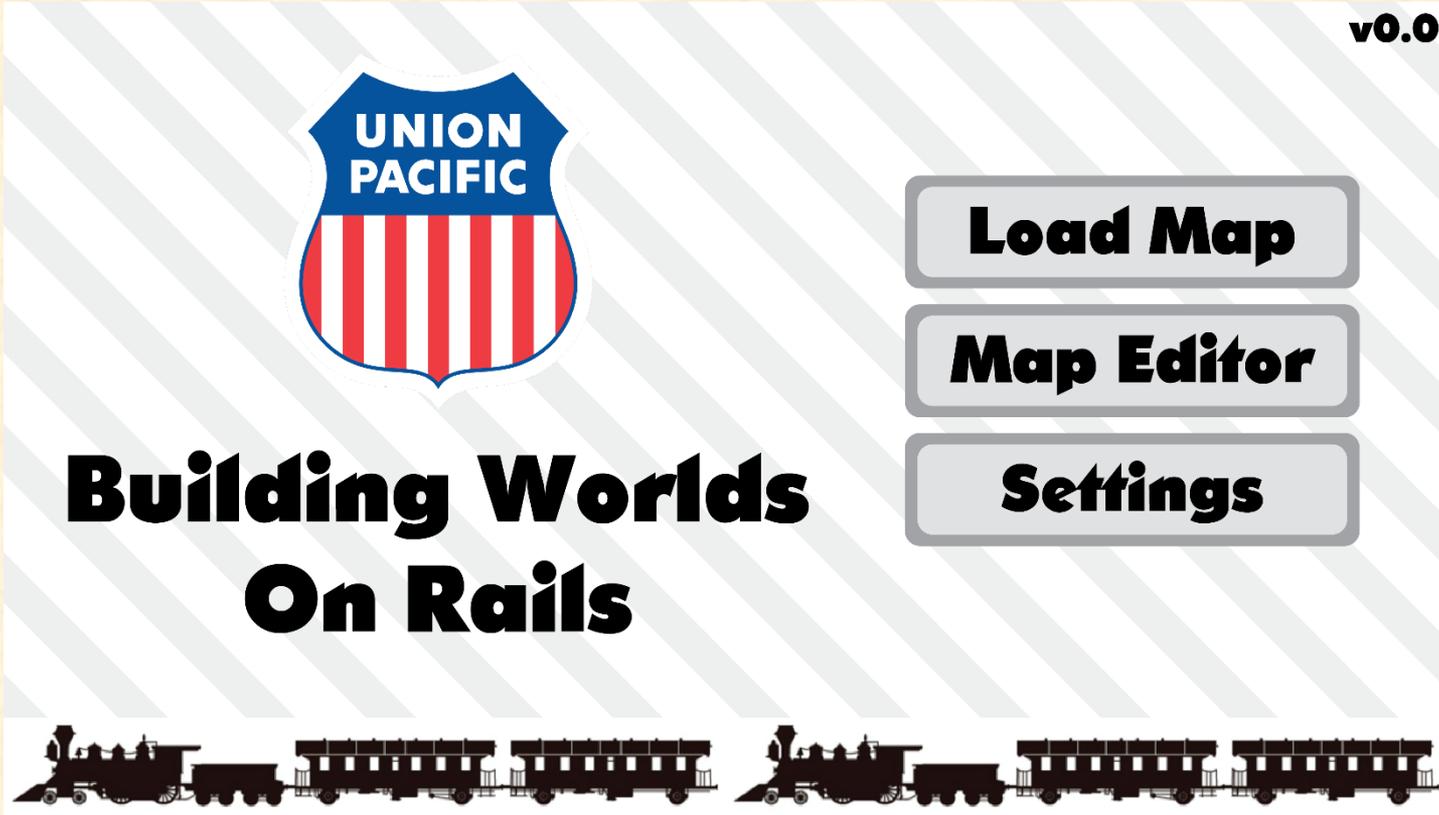
Team Union Pacific

Trever Daniels, Declan McClintock, Jacob Young, Kyle Bush, Zachary Brenz

Team Union Pacific Project Plan Presentation

e.

Screen Mockup

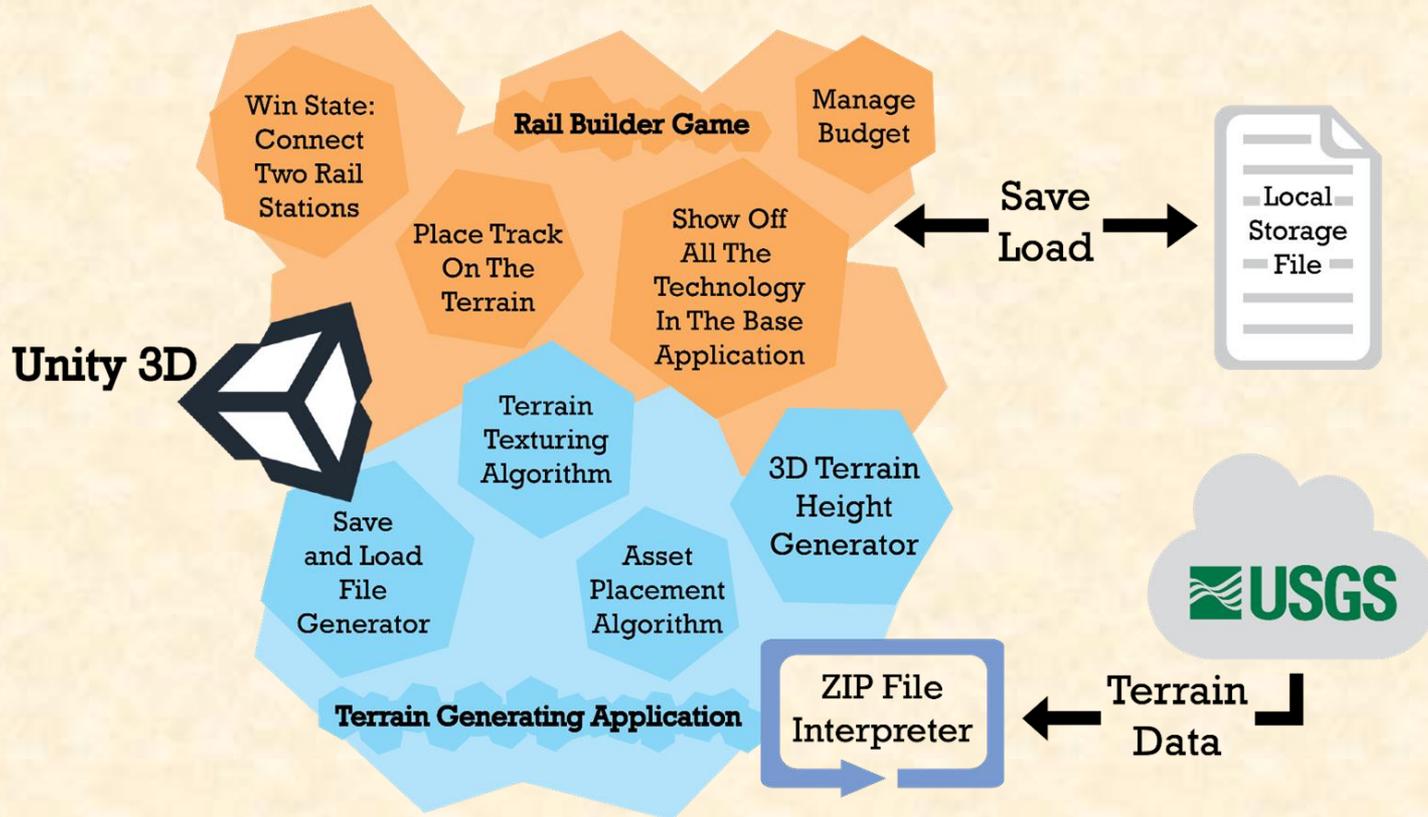




Team Union Pacific Project Plan Presentation

Team Union Pacific Project Plan Presentation

Architecture Diagram



Screen Mockup: Terrain Generation



The Capstone Experience

Team Union Pacific Project Plan

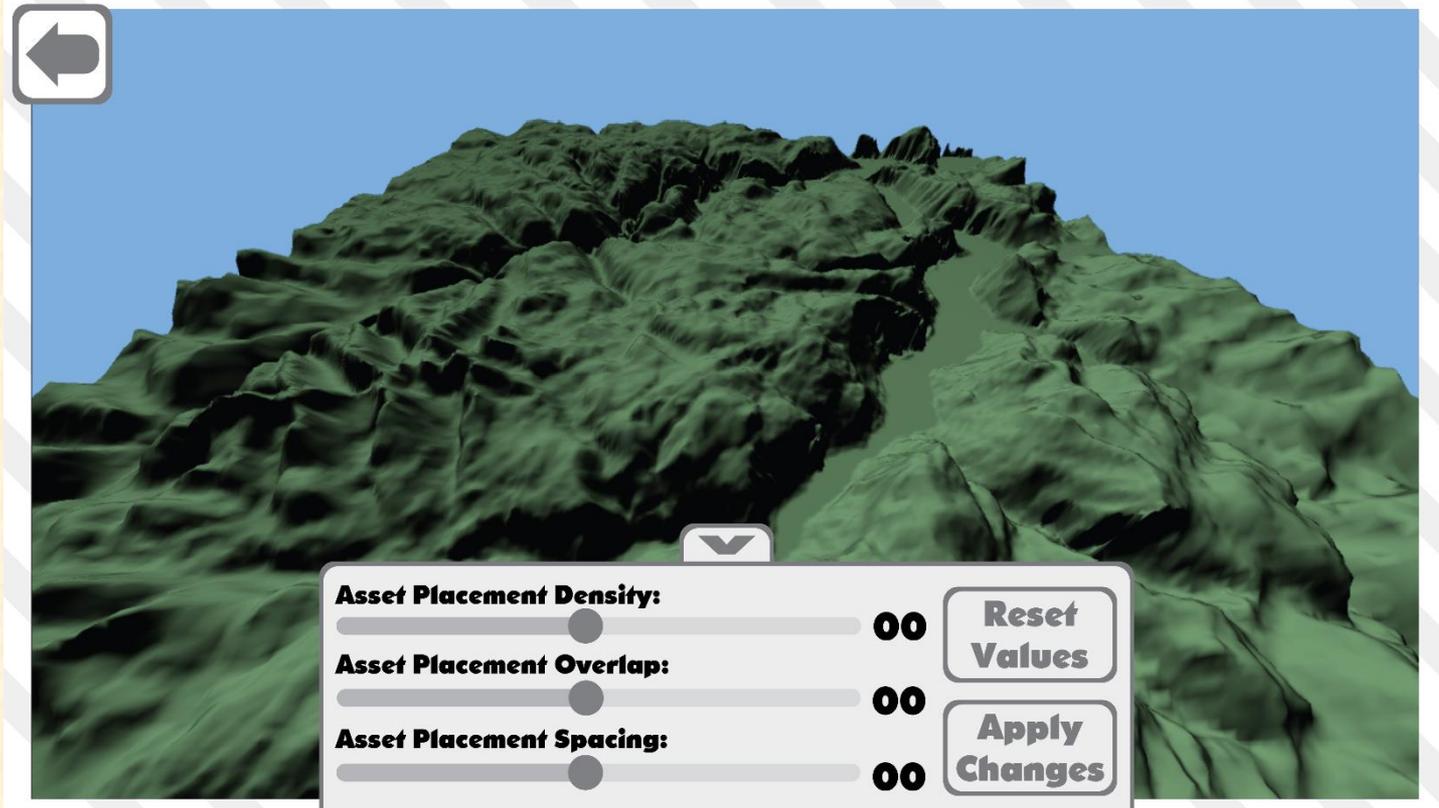
7

Team Union Pacific Project Plan Presentation

Team Union Pacific Project Plan Presentation

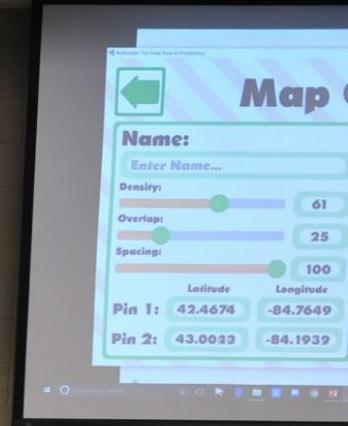
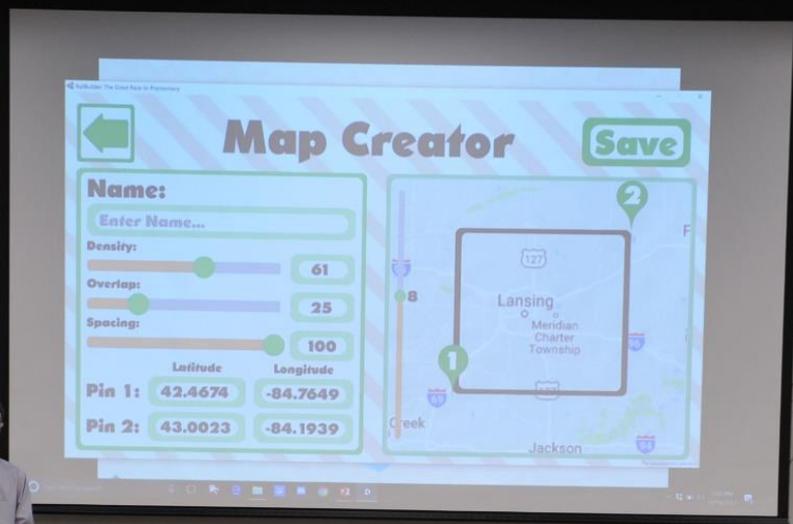
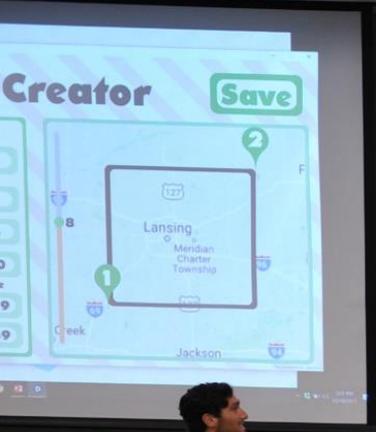
e.

