

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2018



*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

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



All-Hands Meetings

- 01/09: Capstone Overview
- 01/11: Project Plan
- 01/16: Risks and Prototypes
- 01/18: Schedule and Teamwork
- 01/23: Team [Status Report Presentations](#)
- 01/25: Team Status Report Presentations
- 01/30: Team [Project Plan Presentations](#)
- 02/01: Team [Project Plan Presentations](#)
- 02/06: Team [Project Plan Presentations](#)
- 02/08: Team [Project Plan Presentations](#)
- 02/13: Resume Writing and Interviewing
- 02/15: Creating and Giving Presentations
- 02/20: Team [Alpha Presentations](#)
- 02/22: Team [Alpha Presentations](#)
- 02/27: Team [Alpha Presentations](#)
- 03/01: Team [Alpha Presentations](#)
- 03/06: (Spring Break, No Meeting)
- 03/08: (Spring Break, No Meeting)
- 03/13: Team Status Report Presentations
- 03/15: Team Status Report Presentations
- 03/20: [Design Day](#) and the [Project Videos](#)
- 03/22: Camtasia Demo
- 03/27: Intellectual Property
- 03/29: Ethics and Professionalism
- 04/03: Team [Beta Presentations](#)
- 04/05: Team [Beta Presentations](#)
- 04/10: Team [Beta Presentations](#)
- 04/12: Team [Beta Presentations](#)
- 04/17: Status Report Presentations
- 04/19: Status Report Presentations
- 04/24: [Project Videos](#)
- 04/26: [Project Videos](#) and [All Deliverables](#)
- 04/26: [Design Day Setup](#)
- 04/27: [Design Day](#)
- 05/03: [Project Videos](#)



MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Accenture

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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

**>
accenture**



Type to search 🔍



SIGN IN

MENU ≡

NEW ISN'T ON ITS WAY.

WE'RE APPLYING IT
RIGHT NOW.

Accenture is answering real business challenges for our clients through innovation and deep industry knowledge. Here's how.

Team Accenture Project Overview

AMAP: Automated Malware Analysis Platform

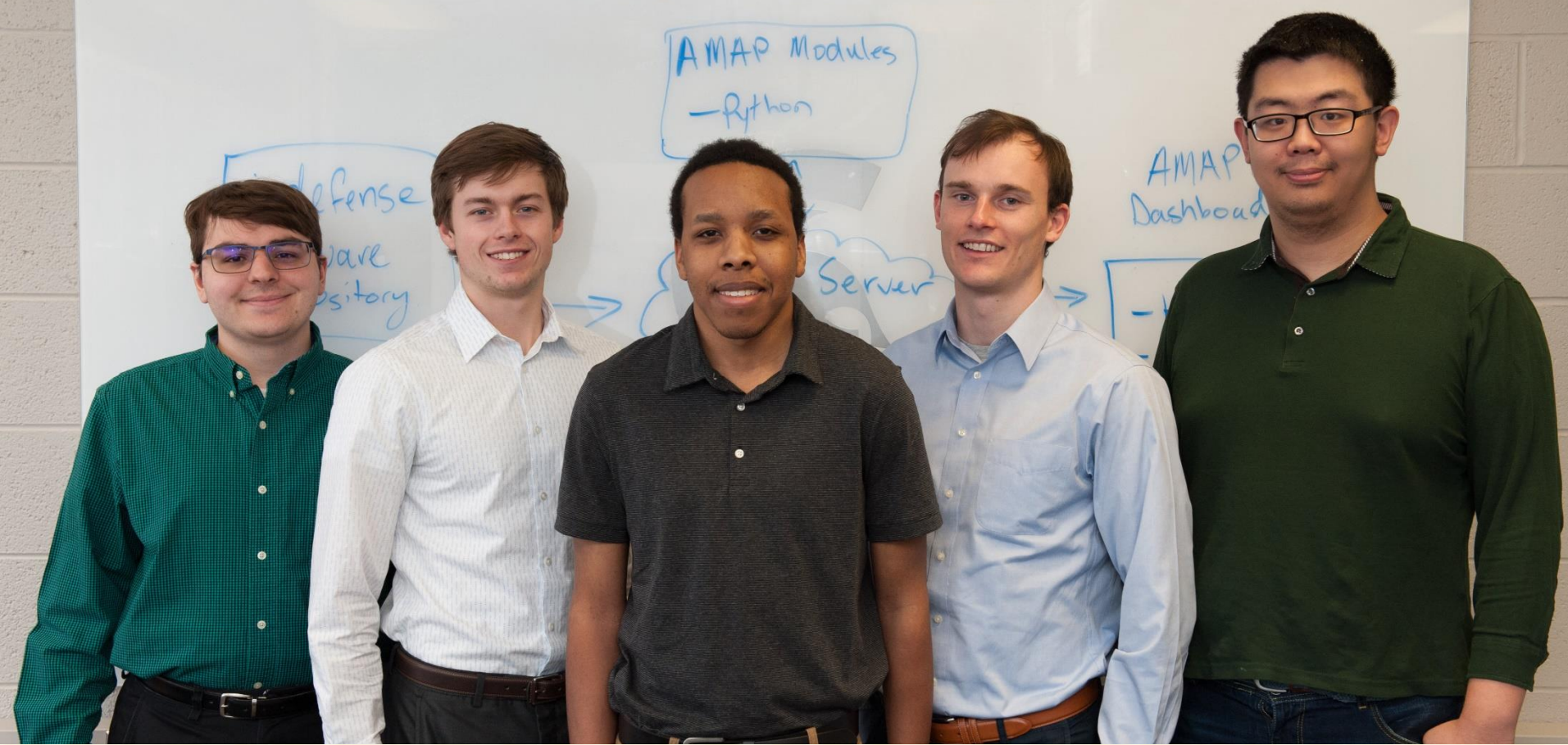
- Functionalities
 - Automate Analysis of Malware
 - Provide All-Inclusive Platform
- Features
 - Ingest Malware Samples
 - Decode Configuration Settings
 - Recover Malware Artifacts
 - Create Relationships in iDefense Platforms
 - Save Payloads in Malware Repository
- Technologies
 - Accenture iDefense Malware Repository
 - Accenture iDefense IntelGraph
 - Database Technologies
 - MongoDB
 - mySQL
 - Python

iDefense® IntelGraph



accenture
Chicago, Illinois



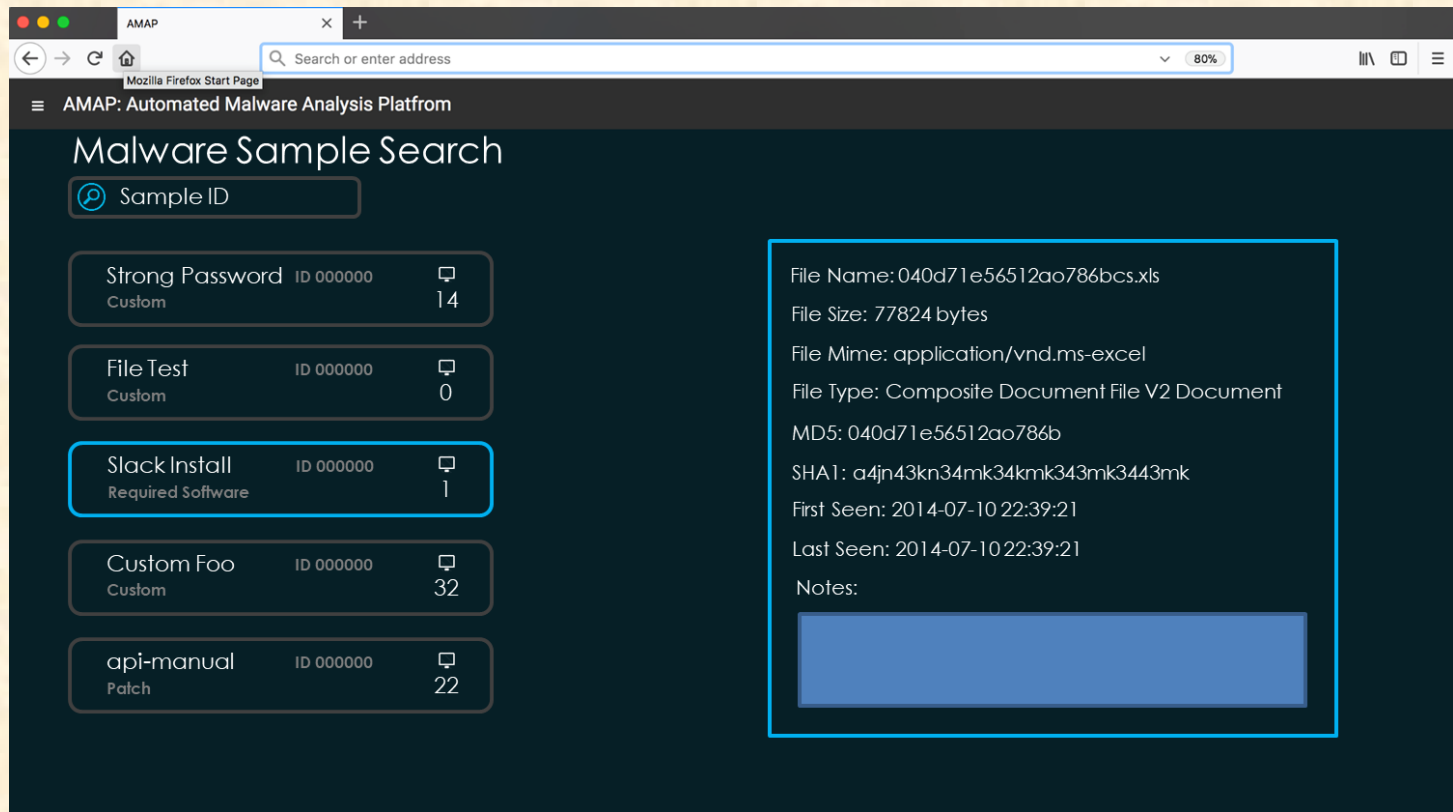


Team Accenture

Griffin Metevia, Sam Kling, Julian Ellis, Andrew Mitchell, Teng Xu

Team Accenture Project Plan Presentation

Screen Mockup: Malware Search

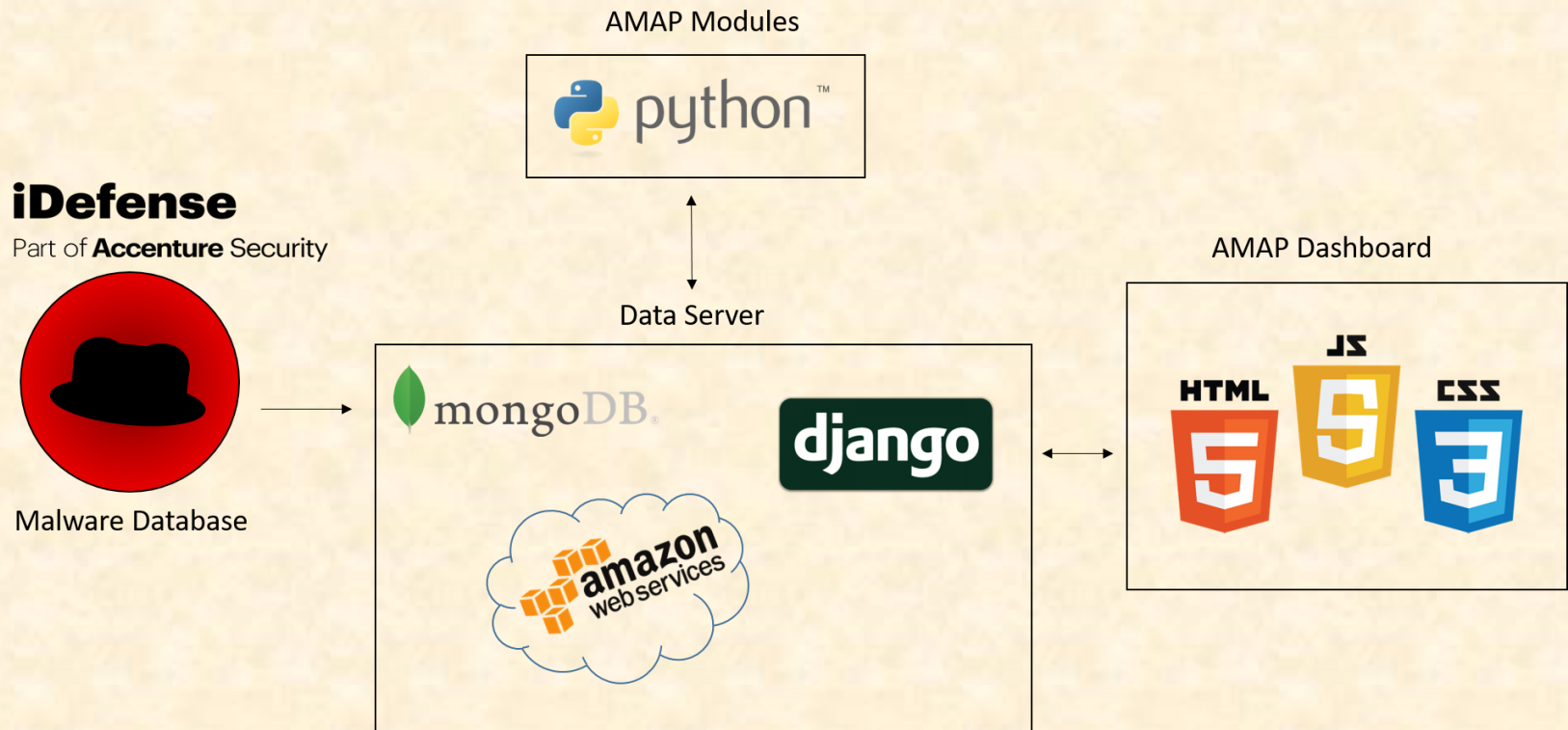


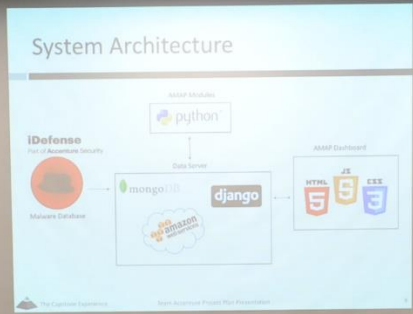
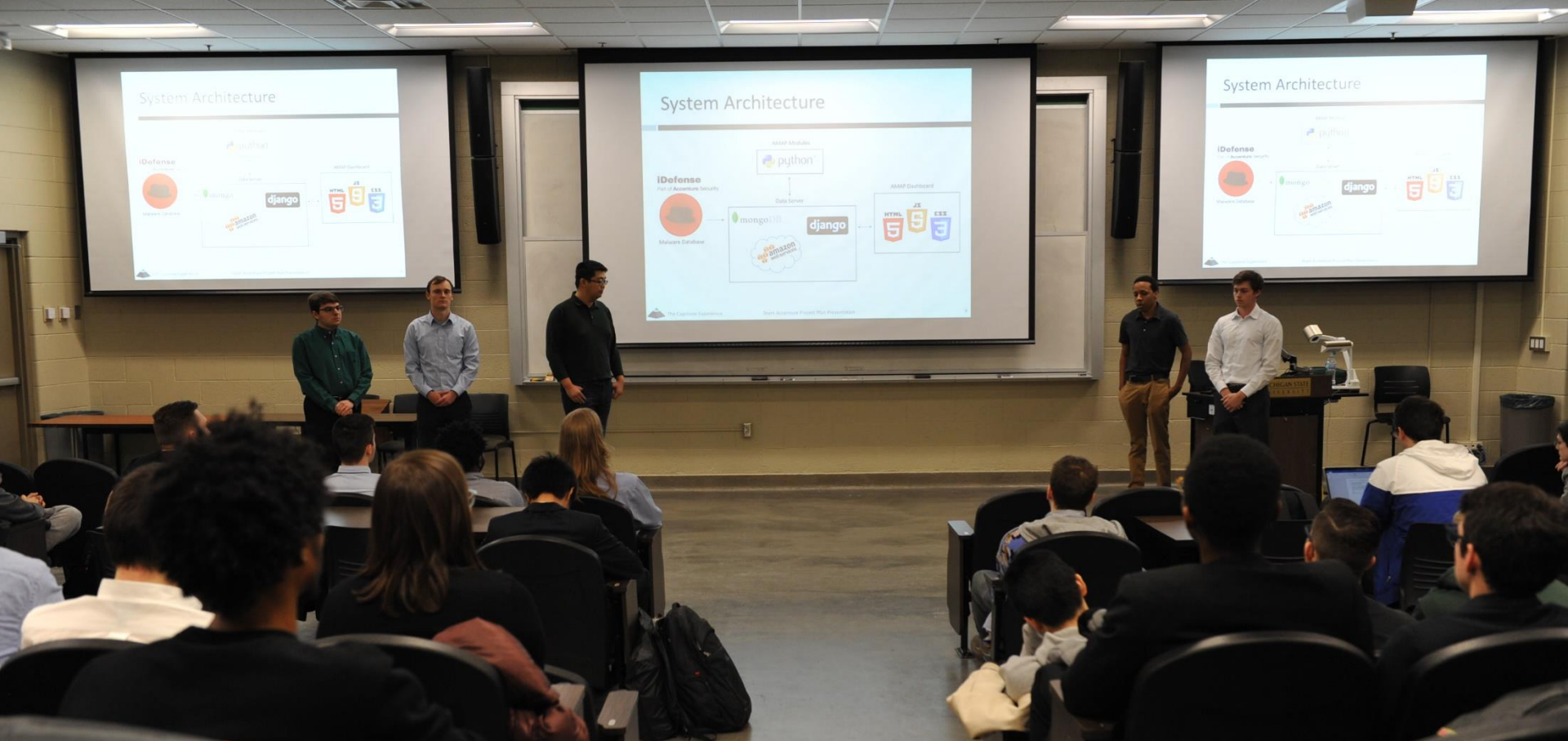


Team Accenture Project Plan Presentation

Team Accenture Project Plan Presentation

Architecture Diagram



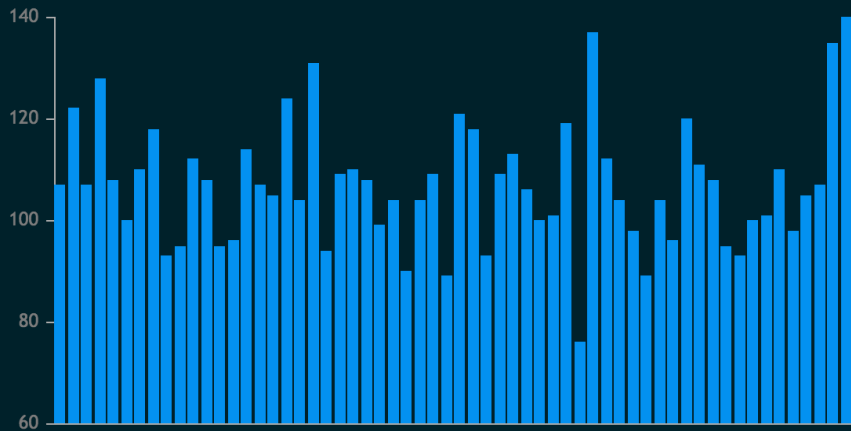


Team Accenture
Project Plan Presentation

Team Accenture Project Plan Presentation

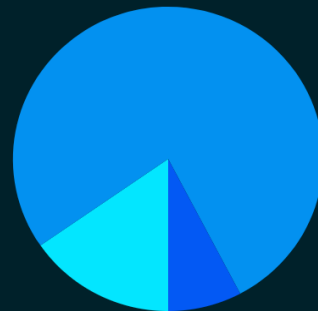
Screen Mockup: AMAP Dashboard

Malware Processed Per Hour



Container Status

Starting Up: 4%
Running: 18%
Idle: 2%





Team Accenture Alpha Presentation

Team Accenture Alpha Presentation

Current Process Status Page

The screenshot displays the AMAP web application interface. The top navigation bar includes the Accenture logo, a search bar, and user information (Andrew Mitchell). The left sidebar contains navigation links for Dashboard, File Upload, and Processes. The main content area is titled 'Processes' and features an 'Analysis Status' section. This section contains a table with five rows of analysis results, each with a 'View' button.

#	SHA256	MD5	Overall Progress	Start Date	Action
1	b3d9cabf3ecb22dbccbd0f13f95313e5ab95be94aec879e6edfaaf534d7f3799	eb684b584704e2fb599d6eaf883c1ae5	<div><div></div></div>	18-1-27 1:54:24	View
2	dff02aca142d4fcfe7721b9c7cb5d7d4ef4965d11e77328d290aaf2eac8d4dd	4871e4752bd67662ac9435d84014391d	<div><div></div></div>	18-2-2 1:59:32	View
3	dcf789f34aabe7ba4c34bbce09bfd6ac6a2efde9f664ec0eab16fd0e37bef0d	3501fa1f022cb8ad97276d55c97377b5	<div><div></div></div>	18-2-3 5:52:45	View
4	2e112bbf5fa0afaf225eb2441b245539cd73f52fb473a6b749490d47497d105	9490fe6870d1273dda8c957cf1b81907	<div><div></div></div>	18-2-3 6:00:23	View
5	9ac3accd466a70884091364b5d2e13534cfa78153b25f51fe477d6bfc6f9abe	68b329da9893e34099c7d8ad5cb9c940	<div><div></div></div>	18-2-5 12:32:02	View

Team Accenture Alpha Presentation

Module Selection Page

AMAP

Andrew

Search

accenture

Dashboard (2 new updates)

File Upload

Processes

Modules

☐ Match Modules For all Files

13413701_10209874704294851_7569077515899457902_n.jpg

- ☒ File Type
- ☒ MD5
- ☒ SHA1
- ☒ SHA256
- ☒ Entropy
- ☒ Decoder
- ☒ NETDATA

Submit

19989639_10213842700812284_7767808038276667761_n.jpg

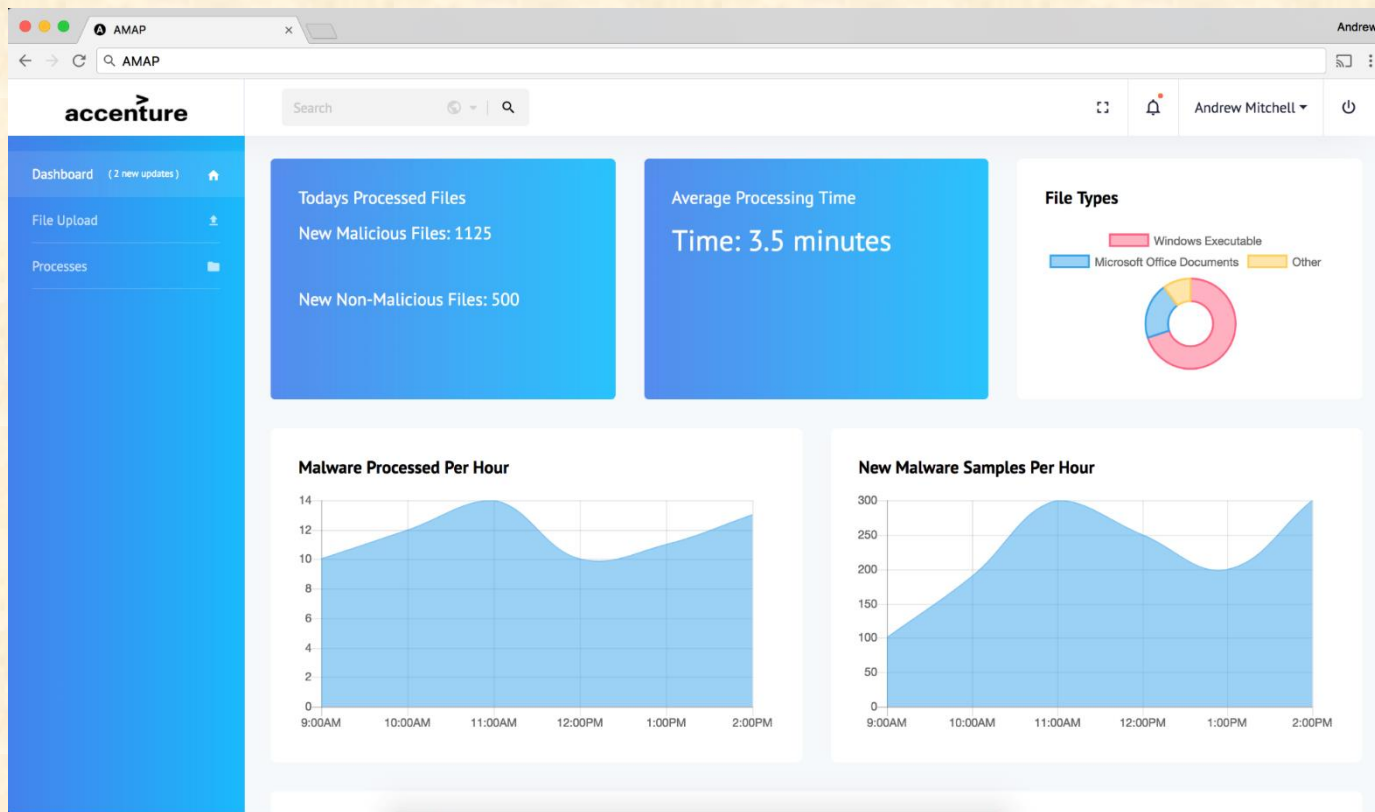
- ☒ File Type
- ☒ MD5
- ☒ SHA1

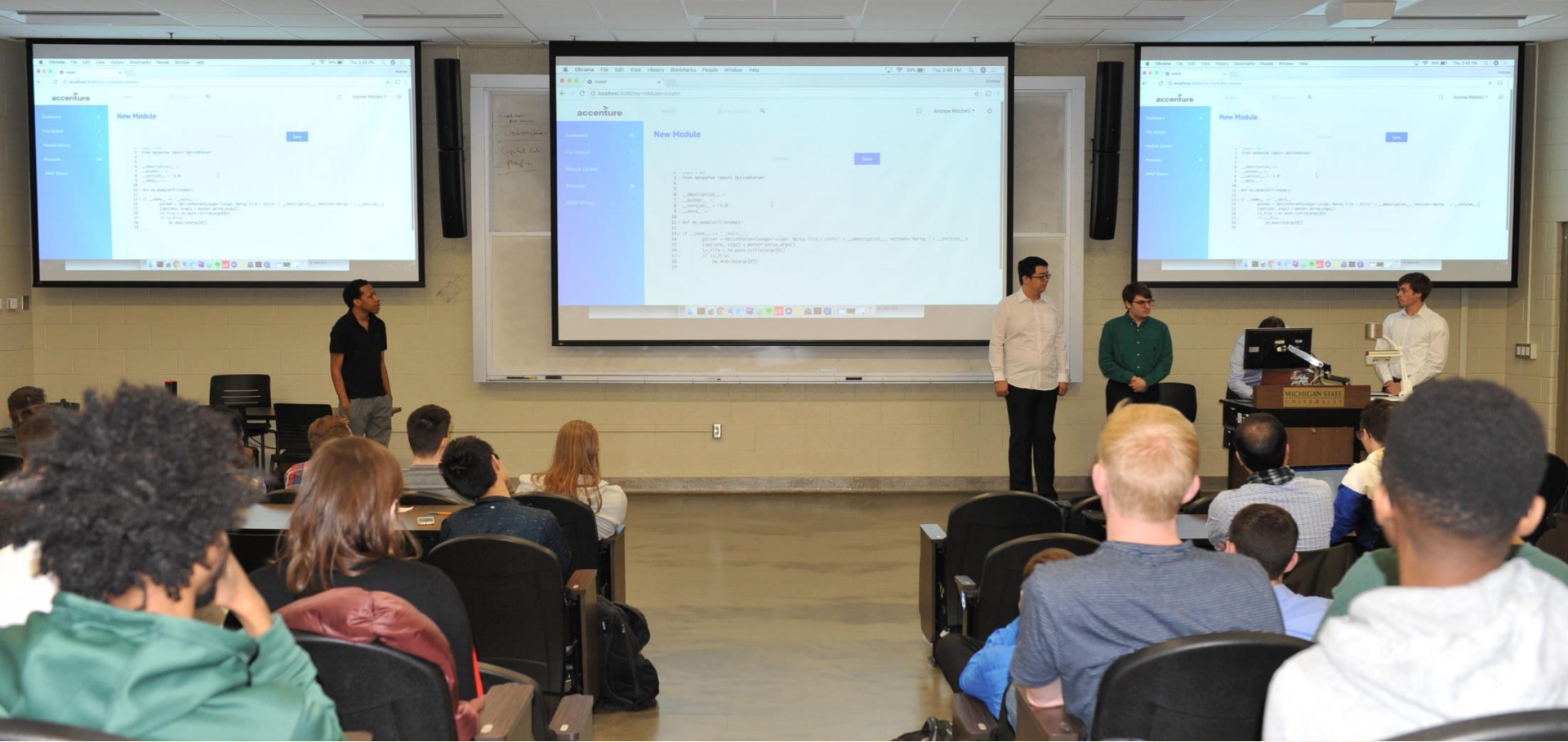


Team Accenture Alpha Presentation

Team Accenture Alpha Presentation

Dashboard

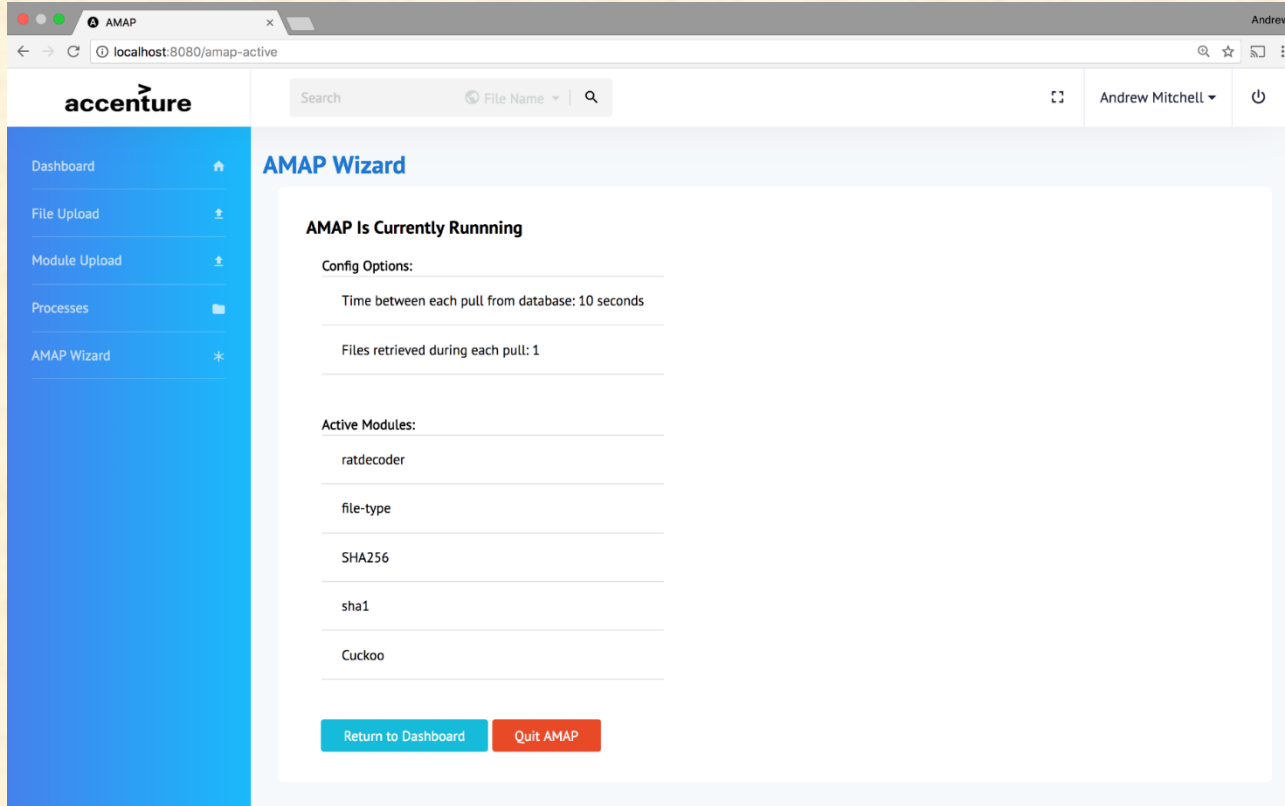




Team Accenture Beta Presentation

Team Accenture Beta Presentation

AMAP Wizard



The screenshot displays the AMAP Wizard web interface in a browser window. The browser's address bar shows the URL `localhost:8080/amap-active`. The interface features a blue sidebar on the left with the Accenture logo and navigation links: Dashboard, File Upload, Module Upload, Processes, and AMAP Wizard (which is currently selected). The main content area is titled "AMAP Wizard" and contains a status message "AMAP Is Currently Running". Below this, there are two sections: "Config Options" and "Active Modules". The "Config Options" section includes two input fields: "Time between each pull from database: 10 seconds" and "Files retrieved during each pull: 1". The "Active Modules" section lists five modules: ratdecoder, file-type, SHA256, sha1, and Cuckoo. At the bottom of the main content area, there are two buttons: "Return to Dashboard" (blue) and "Quit AMAP" (red).