Screen Mockup



The Capstone Experience





Man in light blue shirt and tan pants standing on the left side of the stage.

Man in a dark sweater with orange and blue stripes on the sleeves, standing in the center of the stage.

Man in a light blue shirt and tie, standing in the center of the stage.

Man in a dark polo shirt and khaki pants standing on the right side of the stage.

Man in a plaid shirt sitting at a podium with a Michigan State University logo, operating a laptop.

Team Union Pacific Alpha Presentation

Team Union Pacific Alpha Presentation

Map Creator

Name:
Enter Name...

Density: 61

Overlap: 25

Spacing: 93

	Latitude	Longitude
Pin 1:	42.742	-84.495
Pin 2:	42.727	-84.472

Map showing East Lansing area with a highlighted route and two numbered pins (1 and 2).

Team Union Pacific Alpha Presentation

e.

Map Editor





Team Union Pacific Alpha Presentation

Team Union Pacific Alpha Presentation

e.

Map Viewer



The Capstone Experience





Team Union Pacific Beta Presentation

Team Union Pacific Beta Presentation

e.

Map Creator

Map Creator

Name:
Enter Name...

Density:
50

Texture Smoothing:
1

Elevation Smoothing:
5

Latitude **Longitude**

Pin 1: 42.5927 -84.7586

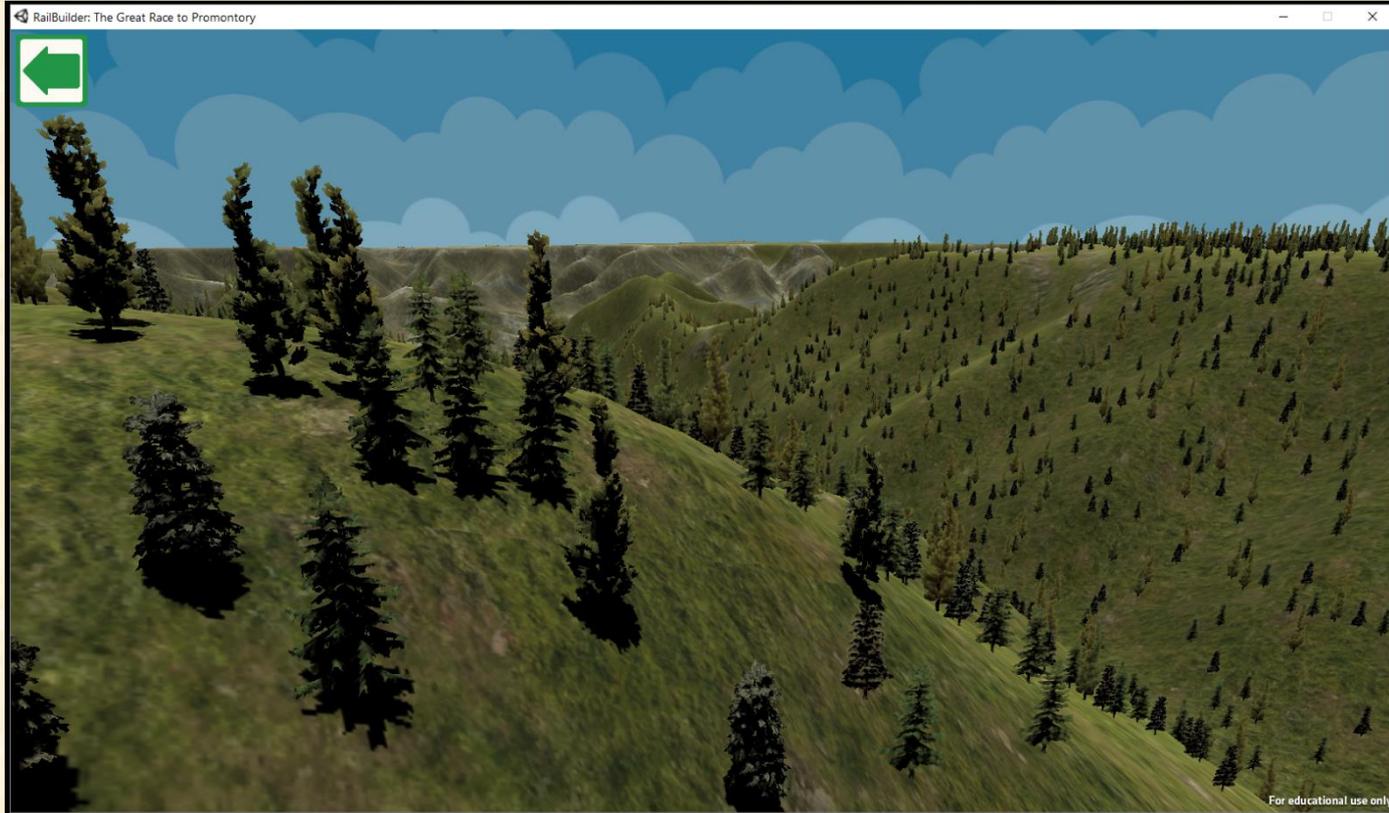
Pin 2: 42.884 -84.3578

Map showing Lansing, Michigan, with a highlighted area and three numbered pins (1, 2, 3) indicating specific locations. The map also shows major roads like I-96 and I-69.

Team Union Pacific Beta Presentation

e.

Realistic Terrain Generation



The Capstone Experience



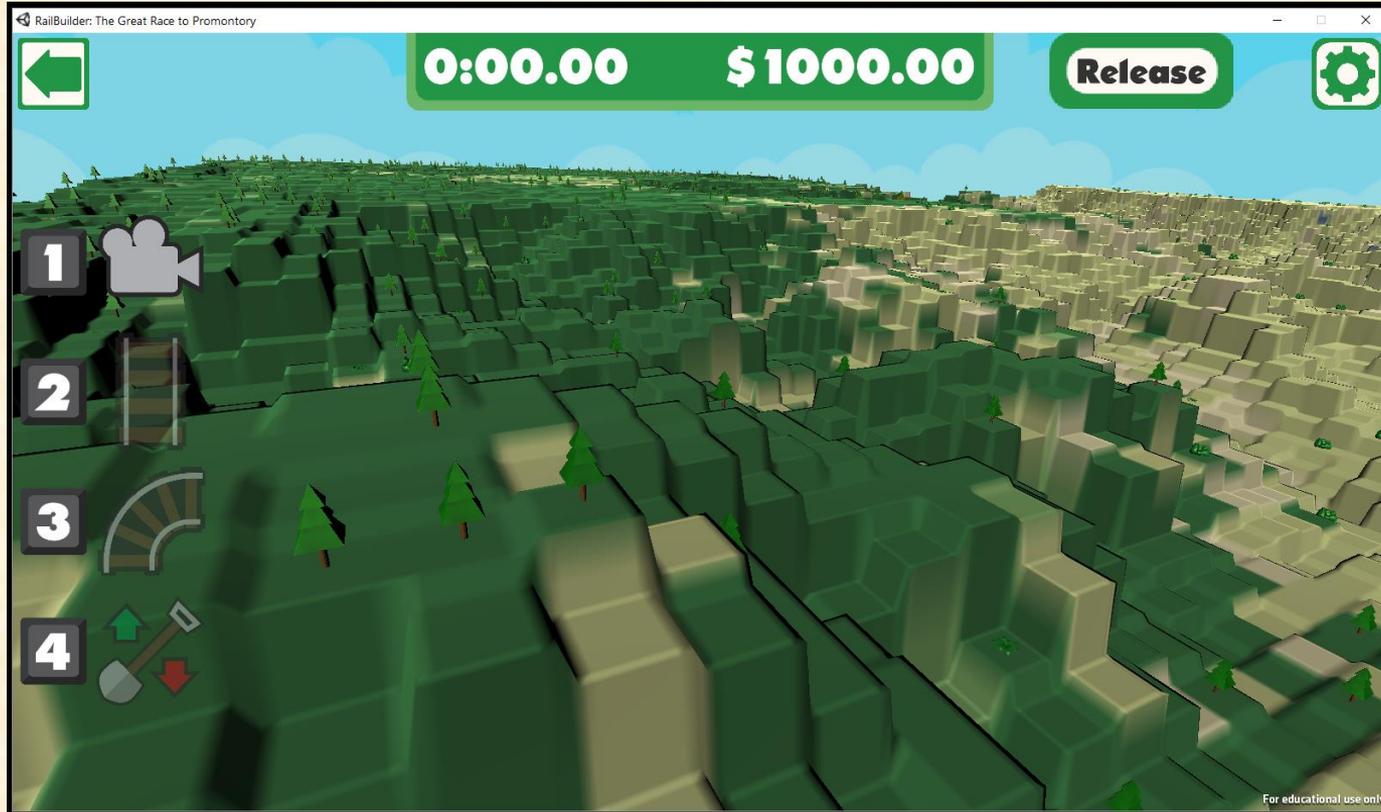


Team Union Pacific Beta Presentation

Team Union Pacific Beta Presentation

e.

Game Terrain Generation



The Capstone Experience





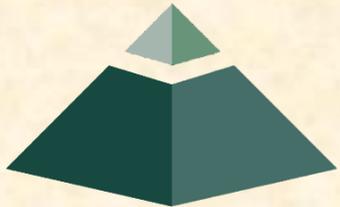
Team Union Pacific
Design Day

MICHIGAN STATE
UNIVERSITY

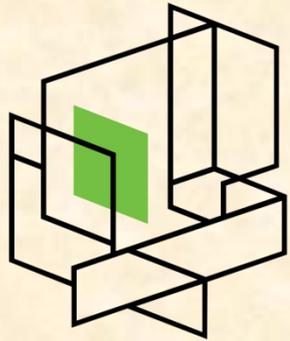
The Capstone Experience

Team Urban Science

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



URBAN SCIENCE™

Automotive News interviewed Jim Anderson to better understand both sales effectiveness ratings and Urban Science.

[LEARN MORE](#)

X



USA

SEARCH

CONTACT US



WHEN WE LOOK AT THE MARKET, WE'RE THE ONLY ONES WHO SEE THE FULL PICTURE.

Every major OEM. Every major dealer body. In every nook, cranny and region, OEMs around the world trust the unique knowledge base and skill set of Urban Science. In the world's most complex business, we're a key partner for success in every part of their operations.

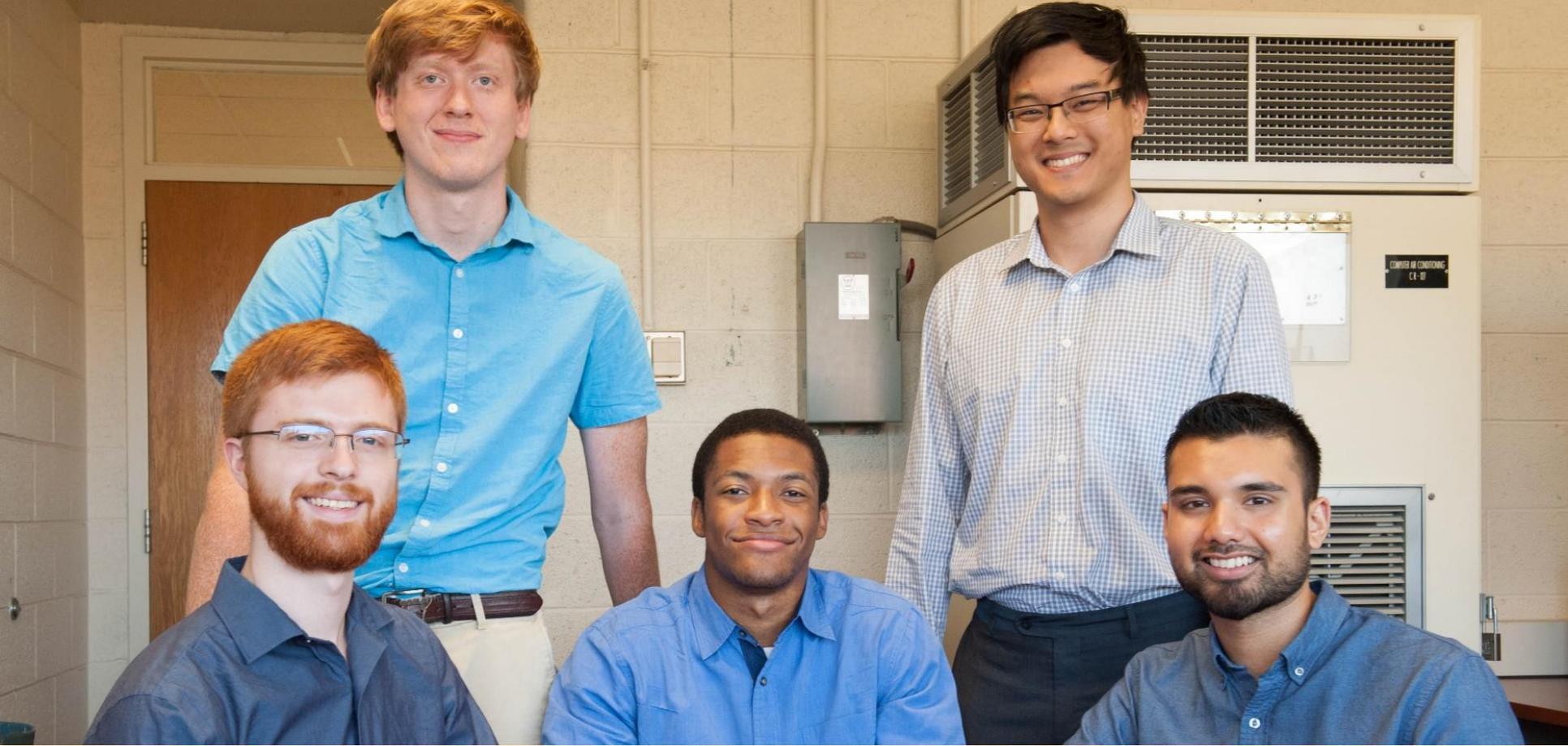
Team Urban Science Project Overview

VDA: Virtual Dealership Advisor

- Functionalities
 - Answer User Free-Form Speech Input Question
 - By Correlating Question with Key Performance Indicators (KPIs)
- Features
 - Design and Build Mobile App
 - Visualize Selected KPIs
 - Show Actions Associated with Each KPI
 - Evaluate All Possible KPIs and Actions
 - Determine Best Answer to Question
- Technologies
 - Apple iPads and iPhones (iOS) / Swift
 - Google Android Tablets and Phones / Java
 - Microsoft .NET Core 1.0
 - Microsoft Cognitive Services
 - Speech
 - Language
 - Knowledge
 - Search