AMAP Wizard

AMAP Is Currently Running

Config Options:

Time between each pull from database: 10 seconds

Files retrieved during each pull: 1

Active Modules:

ratdecoder

file-type

SHA256

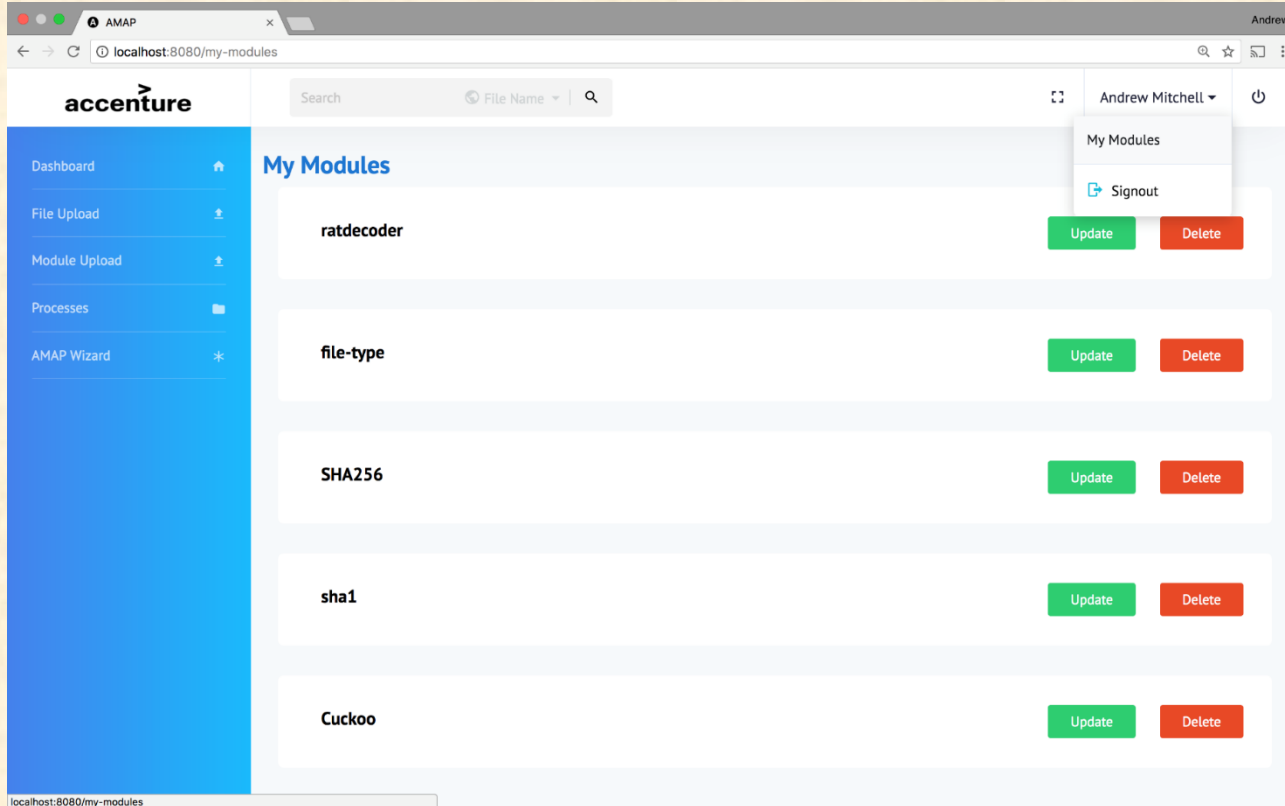
sha1

Cuckoo

Return to Dashboard Quit AMAP

Team Accenture Beta Presentation

BetaPresentationSlideTitle

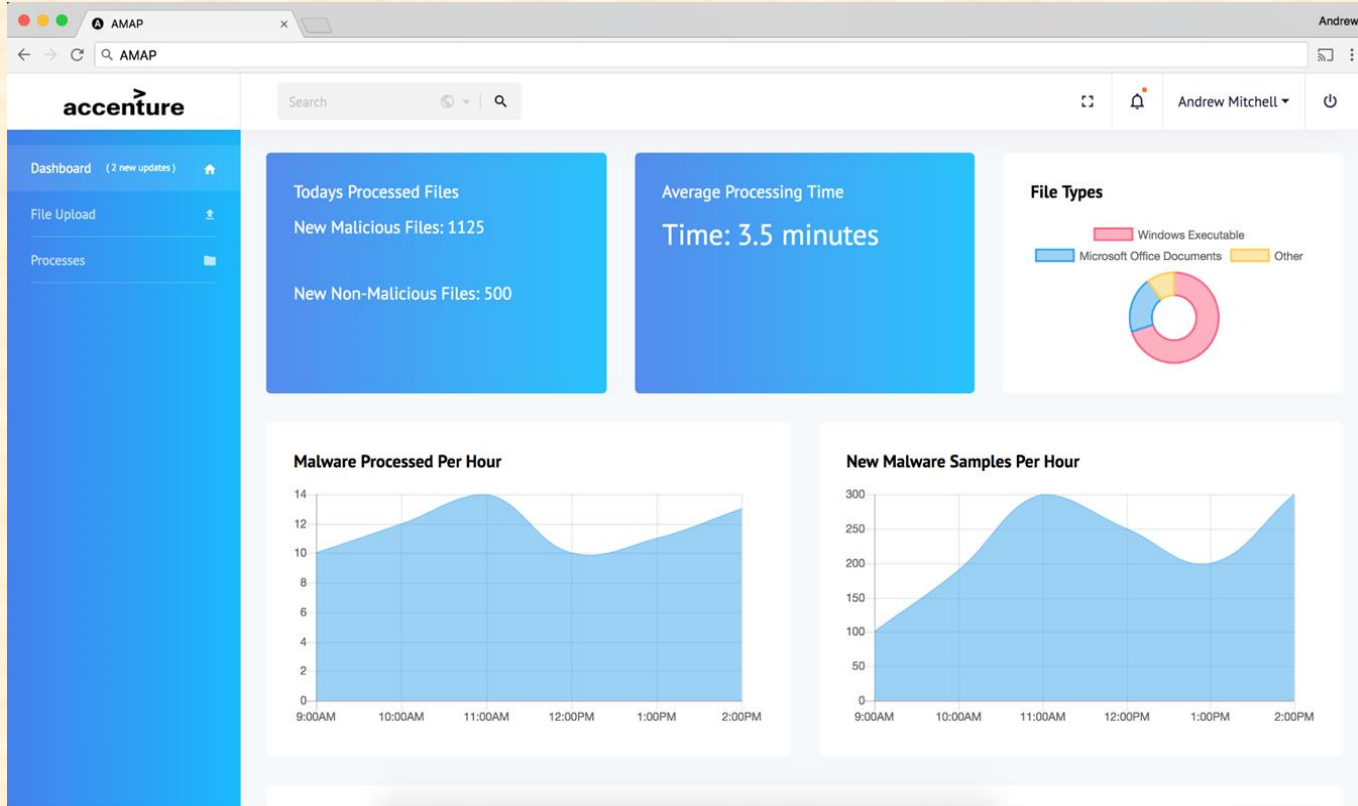


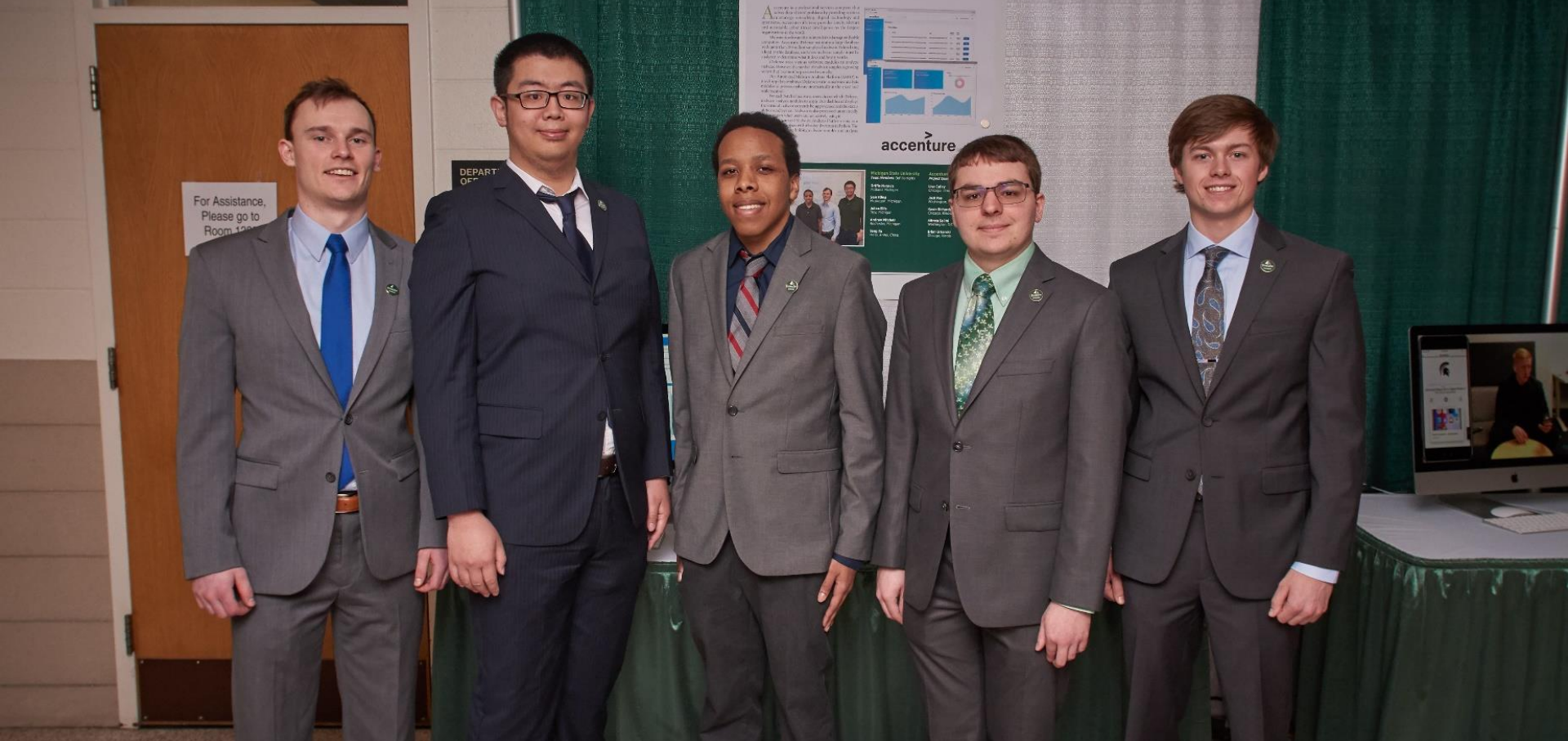


Team Accenture Beta Presentation

Team Accenture Beta Presentation

AMAP Dashboard





Team Accenture @ Design Day
Andrew Mitchell, Teng Xu, Julian Ellis, Griffin Metevia, Sam Kling

MICHIGAN STATE
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The Capstone Experience

Team Amazon

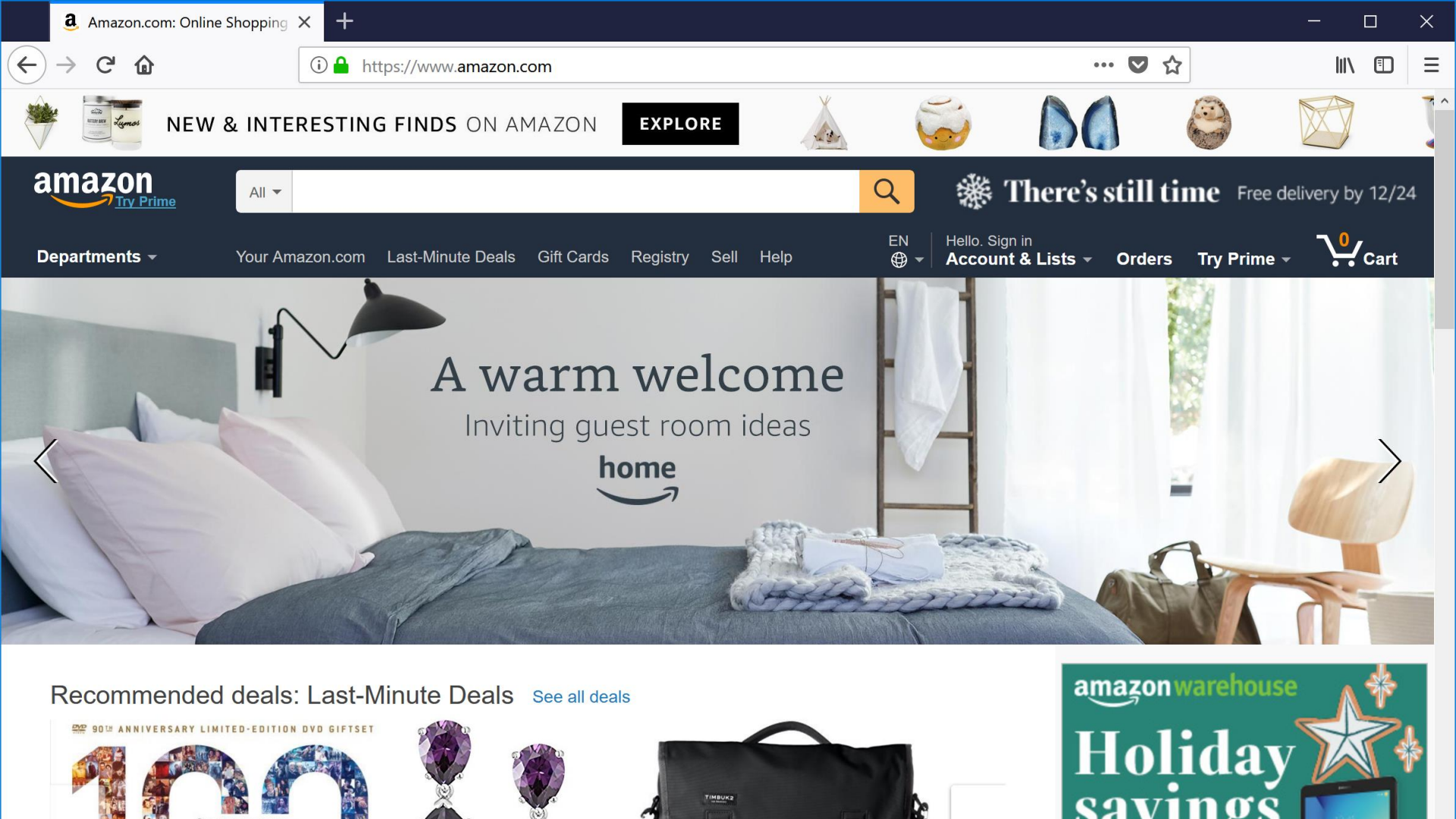
Department of Computer Science and Engineering
Michigan State University
Spring 2018