URBAN SCIENCE
Detroit, Michigan



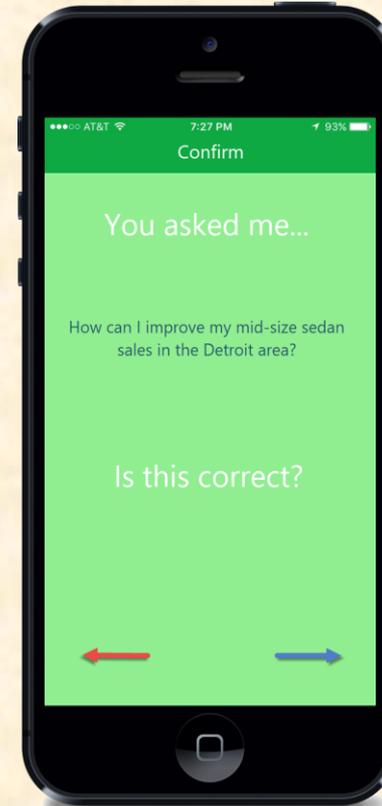
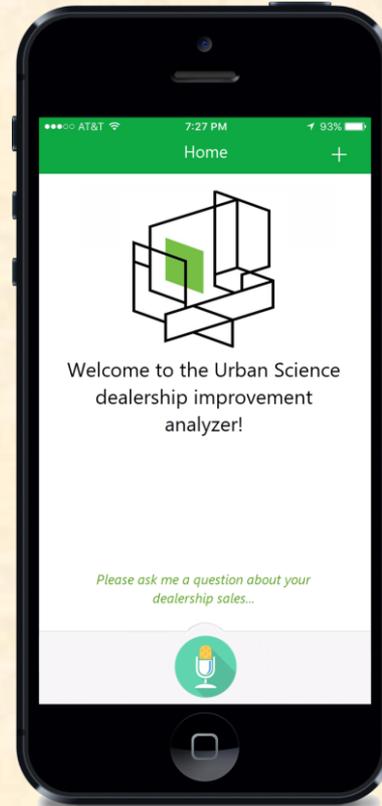
Team Urban Science

Will Renius, James Grenfell, Daniel Oforidankwa, Eric Zhou, Harry Singh

Team Urban Science Project Plan Presentation

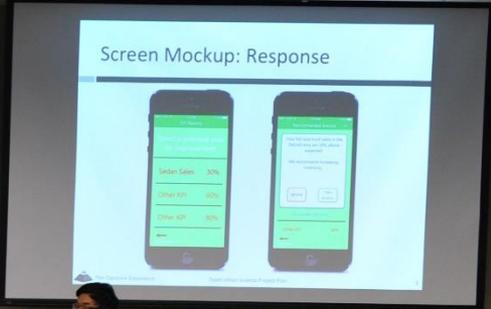
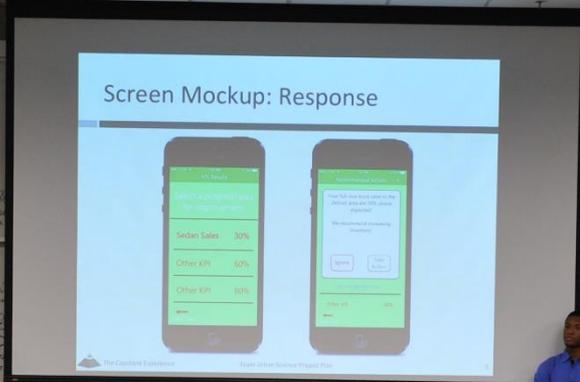
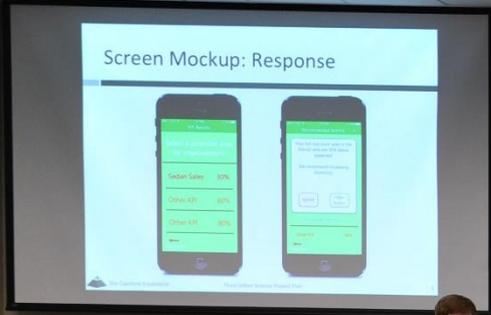
e.

Screen Mockup



The Capstone Experience

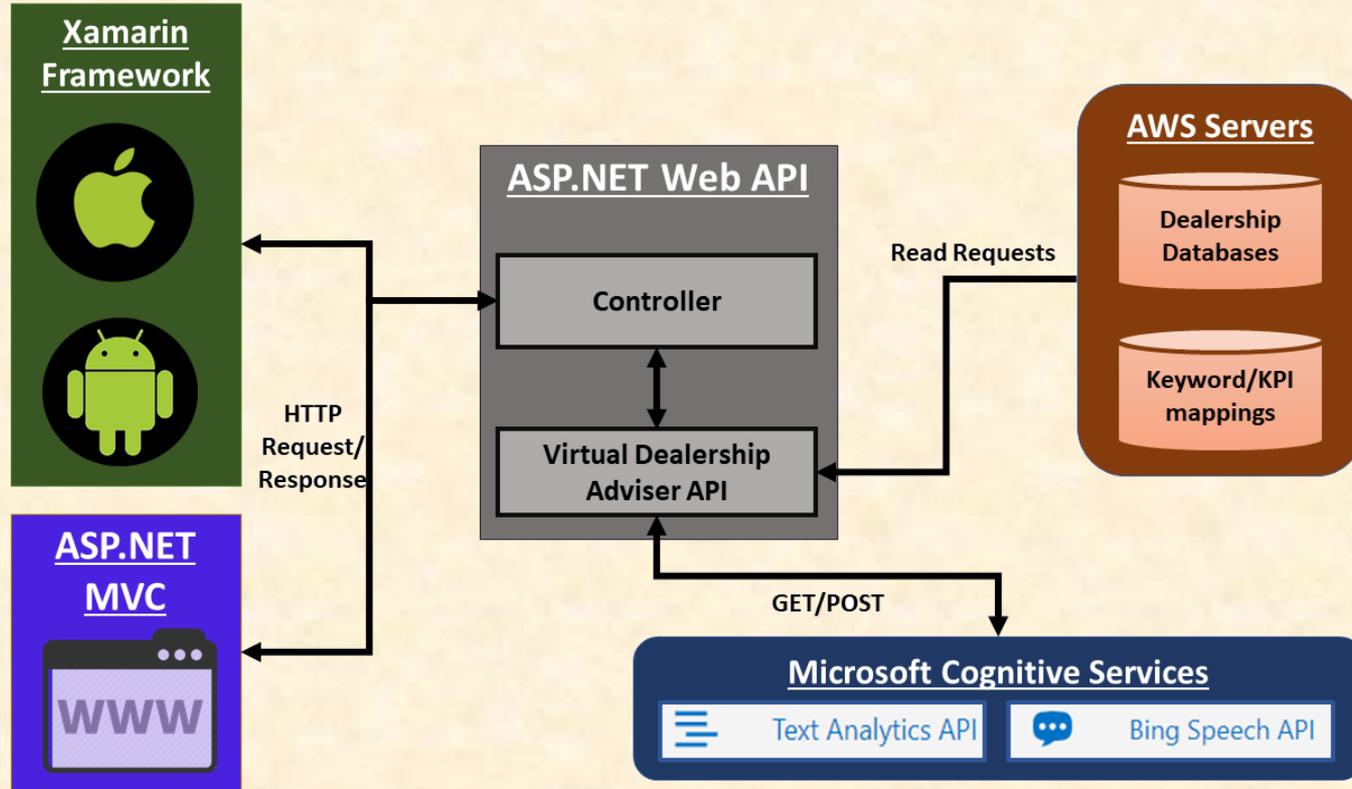


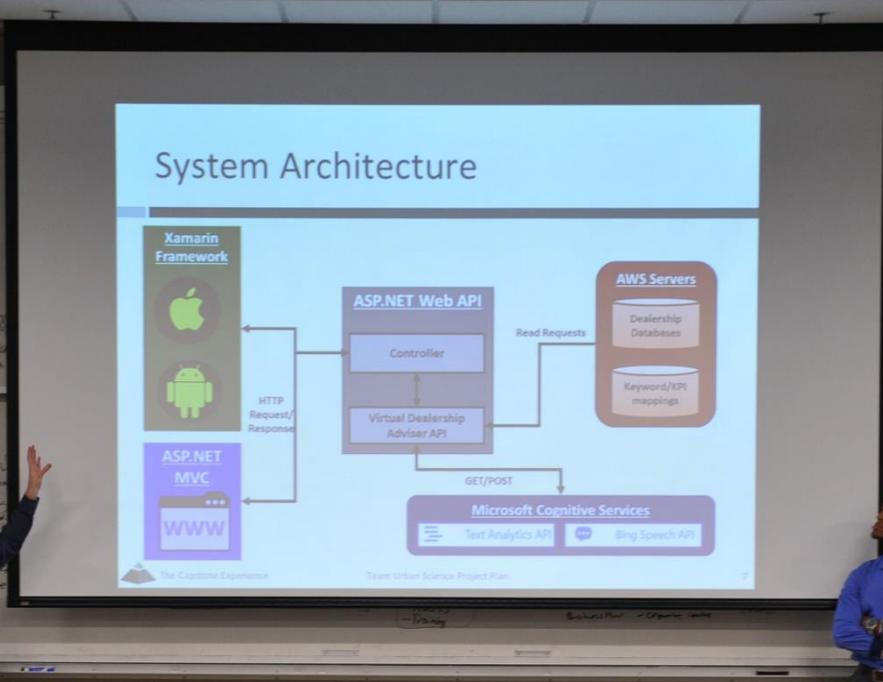
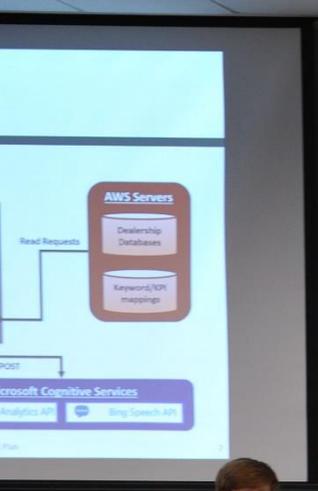


Team Urban Science
Project Plan Presentation

Team Urban Science Project Plan Presentation

Architecture Diagram



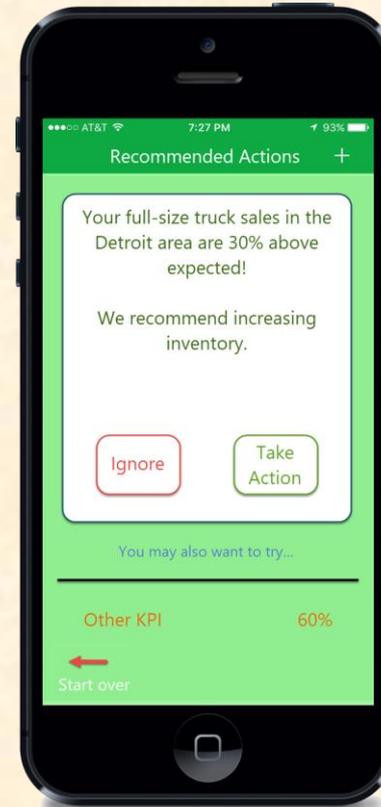
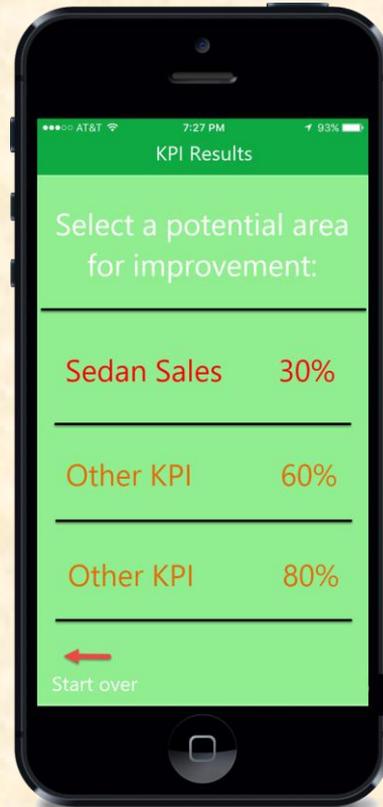


Team Urban Science
Project Plan Presentation

Team Urban Science Project Plan Presentation

e.

Screen Mockup





Team Urban Science Alpha Presentation

Team Urban Science Alpha Presentation

e.

KPI Page (Web App)

The screenshot shows a web browser window with the URL `http://urbansciencecapstone20171011055948.azurewebsites.net/Home/KPI`. The page title is "Here is what we've found for: 'how do i improve my car sales'".

The main KPI card is for "Car Dealer Sales" with a value of 252 and a kpi percentile of 59.2%. The text indicates performance is above average but suggests ways to improve. A green "View Actions" button is present.

Below this, a note says "Look below to see your most needed areas of improvement".

Three smaller KPI cards are shown below:

- Honda Truck Dealer Effectiveness:** Value 83, kpi percentile 4.0%. Performance is far below average.
- Honda Total Insell:** Value 687, kpi percentile 4.4%. Performance is far below average.
- Honda Car Dealer Effectiveness:** Value 428, kpi percentile 5.1%. Performance is far below average.

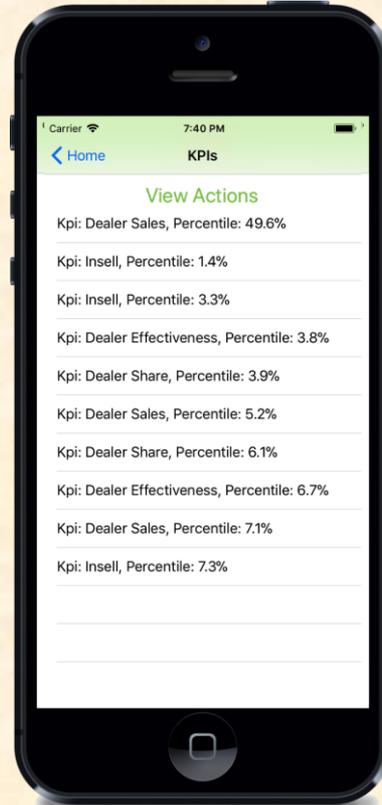
Metric	Value	KPI Percentile	Performance Status
Car Dealer Sales	252	59.2%	Above Average
Honda Truck Dealer Effectiveness	83	4.0%	Far Below Average
Honda Total Insell	687	4.4%	Far Below Average
Honda Car Dealer Effectiveness	428	5.1%	Far Below Average

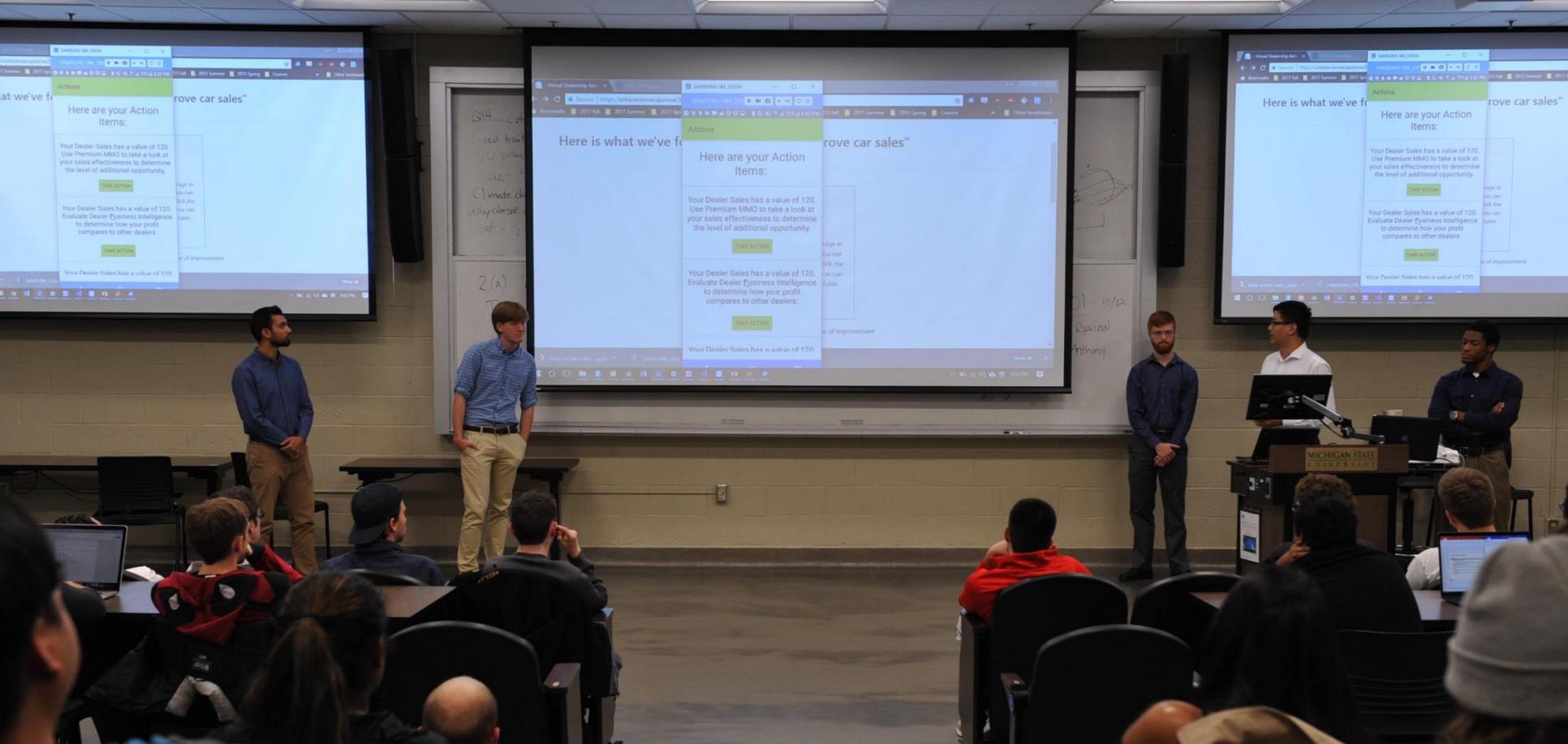


Team Urban Science Alpha Presentation

e.

KPI Page (iOS)

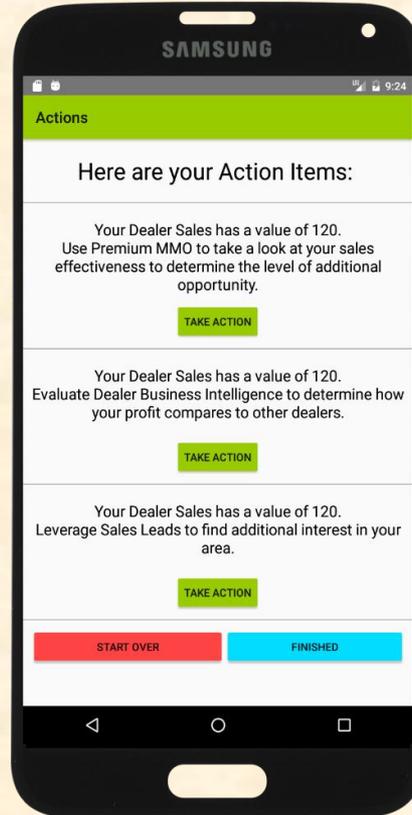


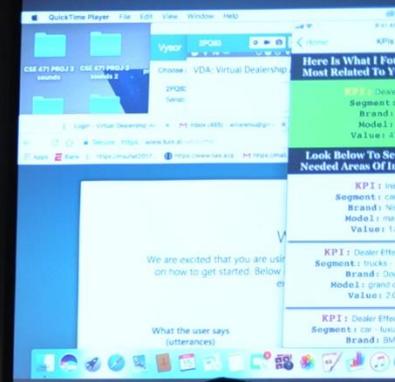
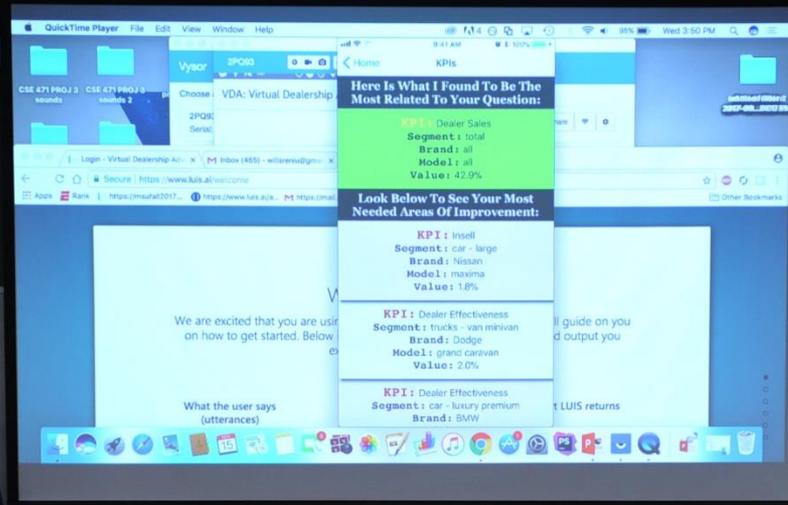
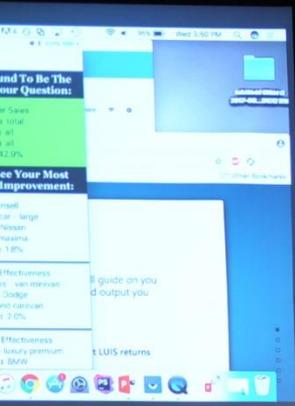


Team Urban Science Alpha Presentation

Team Urban Science Alpha Presentation

Action Page (Android)



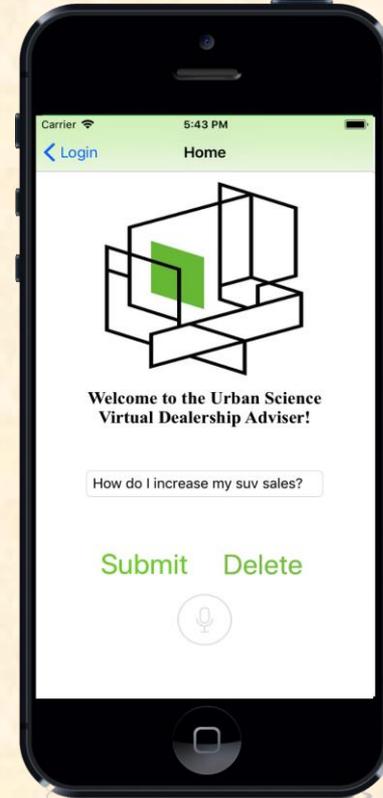
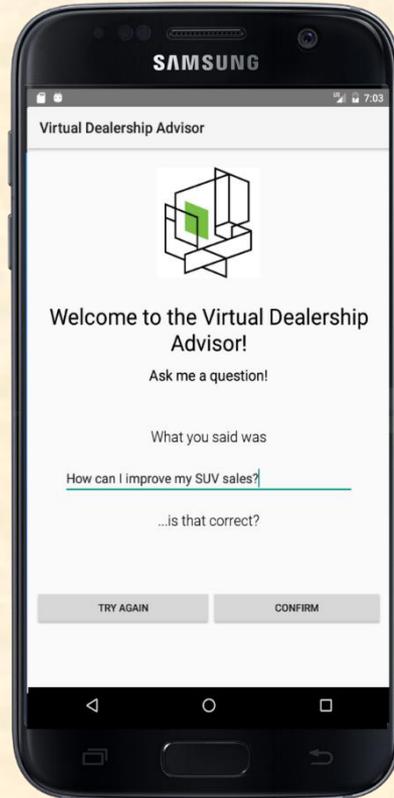


Team Urban Science Beta Presentation

Team Urban Science Beta Presentation

e.