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

amazon





Team Amazon

Project Overview

AMPED: Amazon Marketplace Podcast Earnings Detection

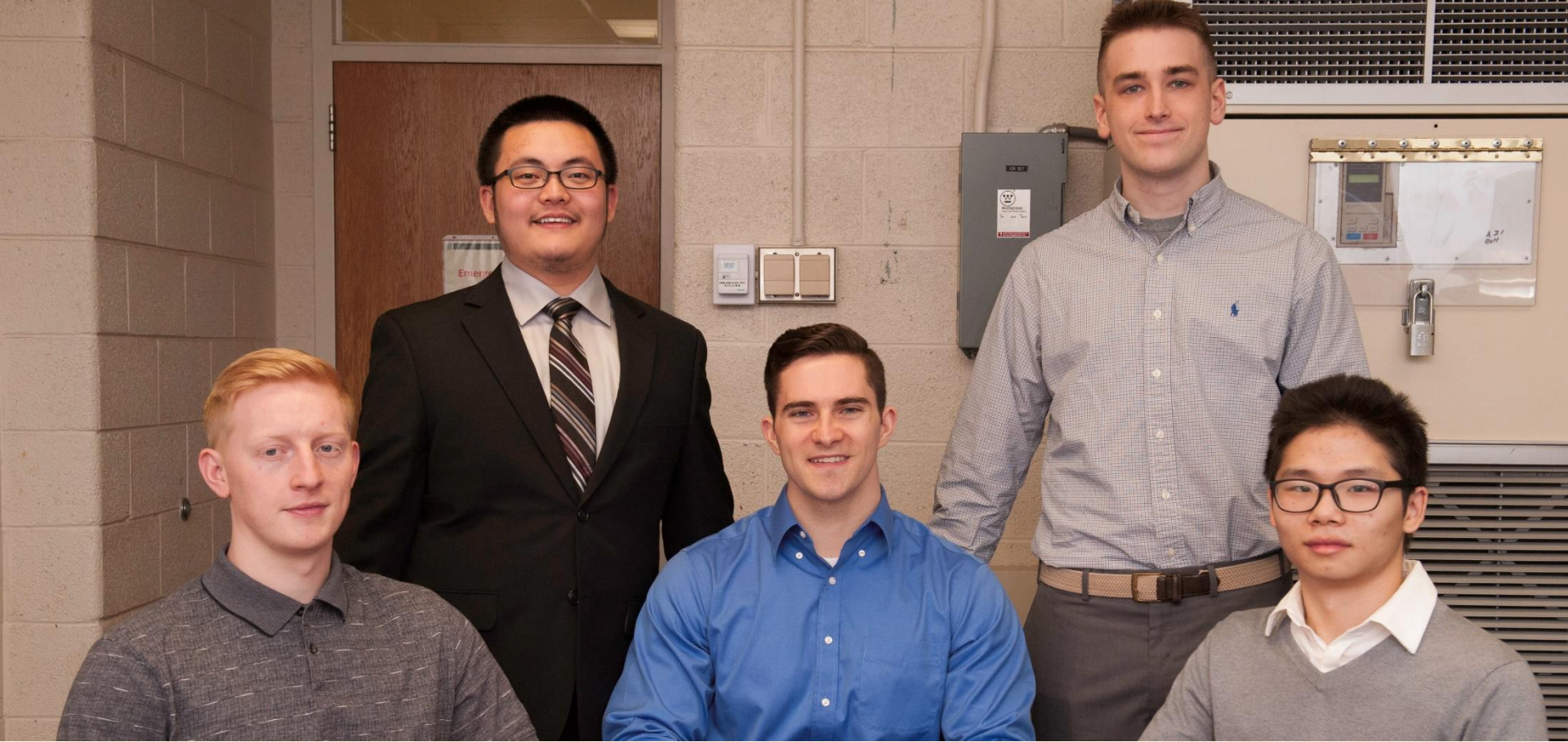
- Functionalities
 - Play Podcasts
 - Show Listeners Related Amazon Products
 - Support Listener's Favorite Content Producer
- Features
 - Create Integrated Audio Player
 - Enable Uploading of Podcast by Producer
 - Transcribe Speech to Text
 - Comprehend Content
 - Find Related Amazon Products
 - Package Results Into API for Player
- Technologies
 - AWS Compute & Database Services
 - Amazon Transcribe
 - Amazon Comprehend
 - Amazon Item Search
 - Amazon Queuing and Notification Services
 - Amazon Elastic Beanstalk and API Gateway



amazon

Seattle, Washington
Detroit, Michigan



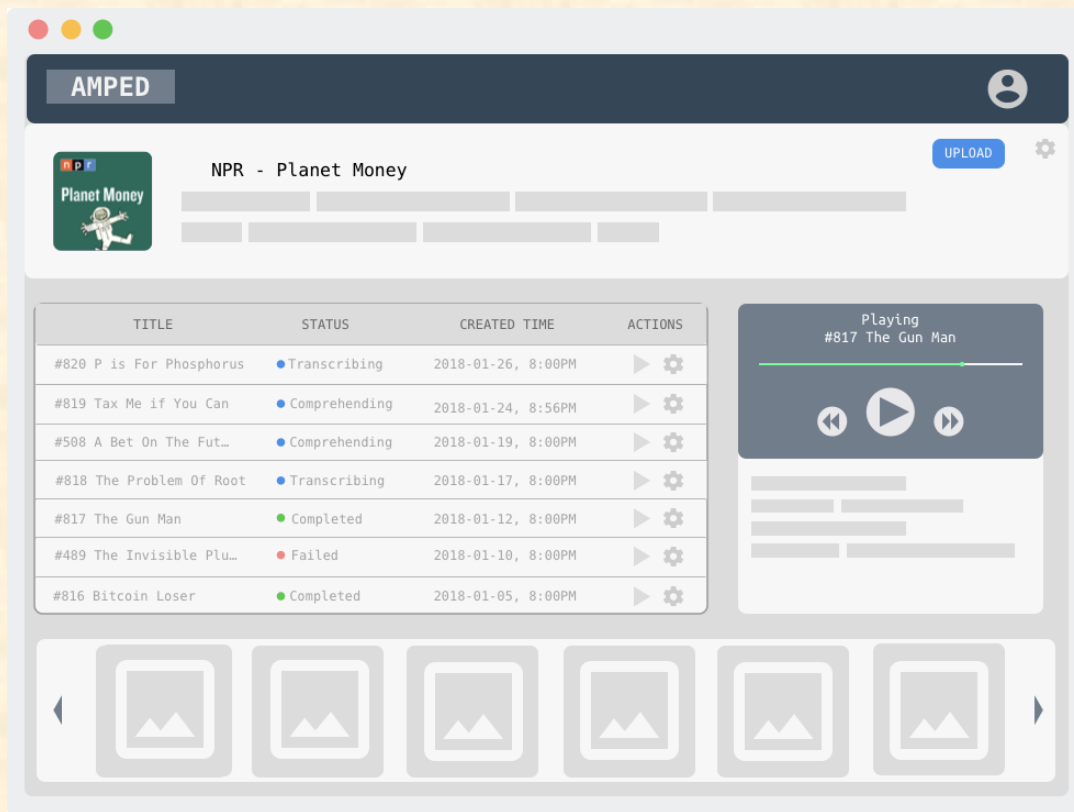


Team Amazon

Zach Whitener, Hansheng Zhao, Dillon Stock, Cam Korzecke, Chess Luo

Team Amazon Project Plan Presentation

Screen Mockup: Web App Dashboard



Podcast Upload Modal

A screenshot of a web application interface showing a 'CREATE A NEW PODCAST' modal. The modal is a light blue box with a dashed border, centered over a blurred background of a podcast app. Inside the modal, there are two text input fields labeled 'Name' and 'Description'. Below these fields is a dashed rectangular box with a cloud upload icon and the text 'Upload Your Podcast File Here'. At the bottom right of the modal is a blue button labeled 'CREATE'. The background app shows a list of podcasts on the left and a sidebar on the right. The top of the app has a header with the text 'ARPED' and a user profile icon.



The Capstone Experience

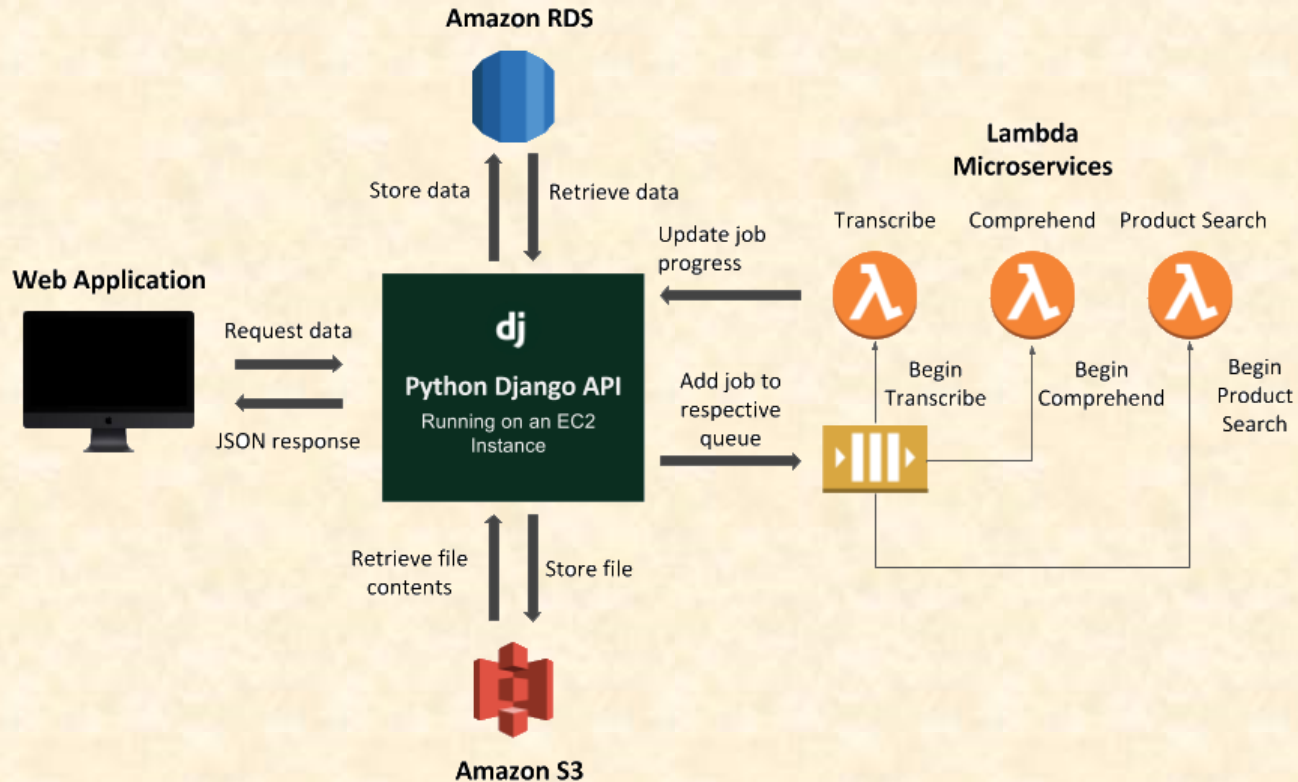
Team Amazon Project Plan Presentation

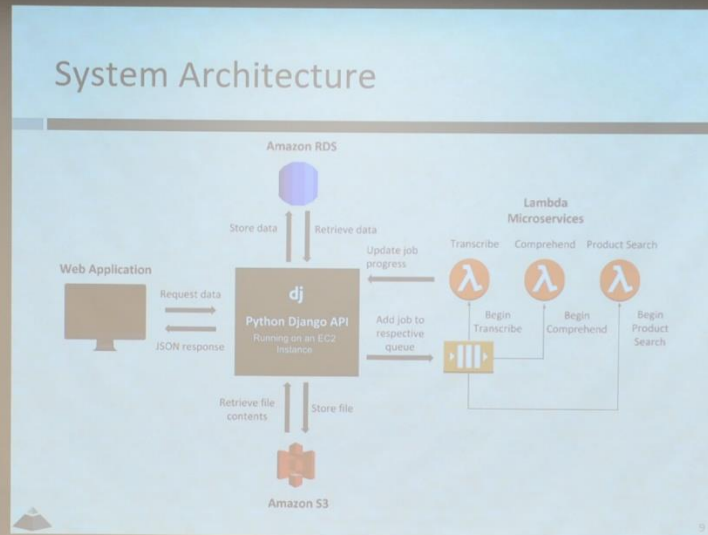
5

Team Amazon
Project Plan Presentation

Team Amazon Project Plan Presentation

Architecture Diagram

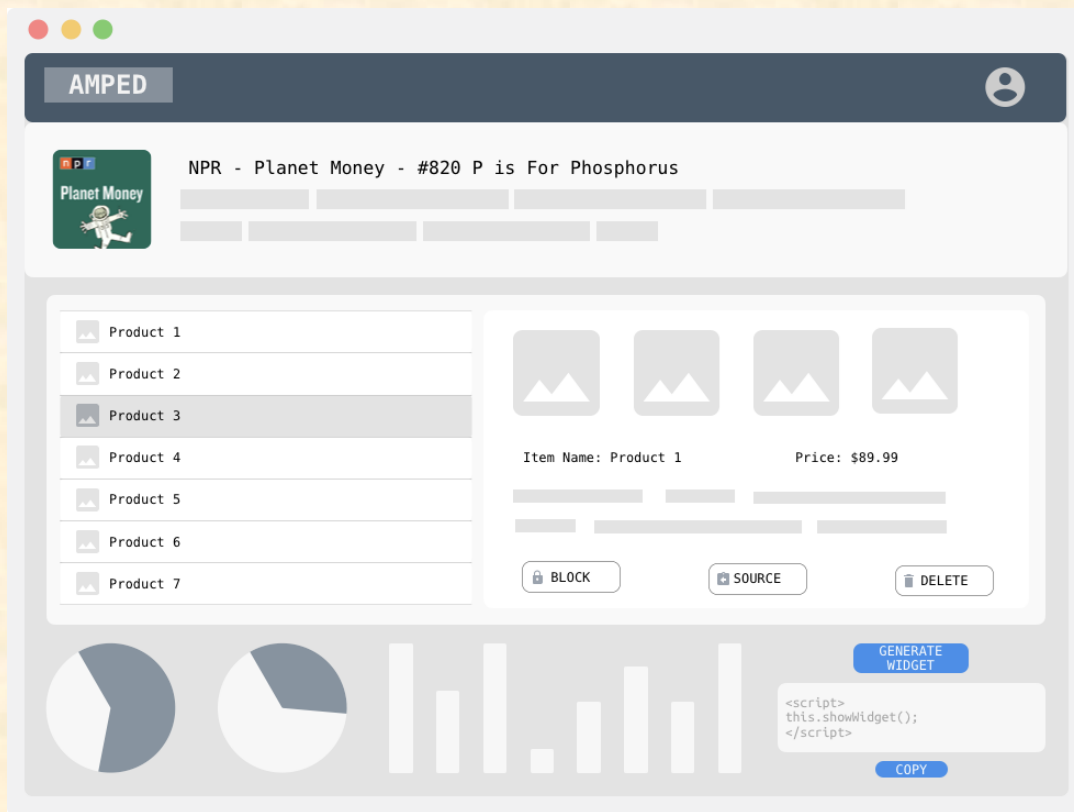




Team Amazon Project Plan Presentation

Team Amazon Project Plan Presentation

Screen Mockup: Podcast Details Page





Team Amazon Alpha Presentation

Team Amazon Alpha Presentation

AMPED Dashboard

AMPED

Plant Money

The economy, explained, with stories and surprises. Imagine you could call up a friend and say, "Meet me at the bar and tell me what's going on with the economy." Now imagine that's actually a fun evening. That's what we're going for at Planet Money. People seem to like it.

Podcasts 59

Listeners 12,444

Rank 2 / 200

Upload


Title	Length	Status	Updated Time	Actions
What America Sells To The World	2:45 mins	Completed	2018-02-20 01:15:25	Play Download Share
Episode 821: The Other Davos	63:39 mins	Completed	2018-02-20 01:15:25	Play Download Share
Janet Yellen's Mystery Story	16:36 mins	Transcribing	2018-02-20 01:15:25	Play Download Share
Weed GDP	82:48 mins	Failed	2018-02-20 01:15:25	Play Download Share
The Black Car Fund	17:00 mins	Failed	2018-02-20 01:15:25	Play Download Share
Episode 820: P Is For Phosphorus	70:48 mins	Transcribing	2018-02-20 01:15:25	Play Download Share
Amazon, IPOs And The Queen Of The Demonweb Pits	96:51 mins	Comprehending	2018-02-20 01:15:25	Play Download Share
A Mafia Story With a Twist	88:00 mins	Completed	2018-02-20 01:15:25	Play Download Share
Episode 819: Tax Me If You Can	22:14 mins	Failed	2018-02-20 01:15:25	Play Download Share



Playing
What America Sells To The World

U.S. exports include airplanes, education and lots of blood.