Home Screen (Android/iOS)



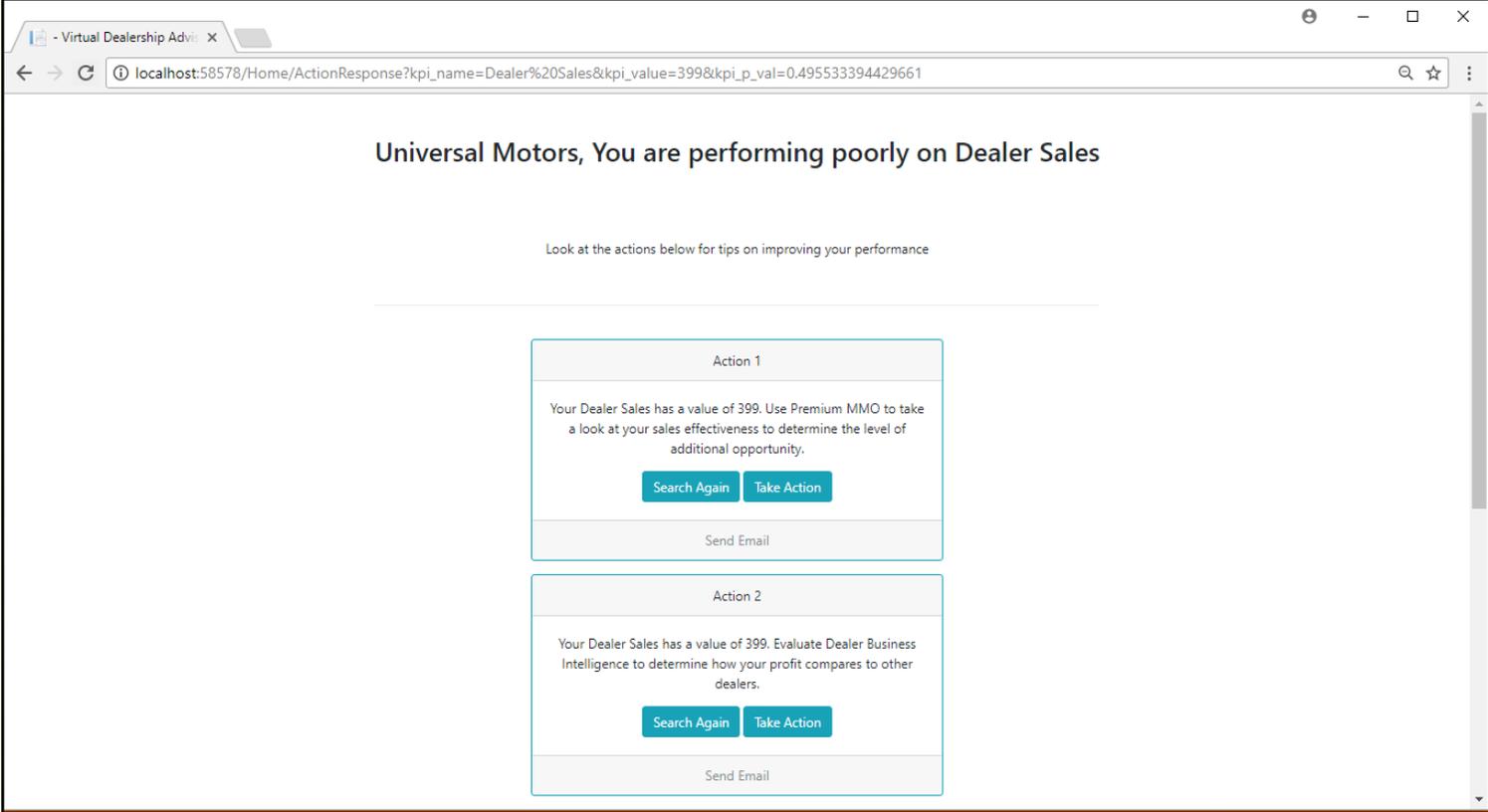
The Capstone Experience



Team Urban Science Beta Presentation

e.

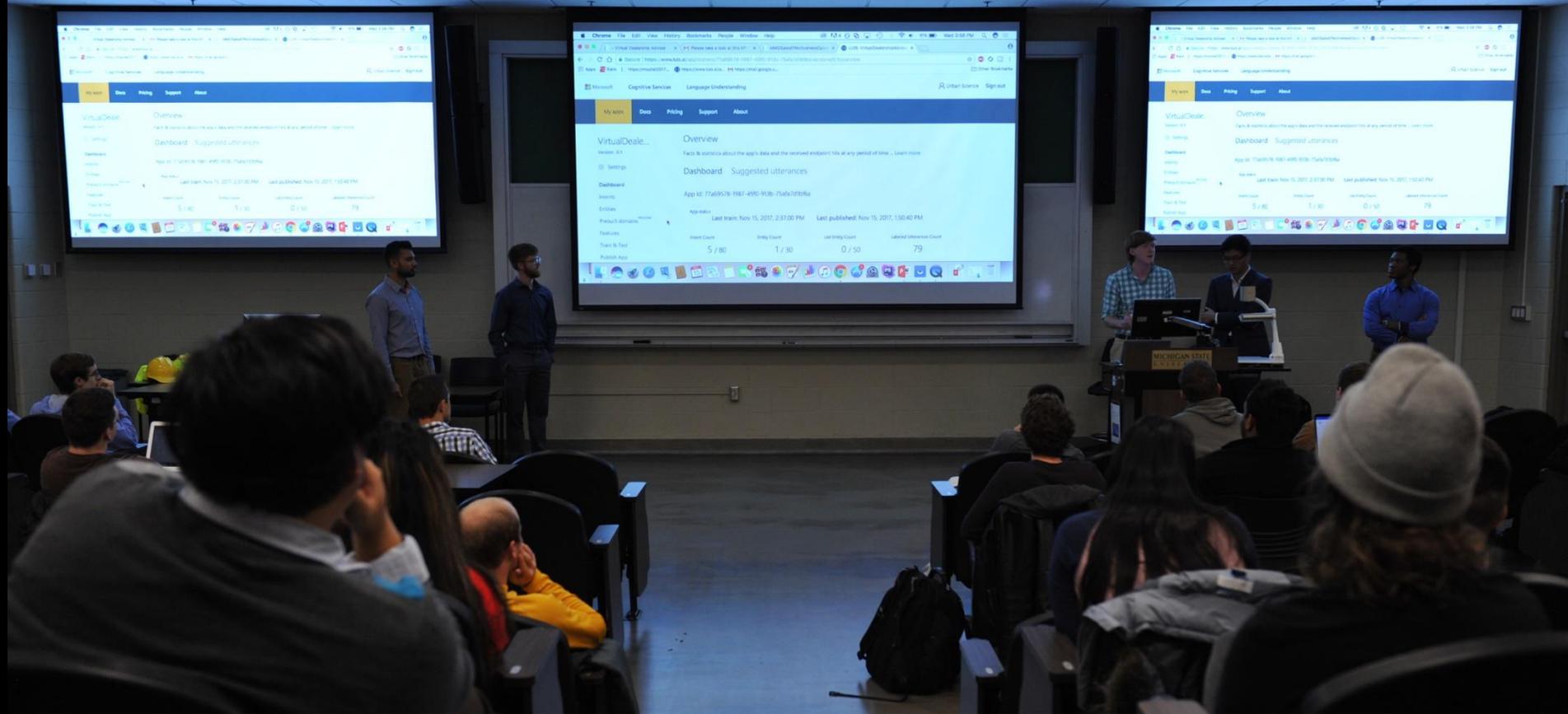
Actions Page (Web-App)



The screenshot shows a web browser window with the following content:

- Browser Tab:** Virtual Dealership Adv...
- Address Bar:** localhost:58578/Home/ActionResponse?kpi_name=Dealer%20Sales&kpi_value=399&kpi_p_val=0.495533394429661
- Header:** Universal Motors, You are performing poorly on Dealer Sales
- Text:** Look at the actions below for tips on improving your performance
- Action 1:**
 - Text: Your Dealer Sales has a value of 399. Use Premium MMO to take a look at your sales effectiveness to determine the level of additional opportunity.
 - Buttons: Search Again, Take Action
 - Footer: Send Email
- Action 2:**
 - Text: Your Dealer Sales has a value of 399. Evaluate Dealer Business Intelligence to determine how your profit compares to other dealers.
 - Buttons: Search Again, Take Action
 - Footer: Send Email

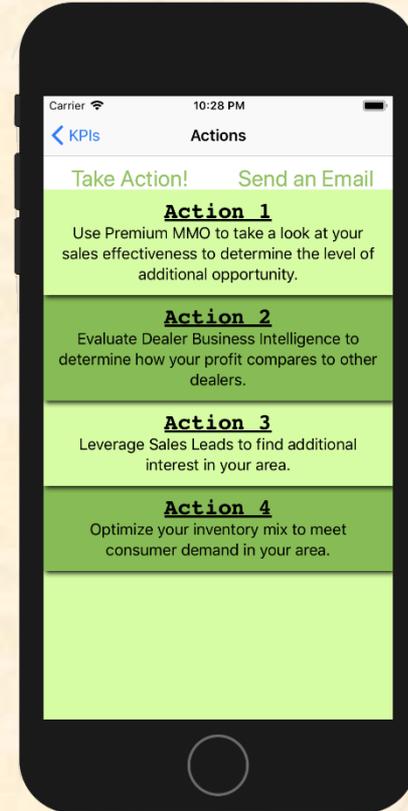
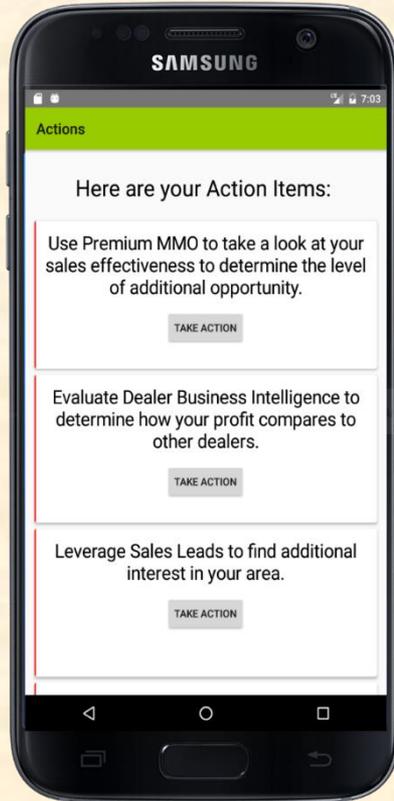


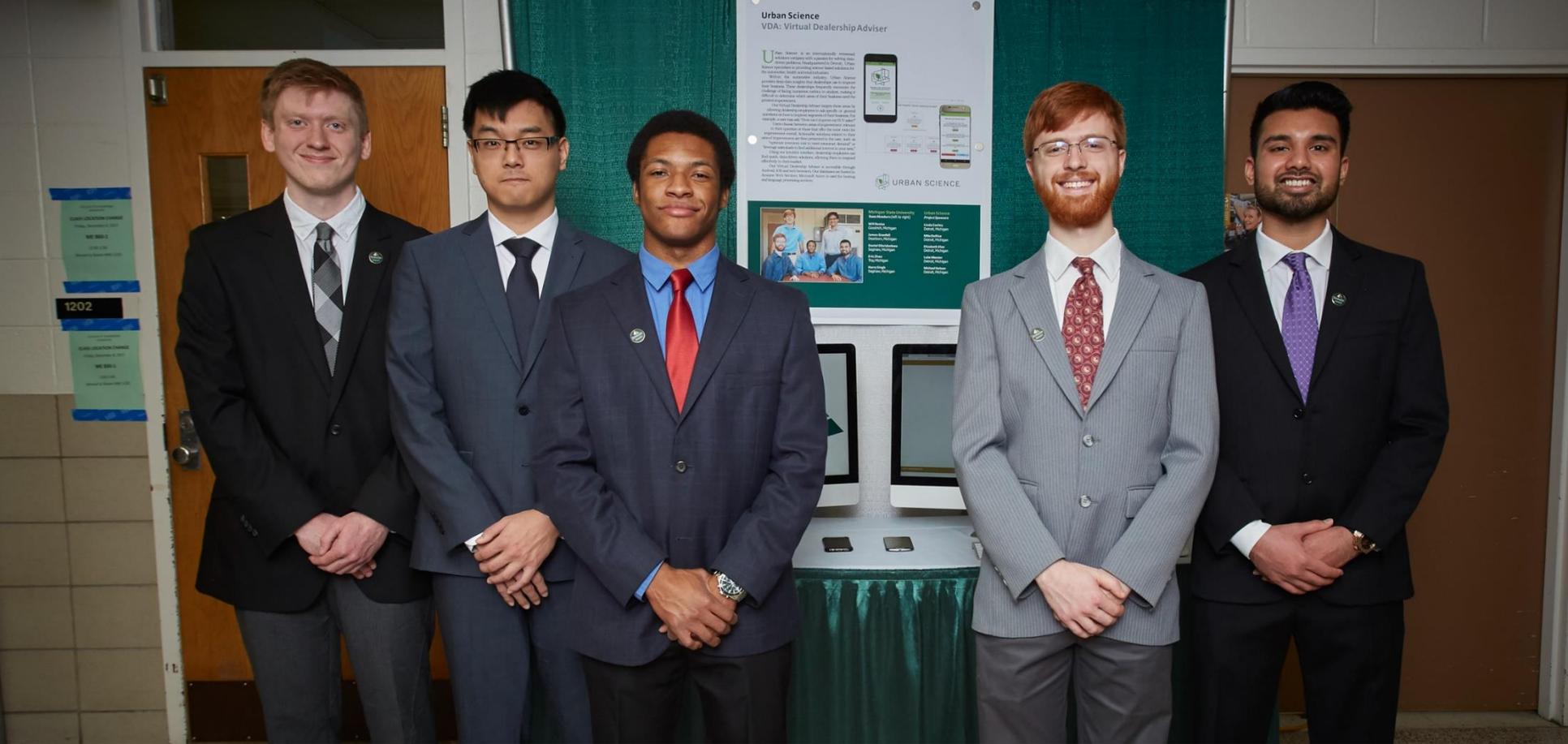


Team Urban Science Beta Presentation

Team Urban Science Beta Presentation

Actions Page (Android/iOS)





Team Urban Science
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Yello

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

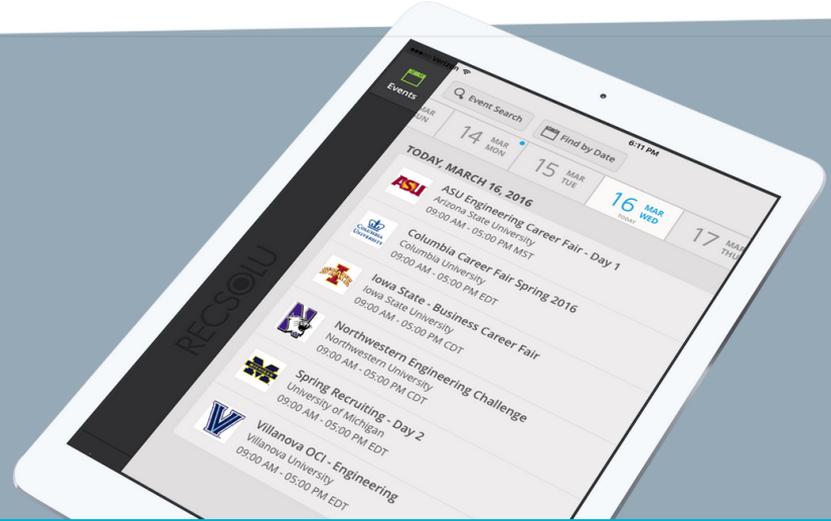
yello



Campus Recruiting

Complete solution for robust campus recruiting teams

REQUEST A DEMO



Accurately report on the effectiveness of your campus recruiting efforts to make data-driven decisions on where to recruit in the future and why.

Team Yello Project Overview

Automatic Resume Verification

- Functionalities
 - Verify Resume Information
 - Automatically and Instantly
- Features
 - Design and Build Two Web Apps
 - For Universities and Workplaces to Upload Credentials
 - For Candidates to Upload Resumes
 - Ensure Security and Privacy
 - Proof of Source
 - Proof of Existence / Timestamp
 - Proof of Work / Education / Military Service
 - Store and Access Credentials Using a Blockchain
 - Notify Candidates When Credentials Uploaded
 - Verify Resume Information Upon Uploading
 - Inform Recruiters re Resume Accuracy
- Technologies
 - Ruby on Rails
 - Blockchain
 - Transactional APIs



yello

Chicago, Illinois





Team Yello

Wan Kim, Nathaniel Hagan, Giorgio Maroki, Brandon Burt, Ryan Nagy

Team Yello Project Plan Presentation

e.

Screen Mockup

Verify Portal - Main

http://verification.yello.co/credentialupload

University Credential Upload

Welcome, [university/workplace!](#)

Please Upload Credentials

Add Field

First Name

Last Name

e.g. GPA

Upload

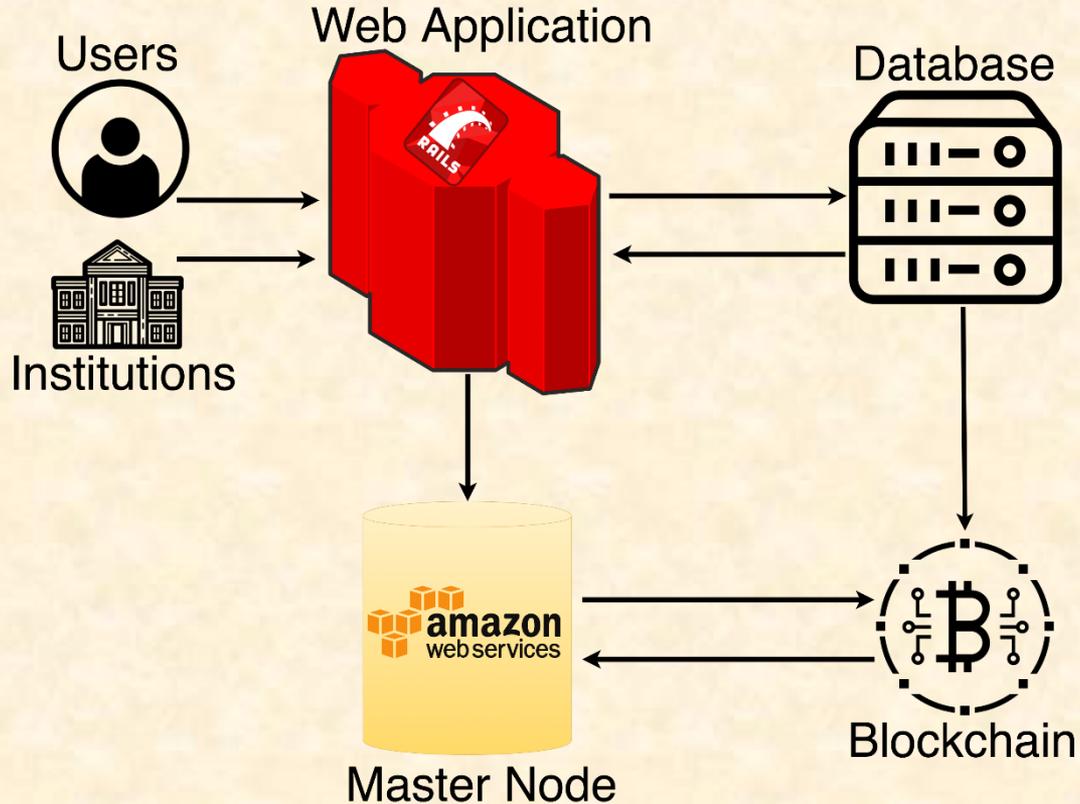


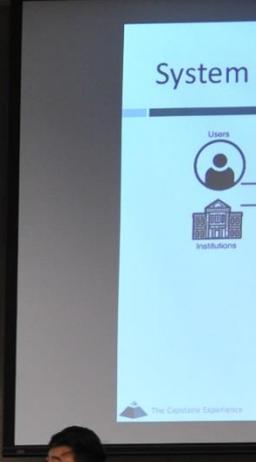
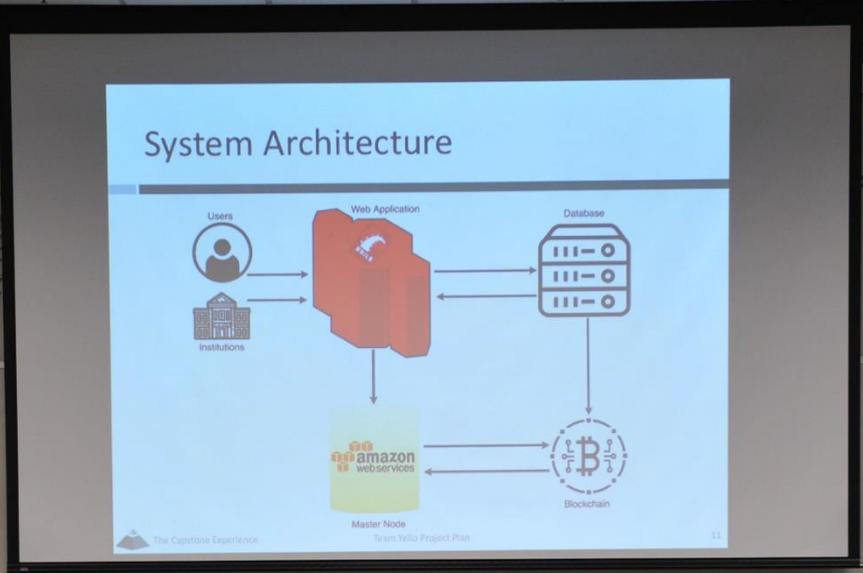
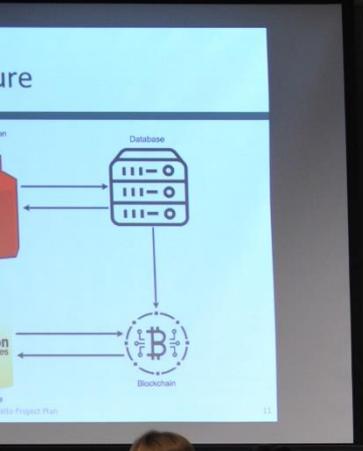


Team Yello Project Plan Presentation

Team Yello Project Plan Presentation

Architecture Diagram



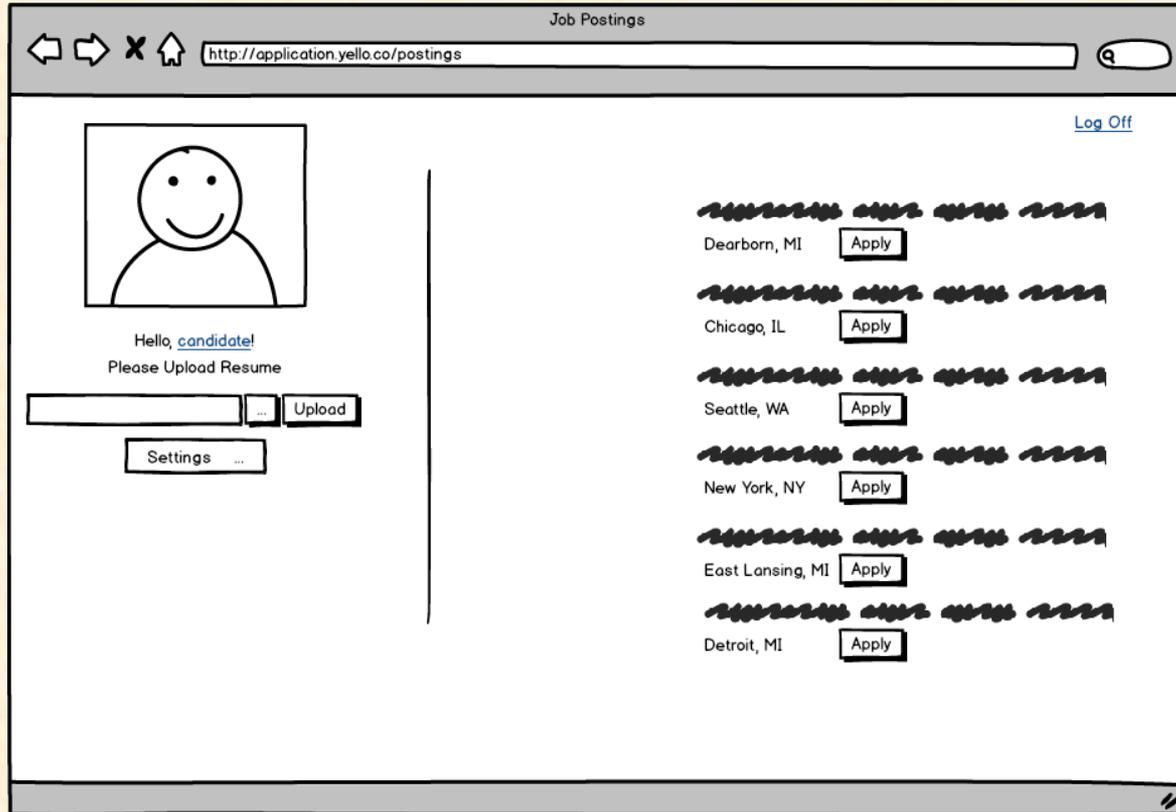


Team Yello Project Plan Presentation

Team Yello Project Plan Presentation

e.

Screen Mockup





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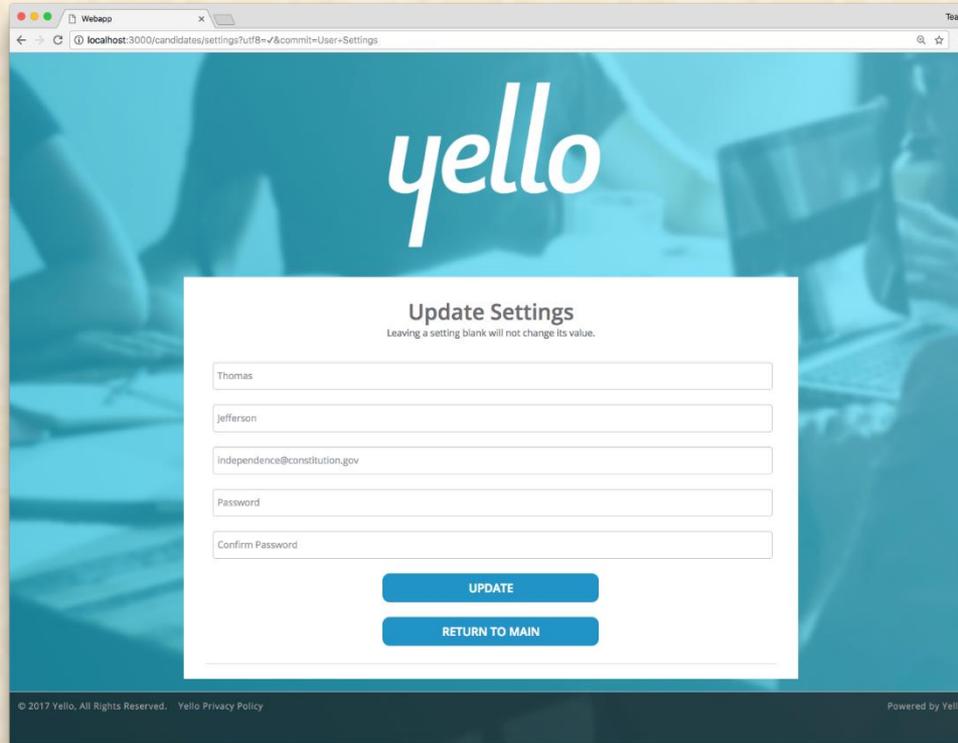


Team Yello Alpha Presentation

Team Yello Alpha Presentation

e.