Team Amazon Alpha Presentation



Product Detail Page

 AMPED

 Google Earpuds 

Progress

Submitted  2017-12-12 12:32

Transcribe  Waiting 

Comprehend


Product Search

Completed

Top Clicks

Rank	Product
1	Lisiwen Bluetooth Headphone...
1	Apple 13.3" MacBook Air (S...
1	Google Pixel GSM Unlocked L...
1	Apple M0827LLK EarPods wit...
1	Google Wifi system (set of ...

Product Detail



Lisiwen Bluetooth Headphones, Wireless Earbuds ...

\$24.99

NOTE: when to pair, please pair the 2 earbuds first then to your Bluetooth devices.

Here are steps to connected:

Twins Pairing:

1. Long press the power button of the pair of earphones at the same time until the led flash in blue and red alternately. The both of them have a voice say "power on" and then "pairing"
2. Double press one of them will have a voice "search for select" and wait for one led of earbud flash in blue and red alternately will have a voice "pairing success", that it is the pairing status.
3. Please turn on the "Bluetooth" on your cellphone and choose "HBQ-J7TWS" on your list.
4. The led flash will be slowly in blue when connected.


Single Pairing:

1. Long press the power button of the earphone until the led flash in blue and red alternately, then it is ready to pair.
2. Please turn on the "Bluetooth" on your cellphone and choose "HBQ-J7TWS" on your list, there would be reminding voice from the earphone.

Please be informed that you can only hear the voice from one earbud when you are in a call in Stereo Mode.

What's in the box:

- 1 x pair earbuds
- 1 x User Manual
- 1 x Charging Case
- 1 x USB Charging Cable For Case

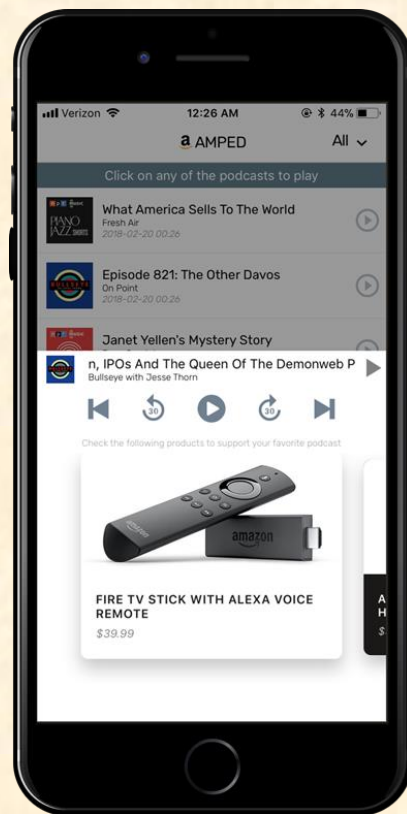
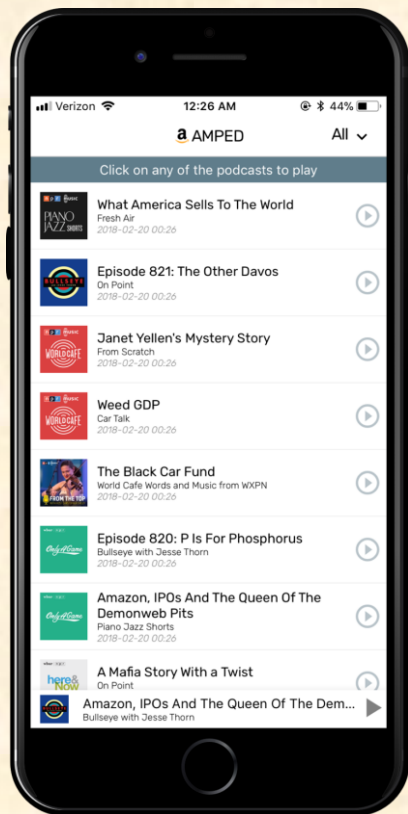
MSU  Amazon
Copyright © 2018 TeamAmazon

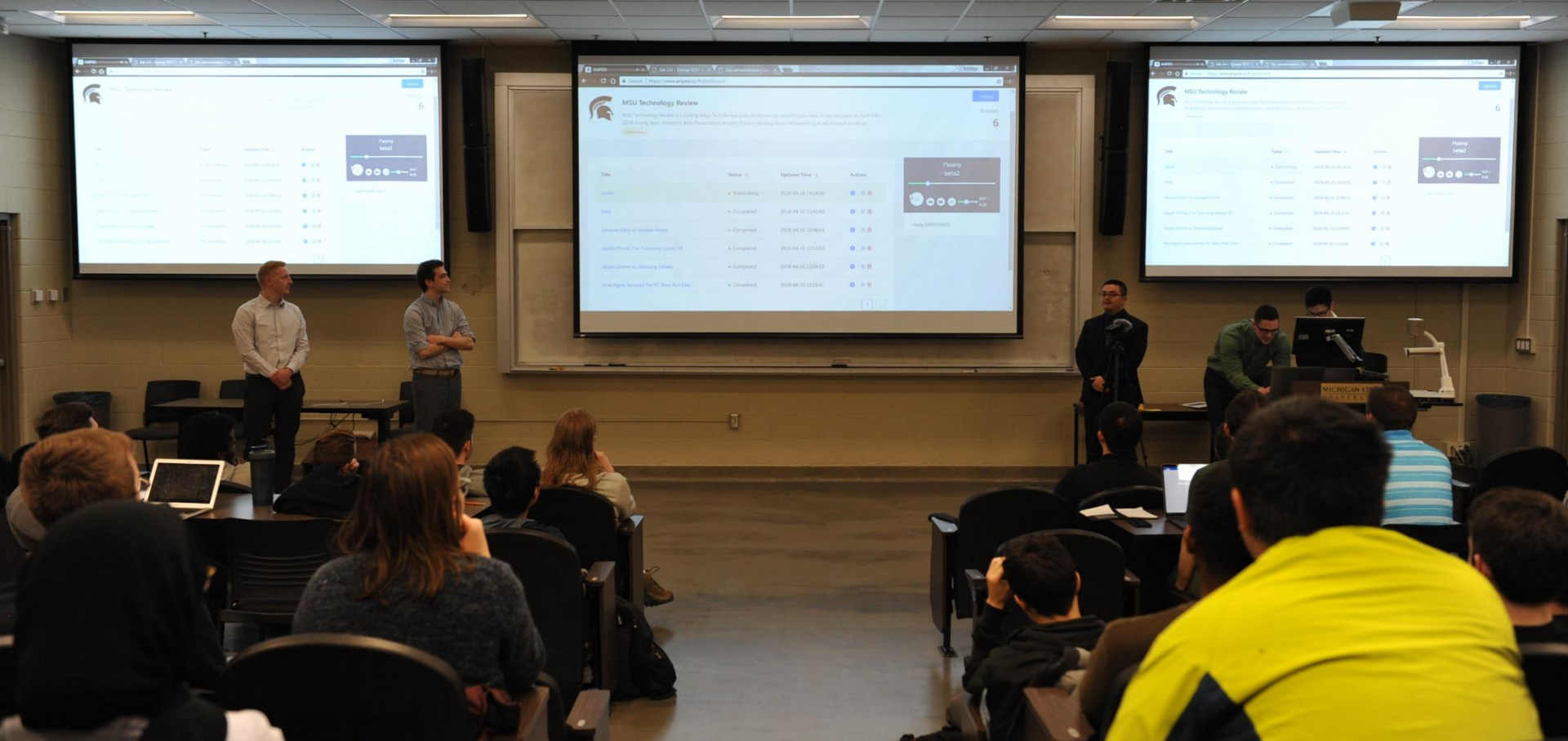


Team Amazon Alpha Presentation

Team Amazon Alpha Presentation

Podcast Library and Product Detail Page





Team Amazon Beta Presentation

Team Amazon Beta Presentation

AMPED Dashboard

AMPED

Plant Money

The economy, explained, with stories and surprises. Imagine you could call up a friend and say, "Meet me at the bar and tell me what's going on with the economy." Now imagine that's actually a fun evening. That's what we're going for at Planet Money. People seem to like it.

Podcasts: 59 | Listeners: 12,444 | Rank: 2 / 200

Table:

Title	Length	Status	Updated Time	Actions
What America Sells To The World	2:45 mins	Completed	2018-02-20 01:15:25	Play Settings Delete
Episode 821: The Other Davos	63:39 mins	Completed	2018-02-20 01:15:25	Play Settings Delete
Janet Yellen's Mystery Story	16:36 mins	Transcribing	2018-02-20 01:15:25	Play Settings Delete

Player:

Playing: What America Sells To The World

U.S. exports include airplanes, education and lots of blood.

Zoomed-in Table:

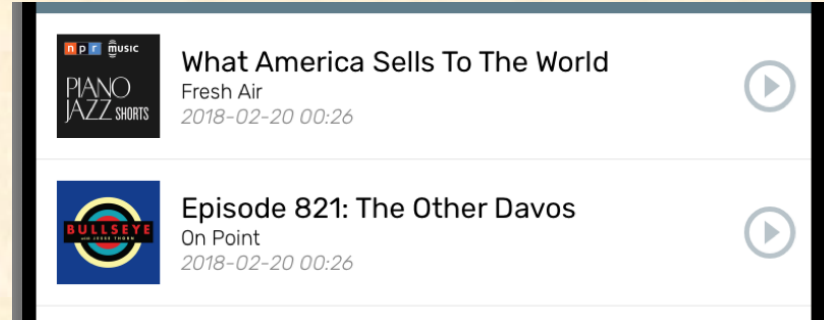
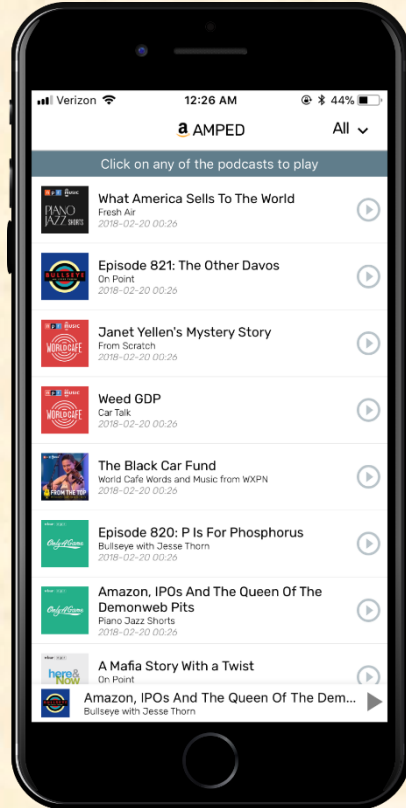
Title	Length	Status	Updated Time	Actions
What America Sells To The World	2:45 mins	Completed	2018-02-20 01:15:25	Play Settings Delete
Episode 821: The Other Davos	63:39 mins	Completed	2018-02-20 01:15:25	Play Settings Delete

Footer:

Episode 819: Tax Me If You Can | 22:14 mins | Failed | 2018-02-20 01:15:25 | [Play](#) [Settings](#) [Delete](#)

Team Amazon Beta Presentation

Podcast Library

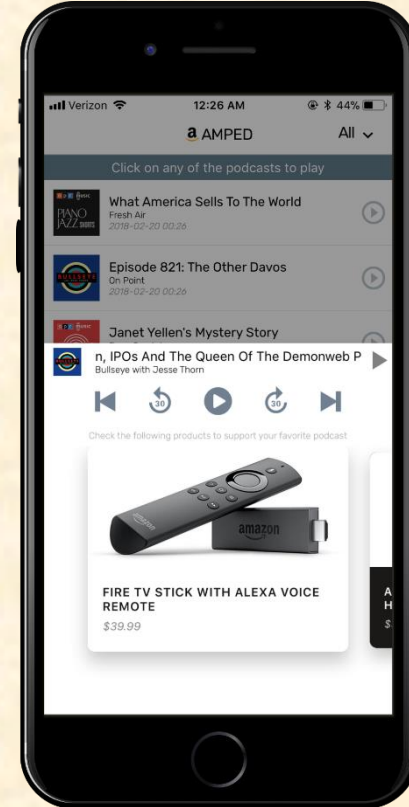
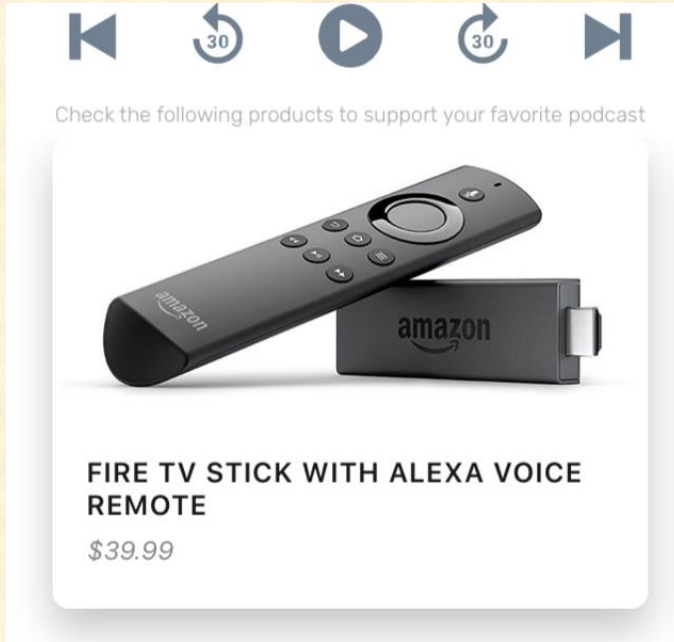




Team Amazon Beta Presentation

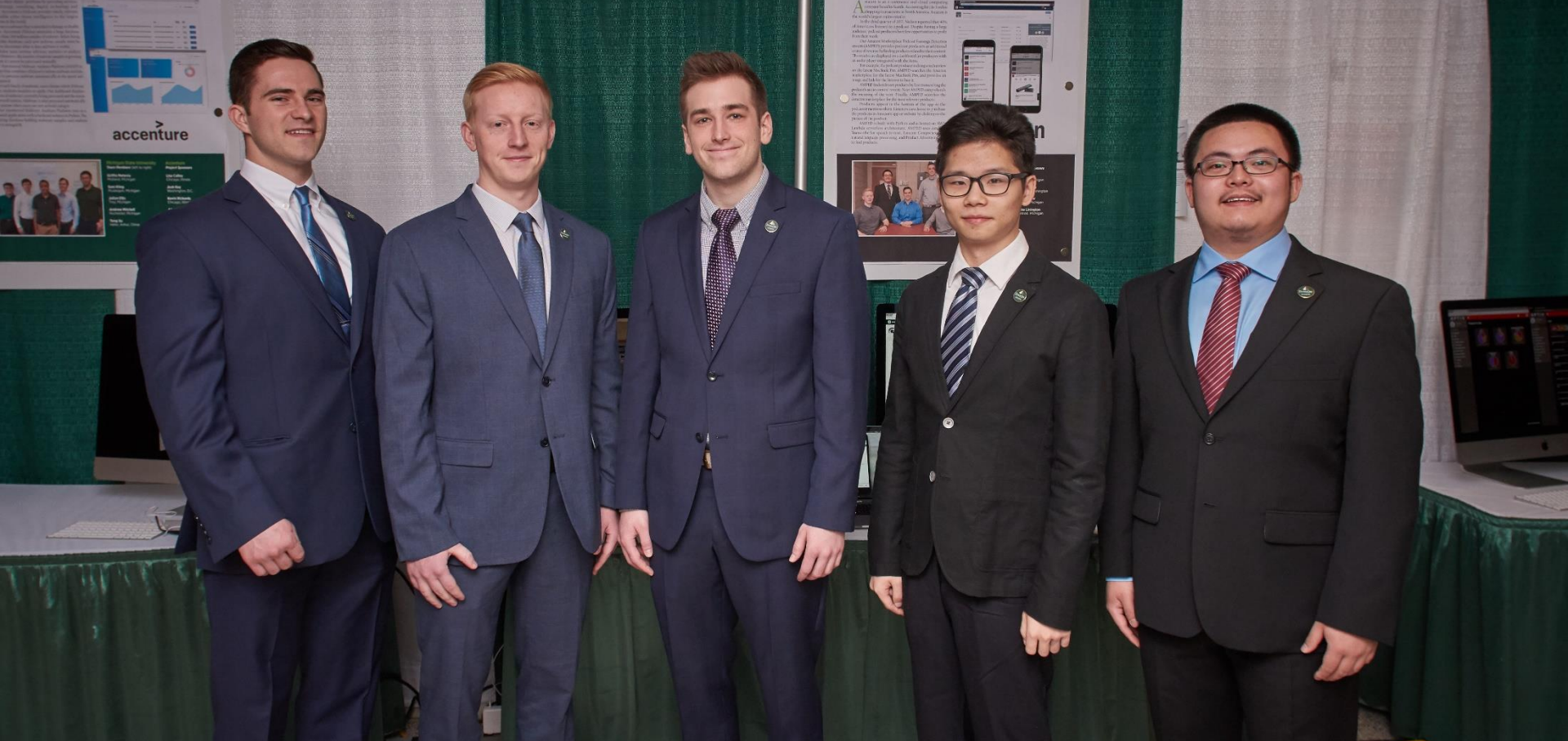
Team Amazon Beta Presentation

Product Display



The Capstone Experience





Team Amazon @ Design Day

Dillon Stock, Zach Whitener, Cam Korzecke, Chess Luo, Hansheng Zhao

MICHIGAN STATE
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The Capstone Experience

Team Aptiv

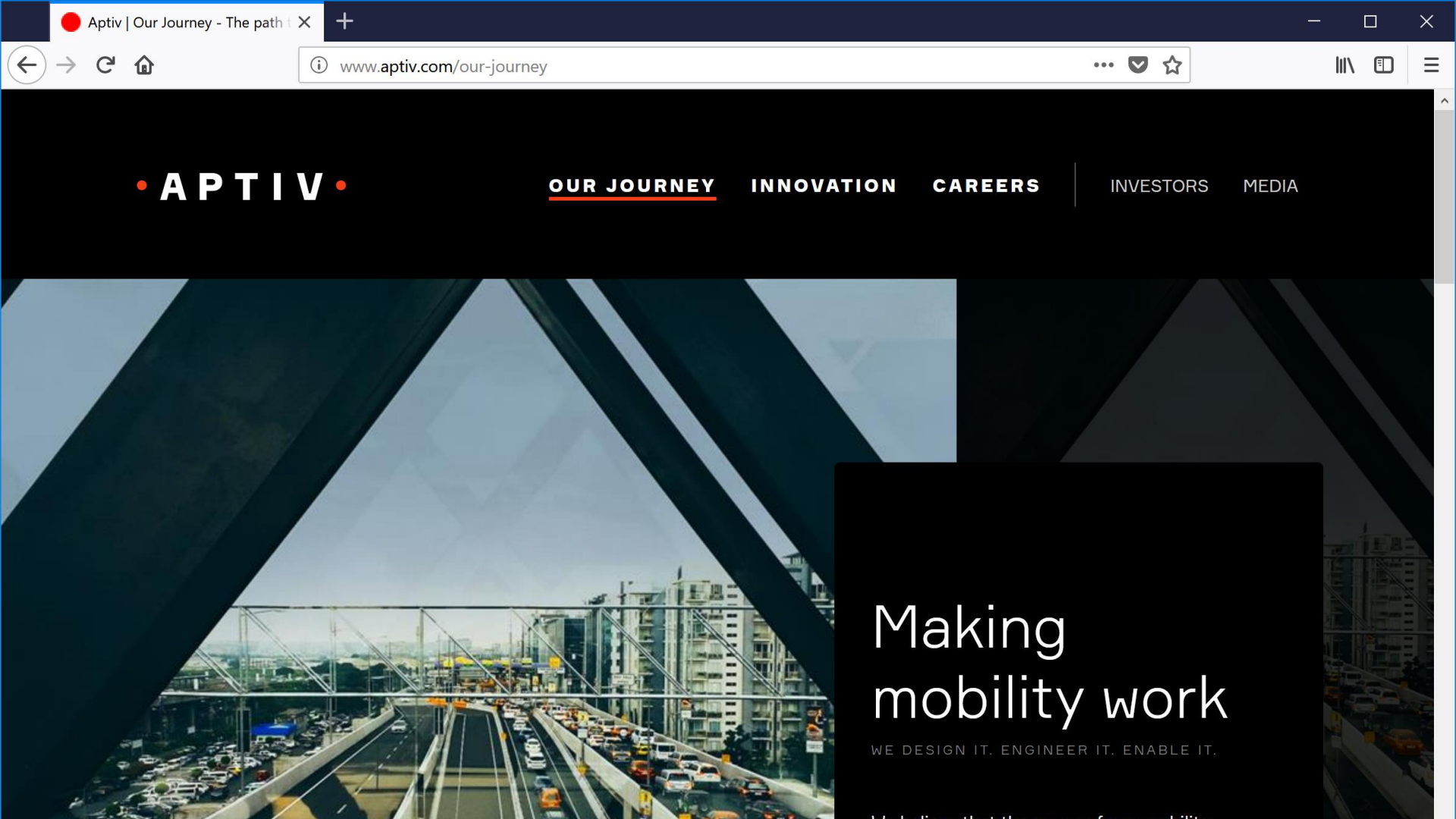
Department of Computer Science and Engineering
Michigan State University
Spring 2018



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



• **A P T I V** •



• **APTIV** •

OUR JOURNEY

INNOVATION

CAREERS

INVESTORS

MEDIA

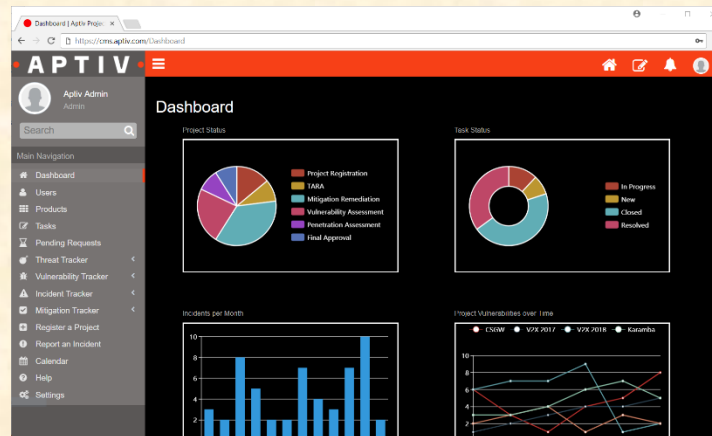
Making mobility work

WE DESIGN IT. ENGINEER IT. ENABLE IT.

Team Aptiv Project Overview

CMS: Cybersecurity Management System

- Functionalities
 - Automate Aptiv's Cybersecurity Process
 - Visualize and Analyze Data Trends
- Features
 - Modules for all Cybersecurity Processes
 - Threat Analysis and Risk Assessment
 - Vulnerability/Penetration Assessment
 - Mitigation Remediation
 - Incident Response
 - Database Visualizations and Analysis
 - Threats/Risks
 - Vulnerabilities
 - Incidents
 - Mitigations
 - Provide Communication Through Task Manager and Request System
- Technologies
 - ASP.NET (C#)
 - CSS/HTML
 - MS SQL
 - Synopsys Protecode
 - Microsoft Azure



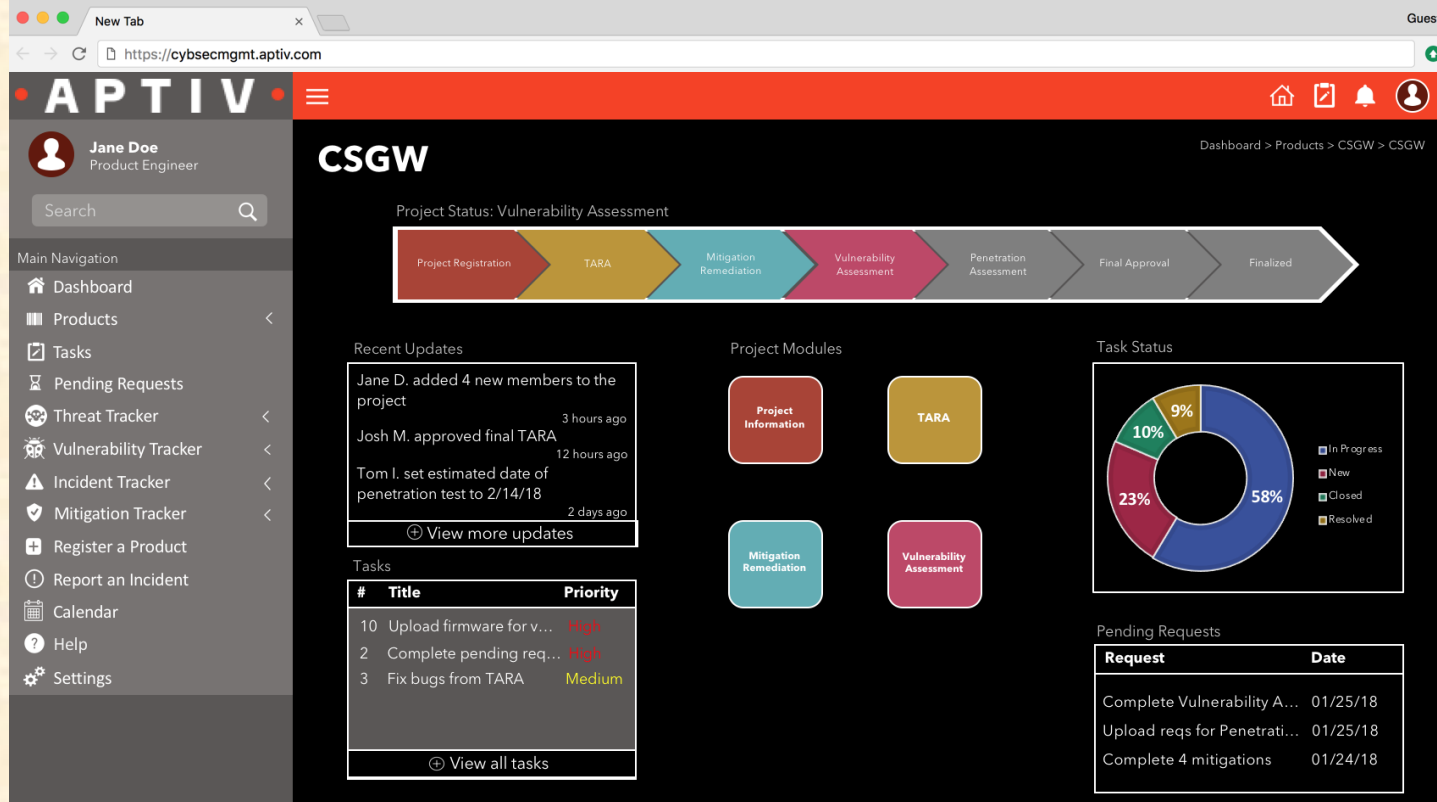


Team Aptiv

Dillon Brown, Clayton Peters, Ashtaan Rapanos, Winton Qian, Wei Jiang

Team Aptiv Project Plan Presentation

Screen Mockup: Incomplete Project Page

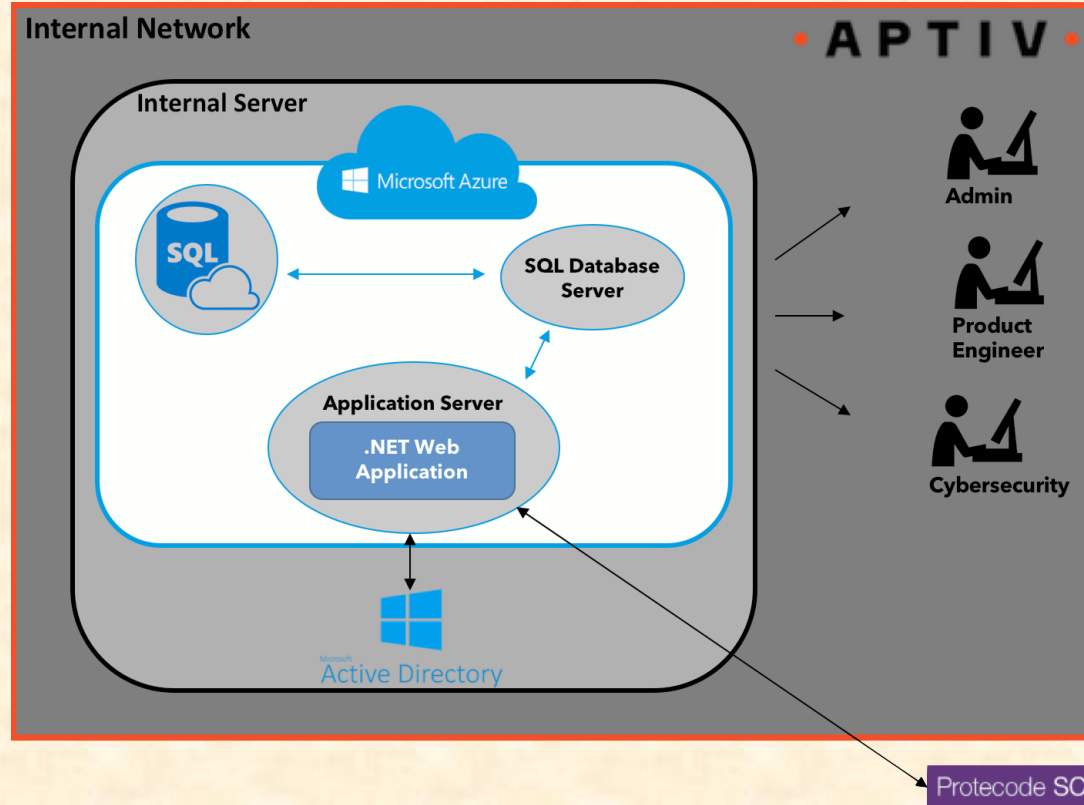


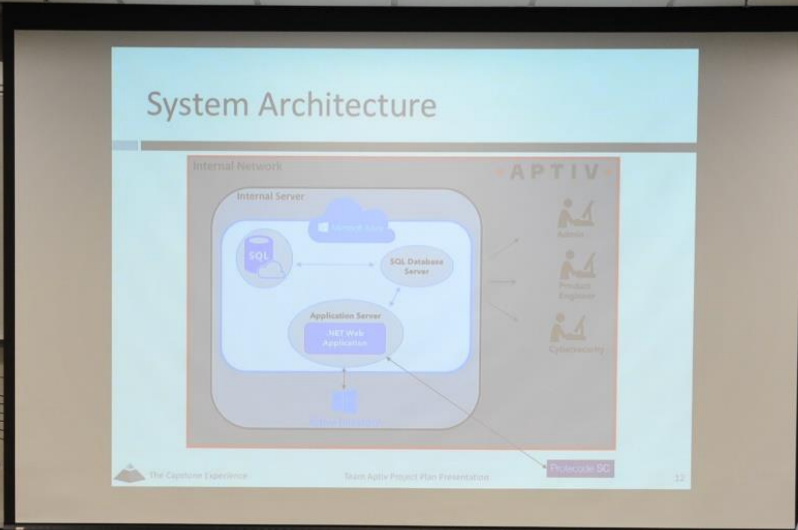
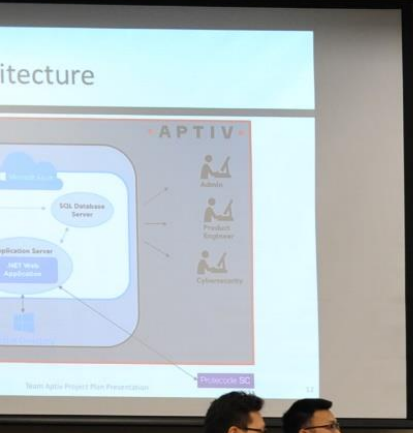