Candidate Settings



The screenshot shows a web browser window with the URL `localhost:3000/candidates/settings?utf8=✓&commit=User+Settings`. The page features the 'yello' logo in white on a teal background. Below the logo is a white form titled 'Update Settings' with the subtitle 'Leaving a setting blank will not change its value.' The form contains five input fields: 'Thomas', 'Jefferson', 'independence@constitution.gov', 'Password', and 'Confirm Password'. At the bottom of the form are two blue buttons: 'UPDATE' and 'RETURN TO MAIN'. The footer of the page includes the text '© 2017 Yello. All Rights Reserved. Yello Privacy Policy' on the left and 'Powered by Yello' on the right.

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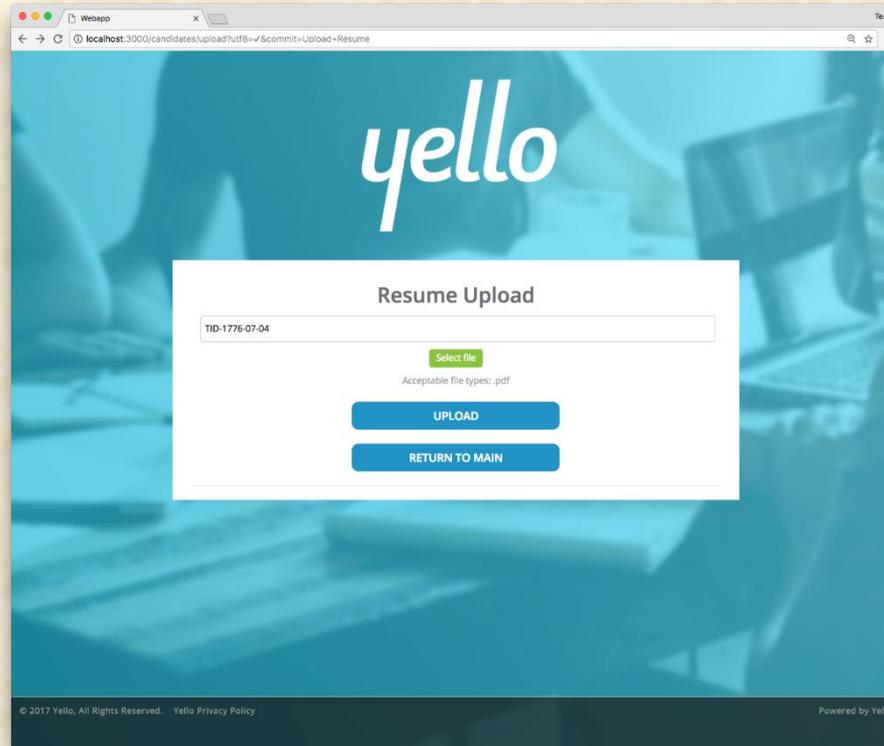
Powered by Yello



Team Yello Alpha Presentation

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Resume Upload



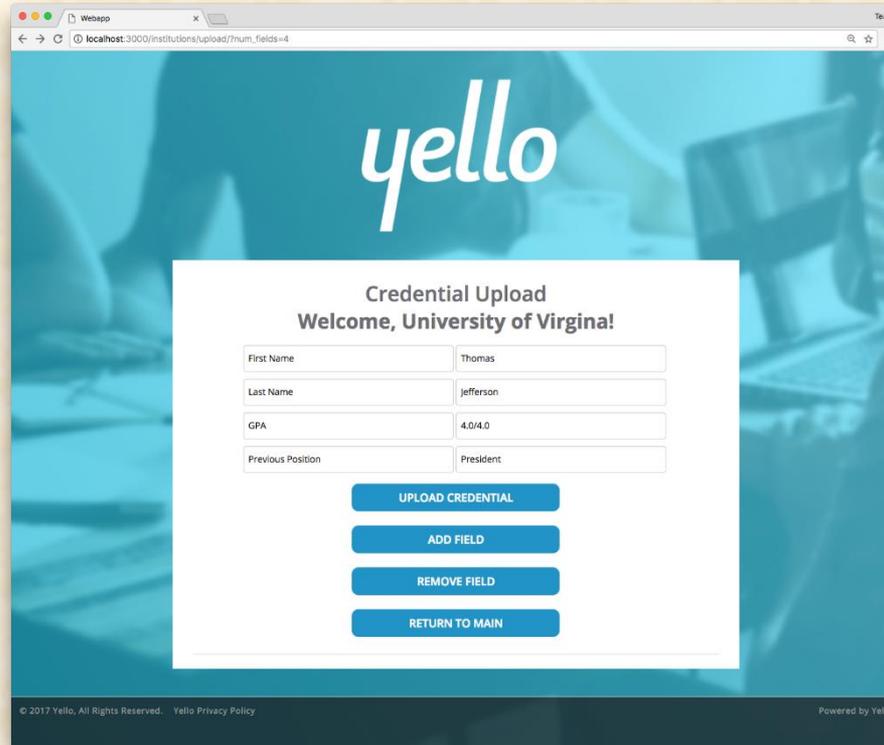
The screenshot shows a web browser window with the URL `localhost:3000/candidates/upload?utf8=✓&commit=Upload+Resume`. The page features the 'yello' logo at the top. Below the logo is a white modal form titled 'Resume Upload'. The form contains a text input field with the value 'TID-1776-07-04'. Below the input field is a green 'Select file' button. Underneath the button, it says 'Acceptable file types: .pdf'. At the bottom of the form are two blue buttons: 'UPLOAD' and 'RETURN TO MAIN'. The footer of the page includes the text '© 2017 Yello, All Rights Reserved. Yello Privacy Policy' on the left and 'Powered by Yello' on the right.



Team Yello Alpha Presentation

e.

Credential Upload



The screenshot shows a web browser window with the URL `localhost:3000/institutions/upload/?num_fields=4`. The page features the 'yello' logo at the top. Below the logo is a white form titled 'Credential Upload' with the subtitle 'Welcome, University of Virginia!'. The form contains four rows of input fields:

First Name	Thomas
Last Name	Jefferson
GPA	4.0/4.0
Previous Position	President

Below the form are four blue buttons: 'UPLOAD CREDENTIAL', 'ADD FIELD', 'REMOVE FIELD', and 'RETURN TO MAIN'. At the bottom of the page, there is a footer with the text '© 2017 Yello, All Rights Reserved. Yello Privacy Policy' on the left and 'Powered by Yello' on the right.



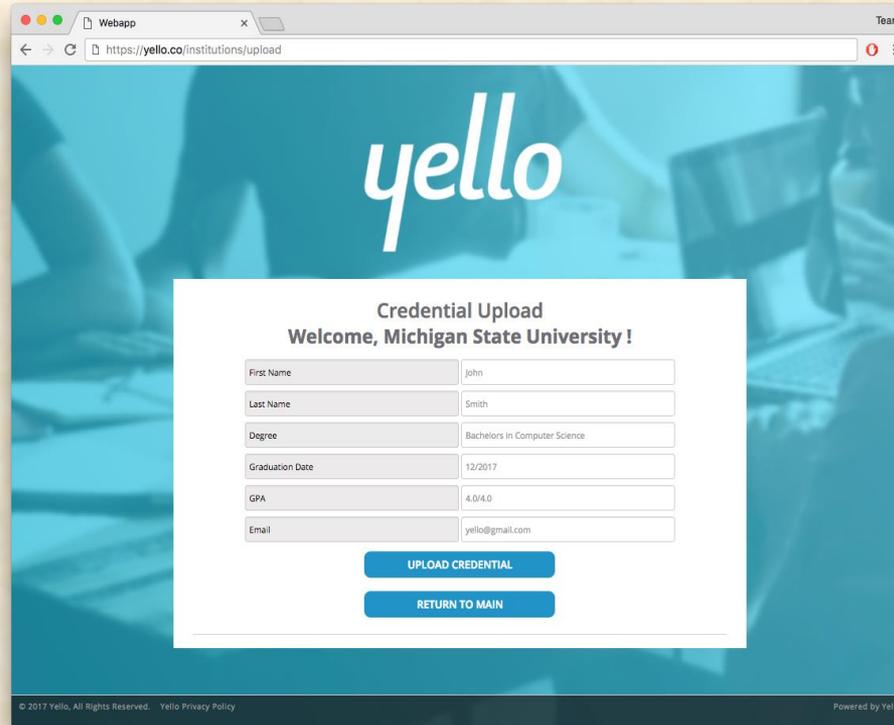


Team Yello Beta Presentation

Team Yello Beta Presentation

e.

Credential Upload



The screenshot shows a web browser window with the URL <https://yello.co/institutions/upload>. The page features the 'yello' logo at the top. Below the logo, the heading reads 'Credential Upload' followed by 'Welcome, Michigan State University!'. The form contains the following fields:

First Name	John
Last Name	Smith
Degree	Bachelors in Computer Science
Graduation Date	12/2017
GPA	4.0/4.0
Email	yello@gmail.com

Below the form are two buttons: 'UPLOAD CREDENTIAL' and 'RETURN TO MAIN'. At the bottom of the page, there is a footer with the text '© 2017 Yello, All Rights Reserved. Yello Privacy Policy' on the left and 'Powered by Yello' on the right.



Team Yello Beta Presentation

e.

Candidate Application View

The screenshot shows a web browser window with the URL `https://yello.co/postings/msu`. The page header features the Michigan State University logo. Below the header, there is a search bar labeled "Search Jobs". The main content area is divided into two columns. The left column contains filters for "Job Type" and "Req Type". The "Job Type" filter includes options for "No Selection", "Full Time", and "Intern". The "Req Type" filter includes options for "No Selection", "University", "MBA", "Apprentice", and "PhD". The right column displays a list of job postings, with the first one being "Account Technology Strategist- Student". Each job listing includes details such as "Job Type", "Recruitment Pipeline", "Country", and "City".

Job Type	Recruitment Pipeline	Country	City
Intern	Sales	United States	Rannana
Intern	Marketing	France	Paris
Intern	Business Development	United States	Denver
Intern	SW	United States	Austin



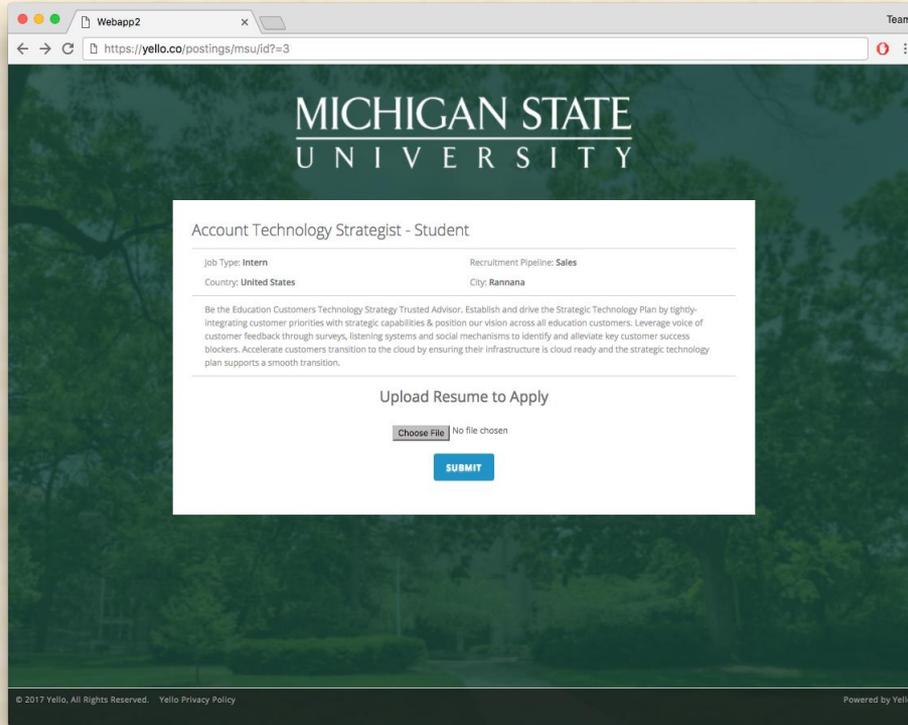


Team Yello Beta Presentation

Team Yello Beta Presentation

e.

Candidate Job Posting View



The screenshot shows a web browser window with the URL `https://yello.co/postings/msu/id?=3`. The page features the Michigan State University logo at the top. Below the logo, the job title "Account Technology Strategist - Student" is displayed. The job details include "Job Type: Intern", "Recruitment Pipeline: Sales", "Country: United States", and "City: Rannana". A description of the role follows, mentioning the Education Customers Technology Strategy Trusted Advisor role. At the bottom of the job details, there is a section titled "Upload Resume to Apply" with a "Choose File" button (currently showing "No file chosen") and a "SUBMIT" button. The footer of the page contains the text "© 2017 Yello, All Rights Reserved. Yello Privacy Policy" and "Powered by Yello".

MICHIGAN STATE
UNIVERSITY

Account Technology Strategist - Student

Job Type: **Intern** Recruitment Pipeline: **Sales**
Country: **United States** City: **Rannana**

Be the Education Customers Technology Strategy Trusted Advisor. Establish and drive the Strategic Technology Plan by tightly-integrating customer priorities with strategic capabilities & position our vision across all education customers. Leverage voice of customer feedback through surveys, listening systems and social mechanisms to identify and alleviate key customer success blockers. Accelerate customers transition to the cloud by ensuring their infrastructure is cloud ready and the strategic technology plan supports a smooth transition.