Team Aptiv Project Plan Presentation

Team Aptiv Project Plan Presentation

Architecture Diagram

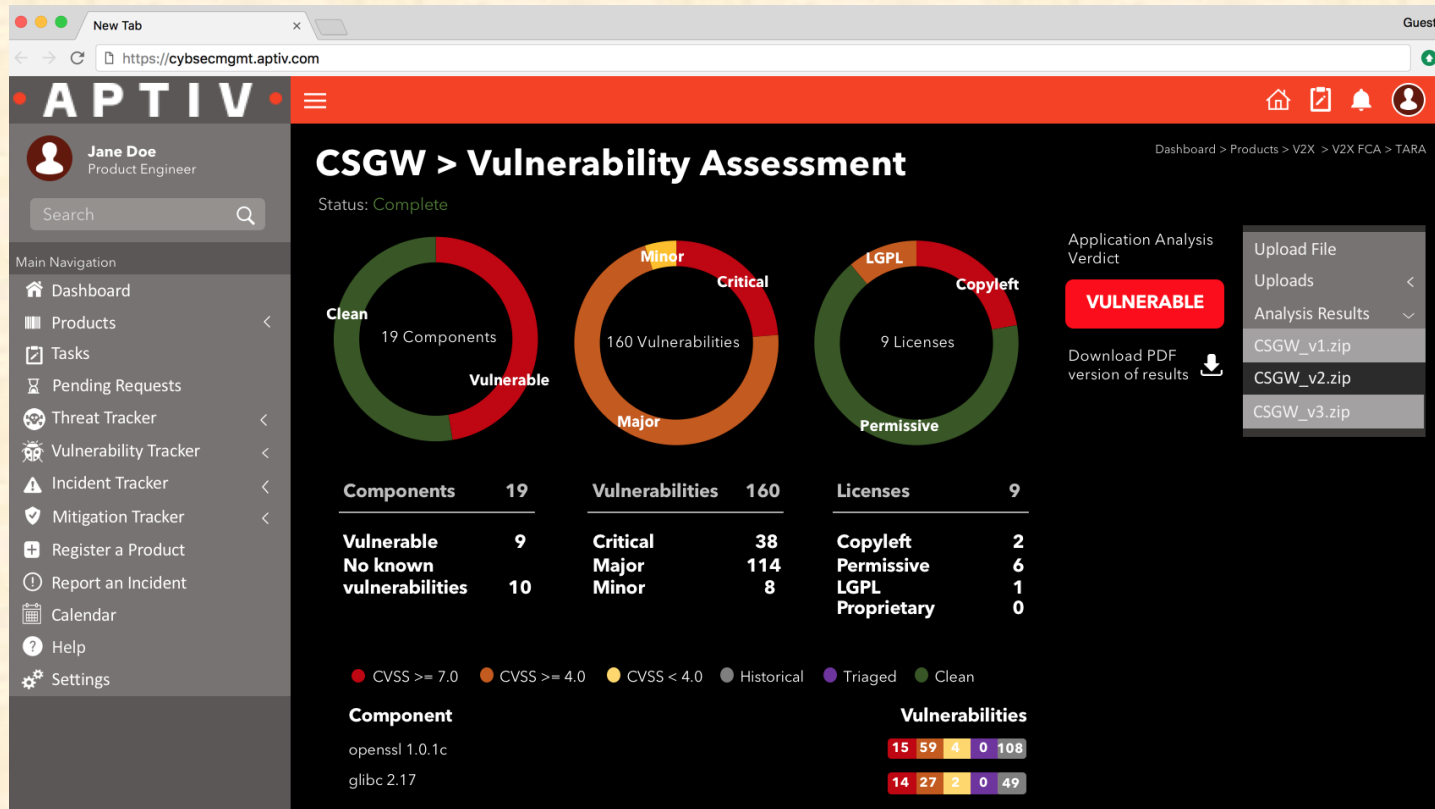




Team Aptiv
Project Plan Presentation

Team Aptiv Project Plan Presentation

Screen Mockup: Vulnerability Assessment

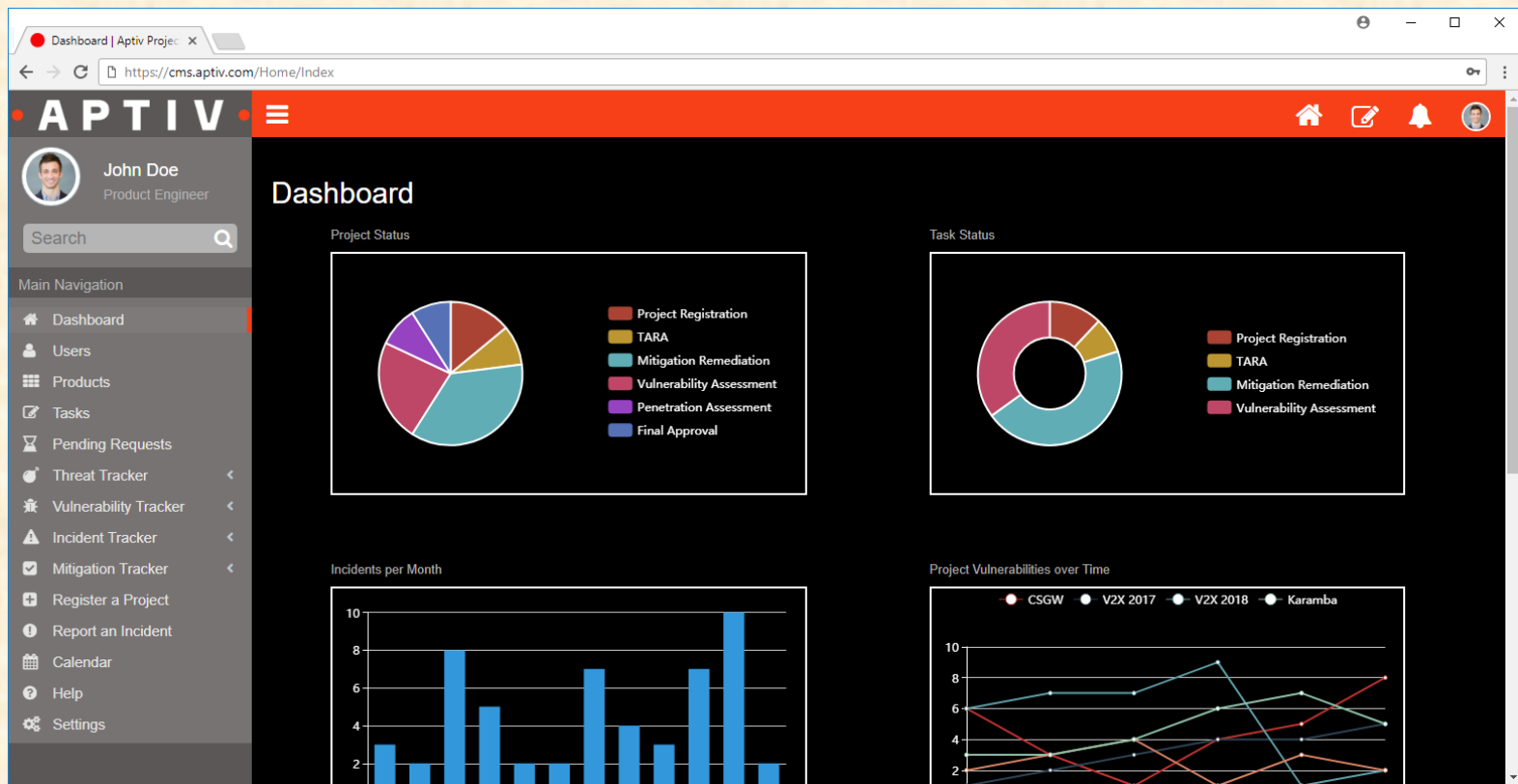




Team Aptiv Alpha Presentation

Team Aptiv Alpha Presentation

Dashboard



Team Aptiv Alpha Presentation

Product Dashboard

The screenshot displays the Aptiv Product Dashboard in a web browser. The browser's address bar shows the URL `localhost:52572/Product/Index`. The application's header is orange, featuring the Aptiv logo on the left and navigation icons (home, edit, notifications, profile) on the right. A left sidebar, titled "Main Navigation", lists various system components: Dashboard, Users, Products (highlighted), Tasks, Pending Requests, Threat Tracker, Vulnerability Tracker, Incident Tracker, Mitigation Tracker, Register a Project, Report an Incident, Calendar, Help, and Settings. The main content area, titled "Products", contains five product cards: "Register Product" (with a plus icon), "498" (0 Projects), "CSGW" (3 Projects), "V2X" (3 Projects), and "A90X" (0 Projects). The footer of the application shows the copyright notice "© 2018 - Aptiv Project Manager".

Product Name	Project Count
Register Product	-
498	0 Projects
CSGW	3 Projects
V2X	3 Projects
A90X	0 Projects



Team Aptiv Alpha Presentation

Team Aptiv Alpha Presentation

Project Page

APTIV

John Doe
Product Engineer

Search

Main Navigation

- Dashboard
- Users
- Products
- Tasks
- Pending Requests
- Threat Tracker
- Vulnerability Tracker
- Incident Tracker
- Mitigation Tracker
- Register a Project
- Report an Incident
- Calendar
- Help
- Settings

V2X 2017

Project Status: Vulnerability Assessment

Project Registration → TARA → Mitigation Remediation → Vulnerability Assessment → Penetration Assessment → Final Approval → Finalized

Recent Updates

- Add Jake to Project (15 minutes ago)
- Vulnerability assessment on V2X_2017.zip completed (30 minutes ago)
- V2X_2017.zip completed uploaded (35 minutes ago)

[View More updates](#)

Project Modules

- Project Registration
- TARA
- Mitigation Remediation
- Vulnerability Assessment

Task Status

Donut Chart Legend:

- In Progress (Blue)
- New (Pink)
- Closed (Green)
- Resolved (Yellow)

Pending Requests

Request	Data
Upload data schematics for penetration assessment	2018-02-18
Upload firmware for penetration assessment	2018-02-18
Complete mitigation #23	2018-02-17

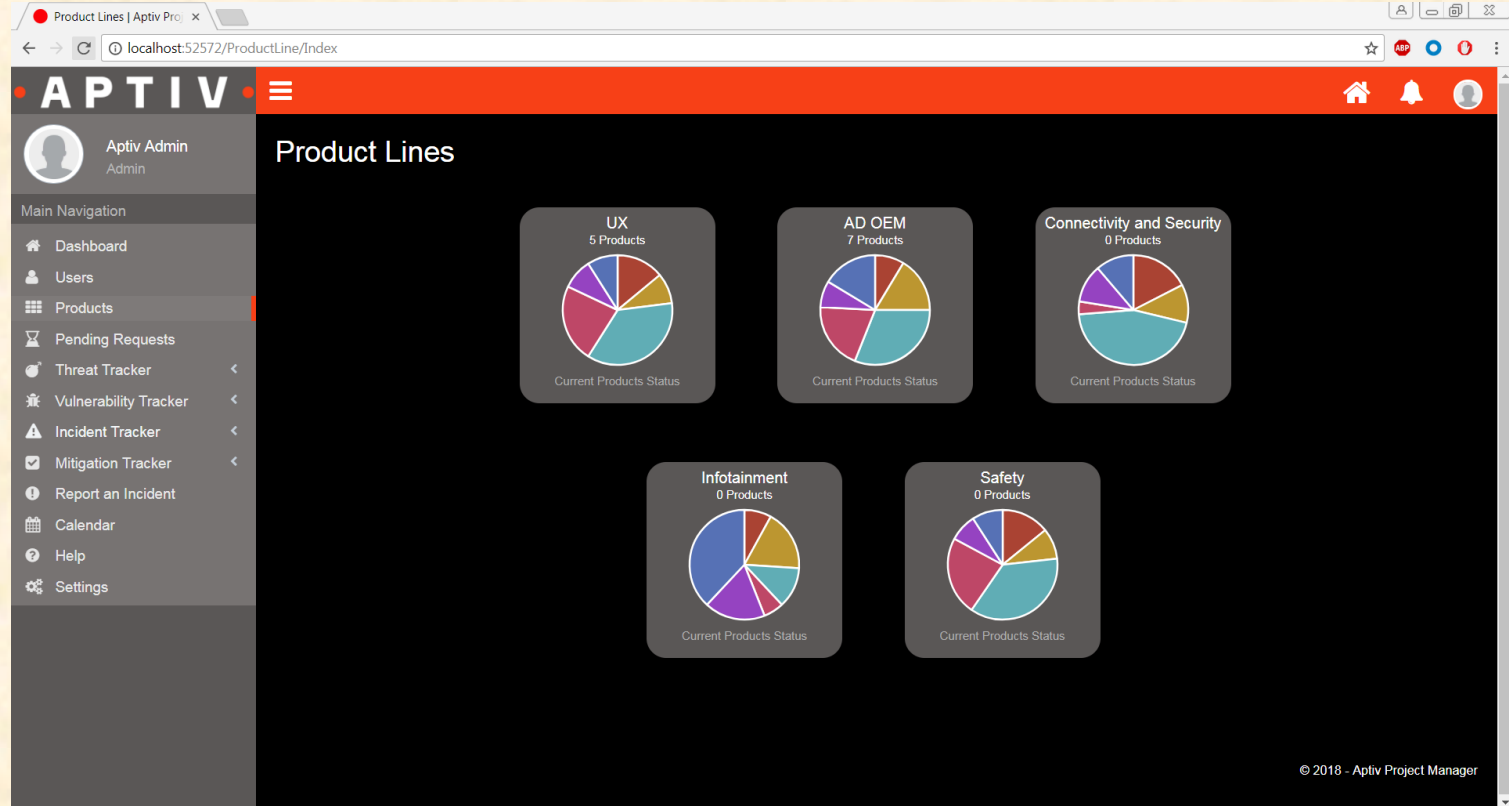
#	Title	Priority
2	Type Report	High
3	Add Adam	Medium
1	Upload file	High
4	Search login	Medium



Team Aptiv Beta Presentation

Team Aptiv Beta Presentation

Product Lines



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Team Aptiv Beta Presentation

Product Page

The screenshot shows a web browser window displaying the Aptiv V2X 2017 product page. The browser's address bar shows the URL: `localhost:52572/Product/Index?productName=V2X%202017&lineName=UX`. The page has a dark theme with a red header bar. On the left is a sidebar with the Aptiv logo and a navigation menu. The main content area features a progress bar for the product status, which is currently at 'Final Approval'. Below the progress bar are three sections: 'Recent Updates' (empty), 'Product Modules' (containing six modules: Project Information, TARA, Mitigation Remediation, Vulnerability Assessment, Penetration Assessment, and Final Approval), and 'Task Status' (empty). At the bottom right, there is a 'Pending Requests' table.

APTIV

Aptiv Admin
Admin

Main Navigation

- Dashboard
- Users
- Products
- Pending Requests
- Threat Tracker
- Vulnerability Tracker
- Incident Tracker
- Mitigation Tracker
- Report an Incident
- Calendar
- Help
- Settings

V2X 2017

Product Status: Final Approval

Product Registration → TARA → Mitigation Remediation → Vulnerability Assessment → Penetration Assessment → Final Approval → Finalized

Recent Updates

There are no recent updates.

Product Modules

- Project Information
- TARA
- Mitigation Remediation
- Vulnerability Assessment
- Penetration Assessment
- Final Approval

Task Status

There are no tasks.