Upload Resume to Apply

Choose File | No file chosen

SUBMIT

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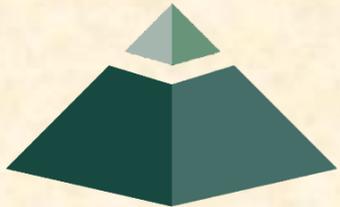
MICHIGAN STATE

UNIVERSITY

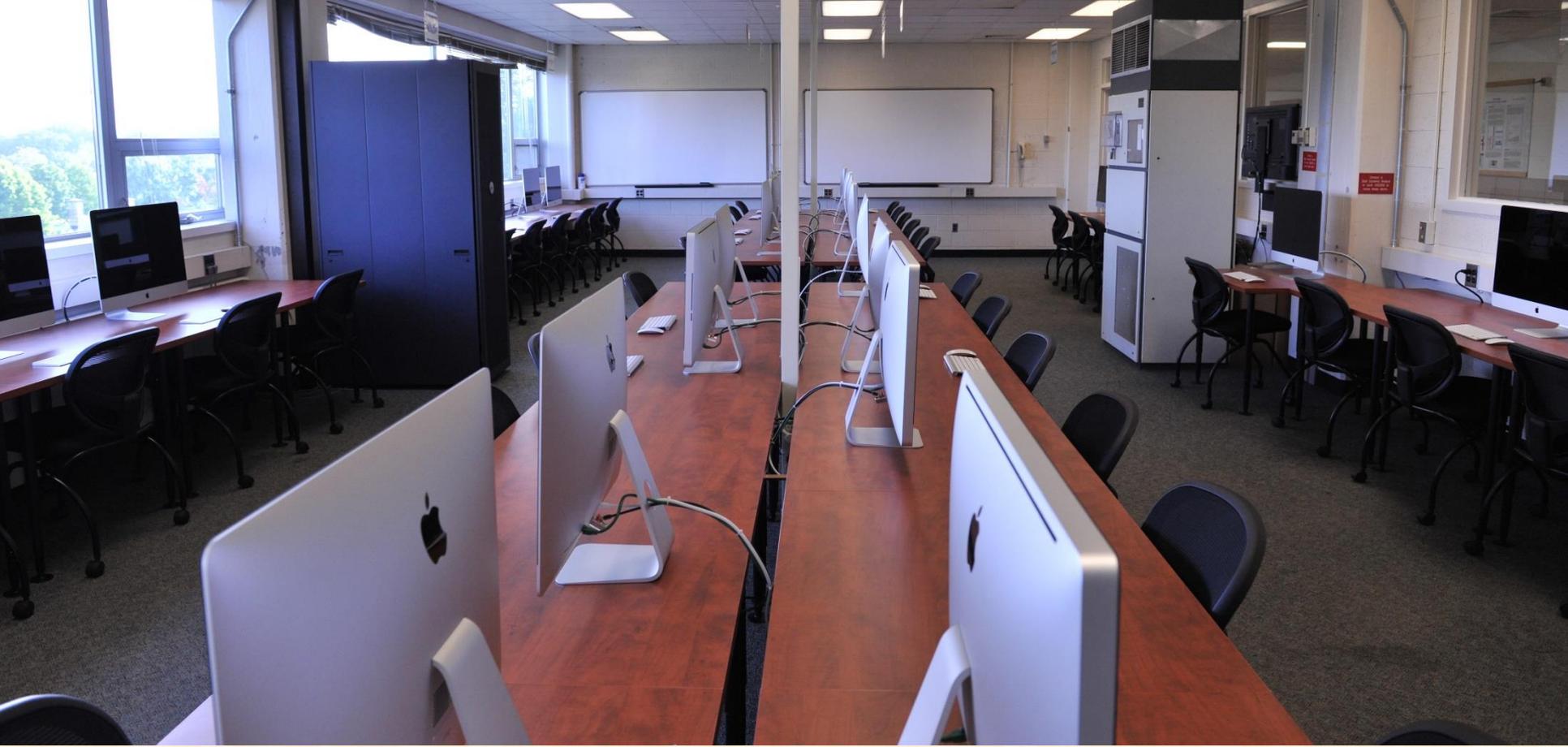
The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*



The Capstone Experience Lab



The Capstone Experience Lab



The Capstone Experience Lab



The Capstone Experience Lab



The Capstone Experience Lab View of Spartan Stadium

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Design Day Award Winners

April 28, 2017



*From Students...
...to Professionals*



All-Hands
Design Day, April 28, 2017



MICHIGAN STATE
UNIVERSITY

COLLEGE OF ENGINEERING

Auto-Owners Exhibition Award

Team TechSmith, Spring 2017

Teacher's Virtual Toolbelt

Alex Crimin, Zeke Zandbergen, Yang He, Ryan Cornillie

Presented by Scott Lake of Auto-Owners Insurance



MSU Federal Credit Union Praxis Award

Team Union Pacific, Spring 2017

Learning New Train Routes

Matthew Schleusener, Kangjie Mi, Nick Summers, Jon Wild

Presented by Liam Petraska of MSU Federal Credit Union



TechSmith Screencast Award

Team Amazon, Spring 2017

ACRA: Amazon Customer Review Analyzer

Jie Wan, Jason Liu, Ian Whalen, Ankit Luthra, Tess Huelskamp

Presented by Wendy Hamilton of TechSmith



MICHIGAN STATE UNIVERSITY

COLLEGE OF ENGINEERING

Urban Science Sigma Award

Team Michigan State University, Spring 2017

CATALyst: Mapping CATA Buses in Real-Time

Charlie Ward, Cathy Dinsmoor, Tom Beaver, Jimmy Mkude, James Dodge
Presented by Linda Koeppel and Luke Mercier of Urban Science

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Design Day Award Winners

December 8, 2017



*From Students...
...to Professionals*



Auto-Owners Exhibition Award

Team Amazon, Fall 2017

Faia: Fashion Artificial Intelligence Assistant

David He, Dominic Zottolo, Zizhen Wang, Danielle Schugars, Nikhil Ramu

Presented by Ross Hacker and Scott Lake of Auto-Owners Insurance



MSU Federal Credit Union Praxis Award

Team Yello, Fall 2017

Automatic Resume Verification

Brandon Burt, Ryan Nagy, Giorgio Maroki, Nathaniel Hagan, Wan Kim

Presented by April Clobes of MSU Federal Credit Union



TechSmith Screencast Award

Team Union Pacific, Fall 2017

RailBuilder: The Great Race to Promontory

Declan McClintock, Jacob Young, Zachary Brenz, Kyle Bush, Trevor Daniels

Presented by Matt Dupuis of TechSmith



Urban Science Sigma Award

Team Michigan State University, Fall 2017

SEA: Spartan Experience App

Nayana Kodur, Patrick Pale, Roy Perryman, Ryan Johnson, Scott Swarhout

Presented by Elizabeth Klee of Urban Science

<tbm-team-placeholder>

Do not delete this textbox.

It's used as a marker in VB code.

See VB Module UTL_TextBoxMarkerSetZOrder.

Keep this slide here. It's a placeholder for the beginning of the Team Sponsor Logos section.

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2017



*From Students...
...to Professionals*

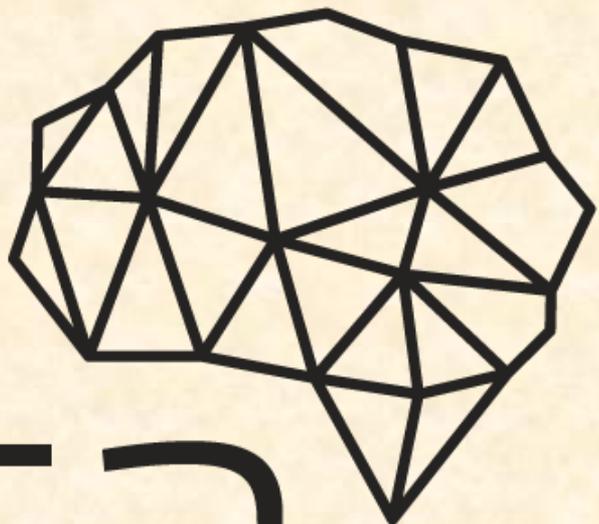
amazon



Auto-Owners

INSURANCE

LIFE • HOME • CAR • BUSINESS



Avata

INTELLIGENCE





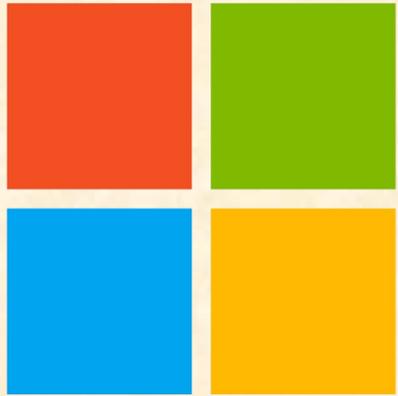
The image features the General Motors (GM) logo, which consists of the letters "GM" in a bold, sans-serif font, positioned above a horizontal bar. The logo is rendered in a light blue color with a subtle gradient and a slight shadow, giving it a three-dimensional appearance. It is centered within a dark blue square background that also has a gradient and a shadow. The entire logo is set against a light beige, textured background. At the top and bottom of the image, there are horizontal bars: a thin grey bar on the left and a wider dark green bar on the right.

GM

Humana

meijer[®]





Microsoft

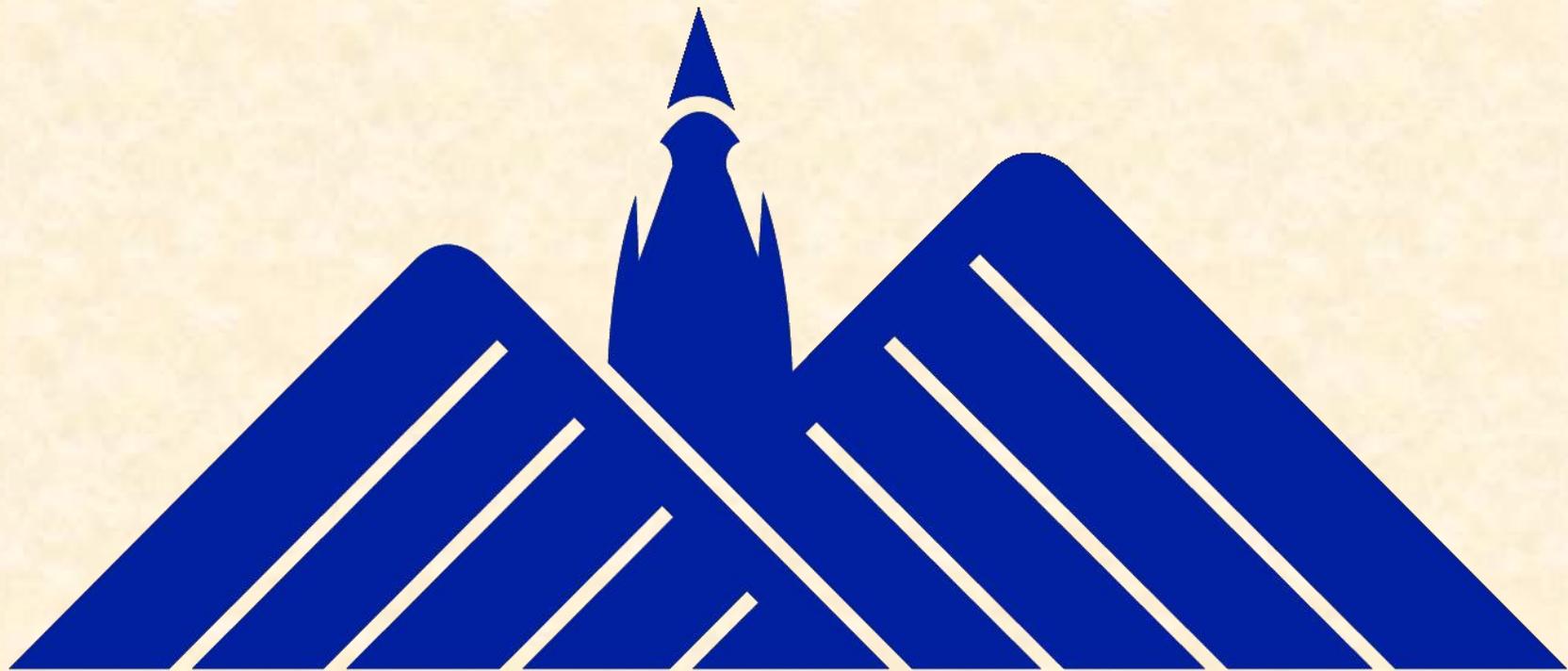


Firefox[®]



F E D E R A L C R E D I T U N I O N

Building Dreams *Together*



THE PHOENIX GROUP



ROOK SECURITY

SPECTRUM HEALTH





Symantec



TechSmith®

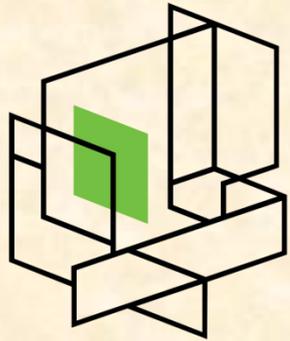


TWO MEN AND A TRUCK[®]

“Movers Who Care[®]”



BUILDING AMERICA[®]



URBAN SCIENCE™

yello