Pending Requests

Request	Date
Upload data schematics for penetration assessment	2/18/2018 12:00:00 AM
Upload firmware for penetration assessment	2/18/2018 12:00:00 AM
Complete mitigation #23	2/17/2018 12:00:00 AM



Team Aptiv Beta Presentation

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TARA Module

APTIV

V2X 2017 > TARA

V2X 2017 Risk Assessment

Asset ID: V2XFAC_01 Case ID: Use_Case_01

Threat Type: Spoofing	Risk Severity: Critical	Likelihood	Impact	Risk
Expertise: Very High	Safety: Very High	4	5.66	22.64
Knowledge: Very High	Operational: Very High			
Window of Opportunity: Very High	Privacy: Very High			
Required Equipment: Very High				

Threat Type: Information Disclosure	Risk Severity: Critical	Likelihood	Impact	Risk
Expertise: Very High	Safety: High	4	3.22	12.88
Knowledge: Very High	Operational: Medium			
Window of Opportunity: Very High	Privacy: Medium			
Required Equipment: Very High				

Threat Type: Spoofing	Risk Severity: Low	Likelihood	Impact	Risk
Expertise: Low	Safety: Low	1	1	1
Knowledge: Low	Operational: Low			
Window of Opportunity: Low	Privacy: Low			



Team Aptiv @ Design Day

Winton Qian, Dillon Brown, Ashtaan Rapanos, Clayton Peters, Wei Jiang

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Team Auto-Owners

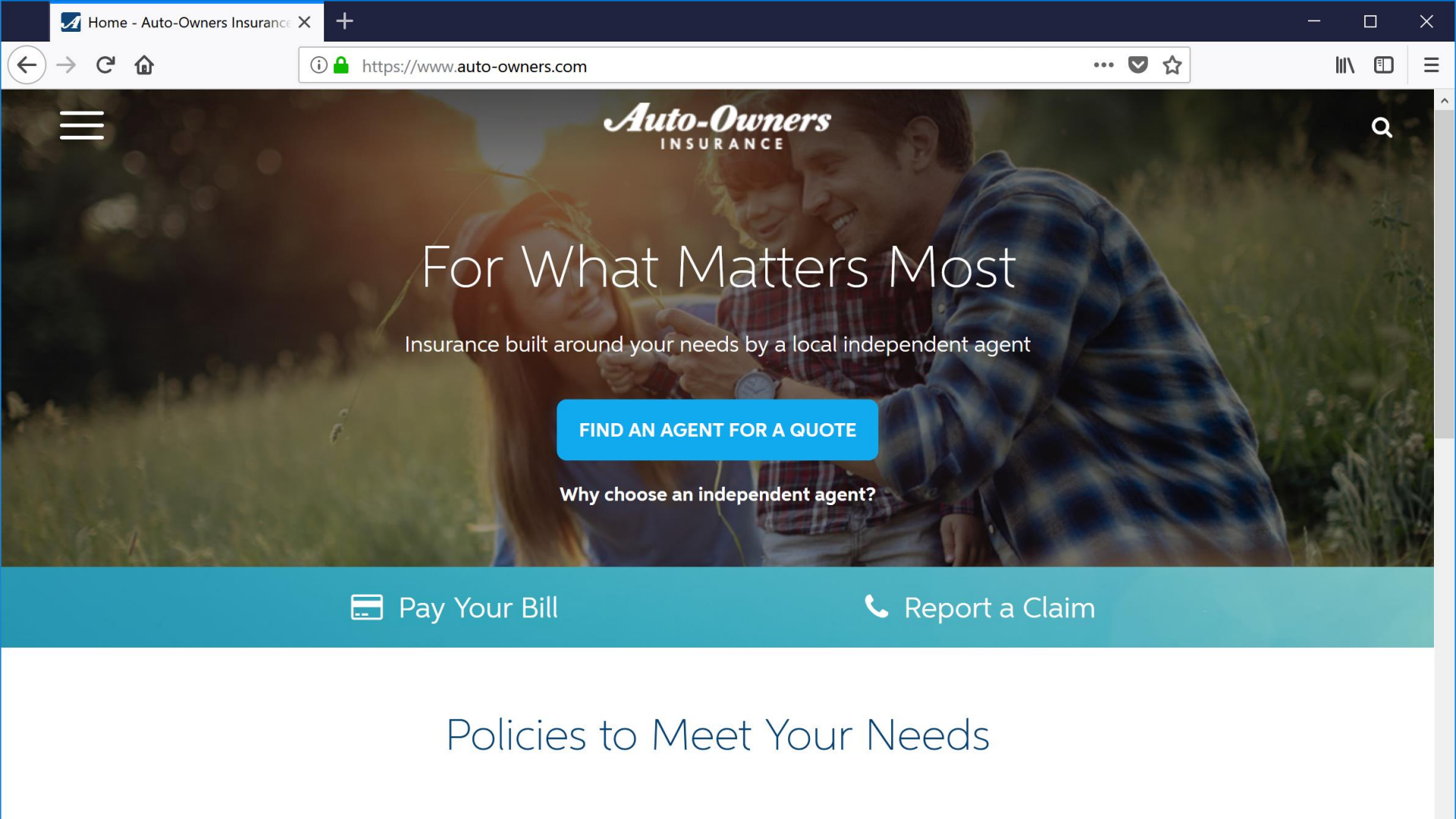
Department of Computer Science and Engineering
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Spring 2018



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Team Auto-Owners Project Overview

IMAGINE: IMAGe INTake Experience

- Functionalities
 - Evaluate Physical Environments (for Insurance Purposes)
 - Leverage Virtual Reality
 - Create Virtual Environments Using Spherical Camera
- Features
 - Support Image Import From Spherical Camera
 - Classify the Environment
 - Detect and Identify Objects
 - Create Virtual Environment
 - Provide Playback, Navigation and Inspection
 - Build and Display Inventory View
- Technologies
 - Unity Game Engine
 - Oculus Rift and Touch Controllers
 - Oculus Rift Sensor
 - Ricoh Theta V Spherical Camera
 - Image Processing and Recognition



Auto-Owners
INSURANCE

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Lansing, Michigan






Team Auto-Owners

Zack Geizer, Reece Cole, Sean Larabell, Nick Frederick, Xinyun Zhao

Team Auto-Owners Project Plan Presentation

Screen Mockup: Web Application

LIVE SUPPORT

Photos

My profileLogout

Housing

List of each category

"The Smith Home" 324 Maple Street

Edit - Paragraph

Anyone Home 1

Read only - Paragraph

Anyone Home 2

Read only - Paragraph

ADD TO LIST


Underwriting Support: 1-800-238-2934 | Technical Support: 1-800-346-0346 x1850


The information gathered will be used for the sole purpose of providing an insurance rate proposal. Rates are subject to change based on company rate schedules and/or changes to any of the required rating information.

Live Support

Feedback & Comments

Terms of Use and Private Policy

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LIVE SUPPORT

Inventory View

EnvironmentExportDownload

"The Smith Home" 324 Maple Street

Object Recognition

Sample Table

IMAGE NUM	OBJECT	ROOM	CHARACTERISTICS	NOTES
1	Sink	Bathroom #1	Pedestal	
1	Toilet	Bathroom #1		
2	Shower/Tub	Bathroom #2		
2	Sink	Bathroom #2	Vanity	
2	Toilet	Bathroom #2		
3	Bed	Bedroom #1	Twin size	
4	Bed	Bedroom #2	Queen size	
5	Bed	Bedroom #3	Full size	Underwriting, Feb. 2018: Bedroom looks unused. May be used as a spare bedroom and not for full-time occupants. That could affect the exposure on the policy. Refer to the agency to confirm.
6	Table		Underwriting, Feb. 2018: looks like the dining room table	
7	Couch	Living Room #1		

ADD TO LIST


Underwriting Support: 1-800-238-2934 | Technical Support: 1-800-346-0346 x1850

The information gathered will be used for the sole purpose of providing an insurance rate proposal. Rates are subject to change based on company rate schedules and/or changes to any of the required rating information.

Live Support

Feedback & Comments

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Interface



Screen Mockup: VR User Interface



The Capstone Experience

Team Auto-Owners Project Plan Presentation

Screen M

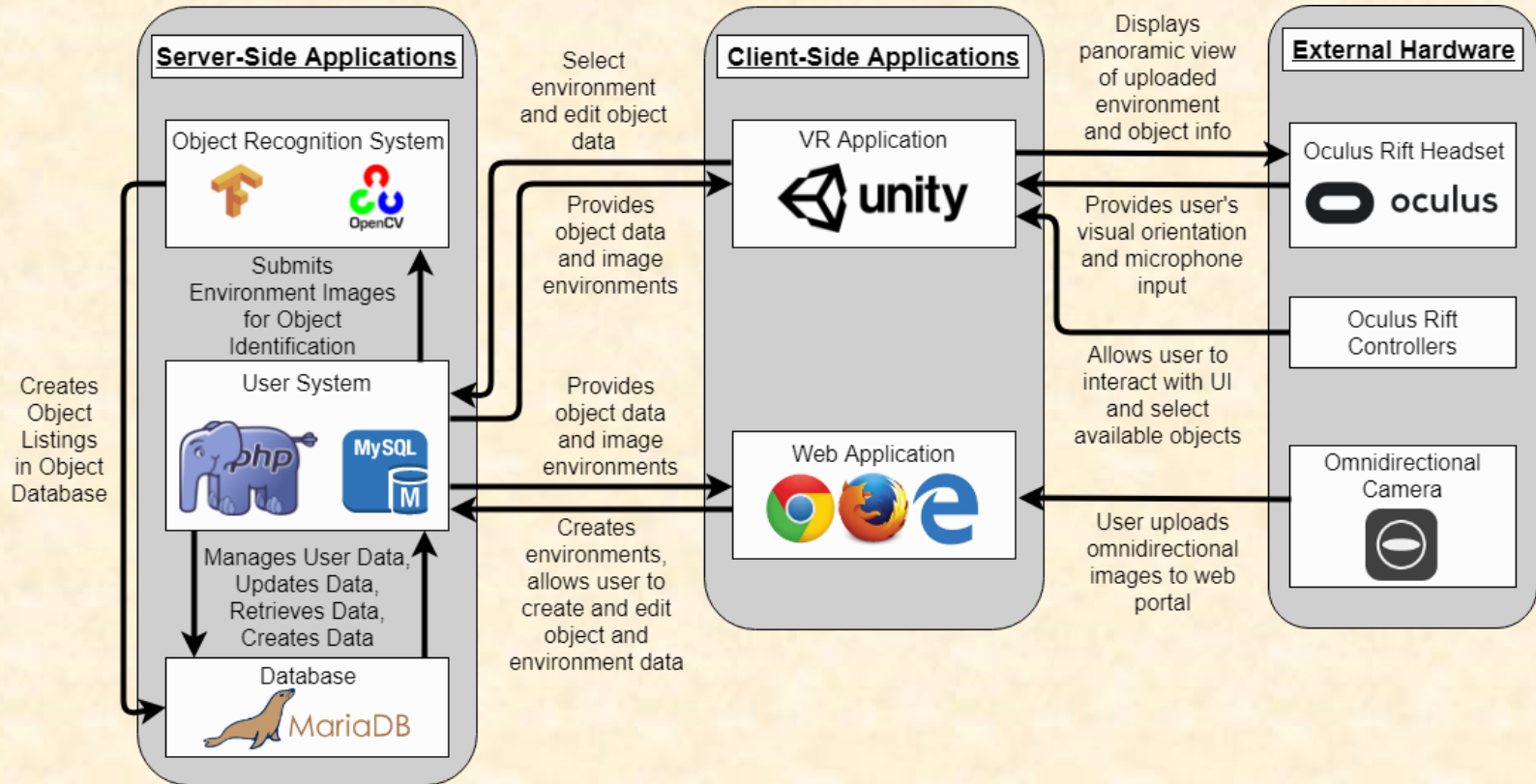


The Capstone Experience

Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

Architecture Diagram

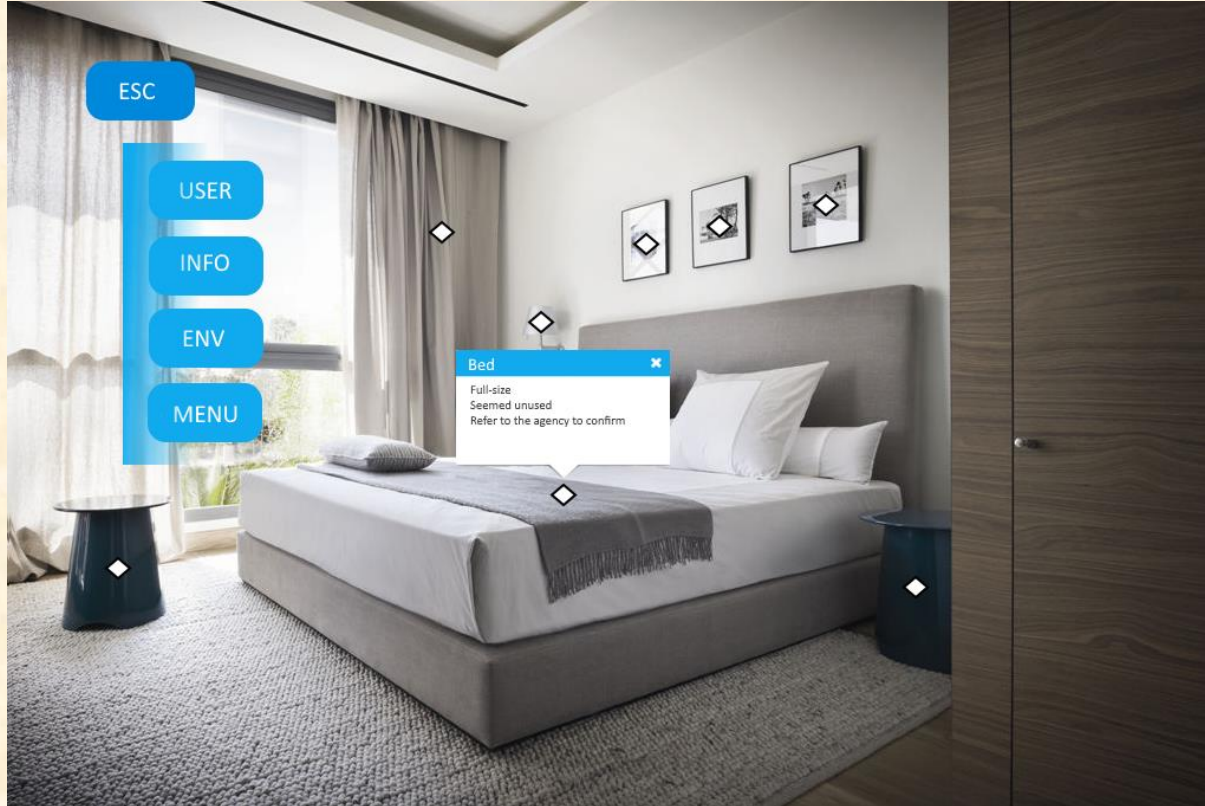




Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

Screen Mockup: VR User Interface

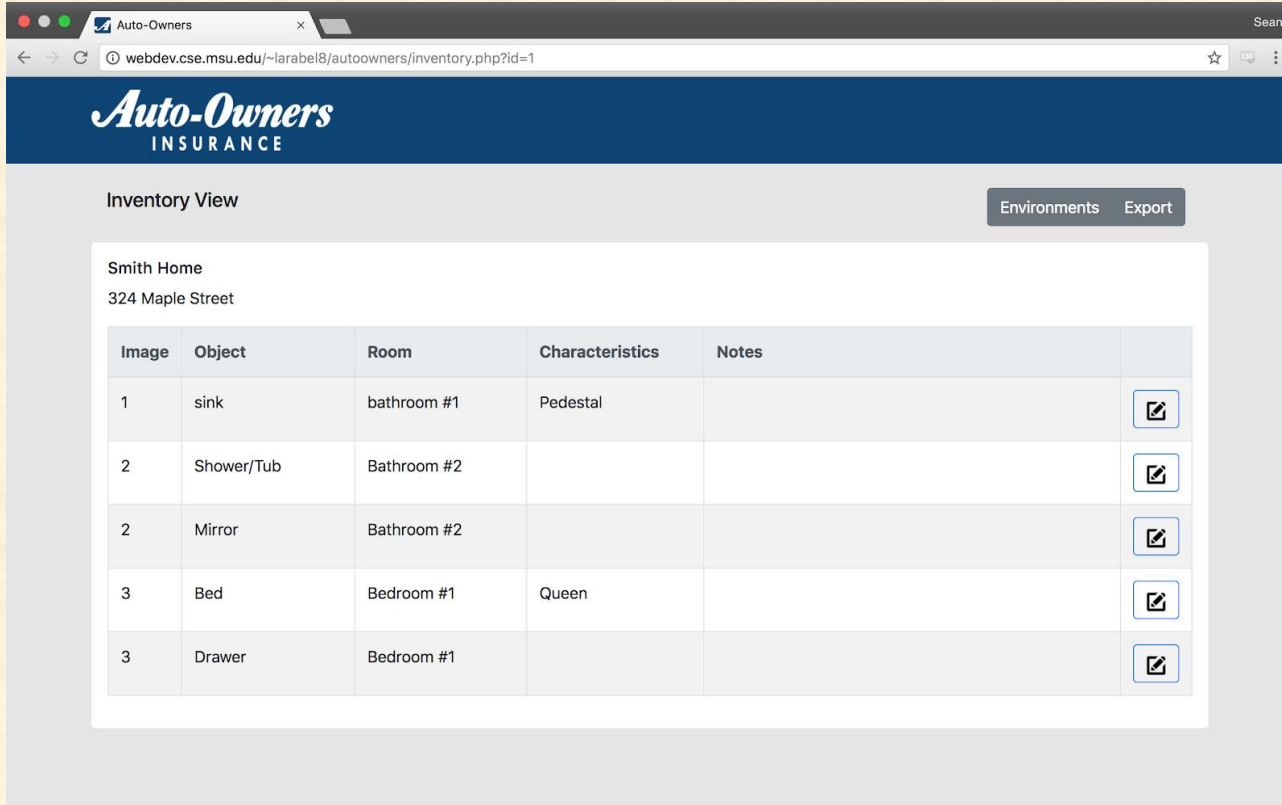









Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

Web: Inventory List



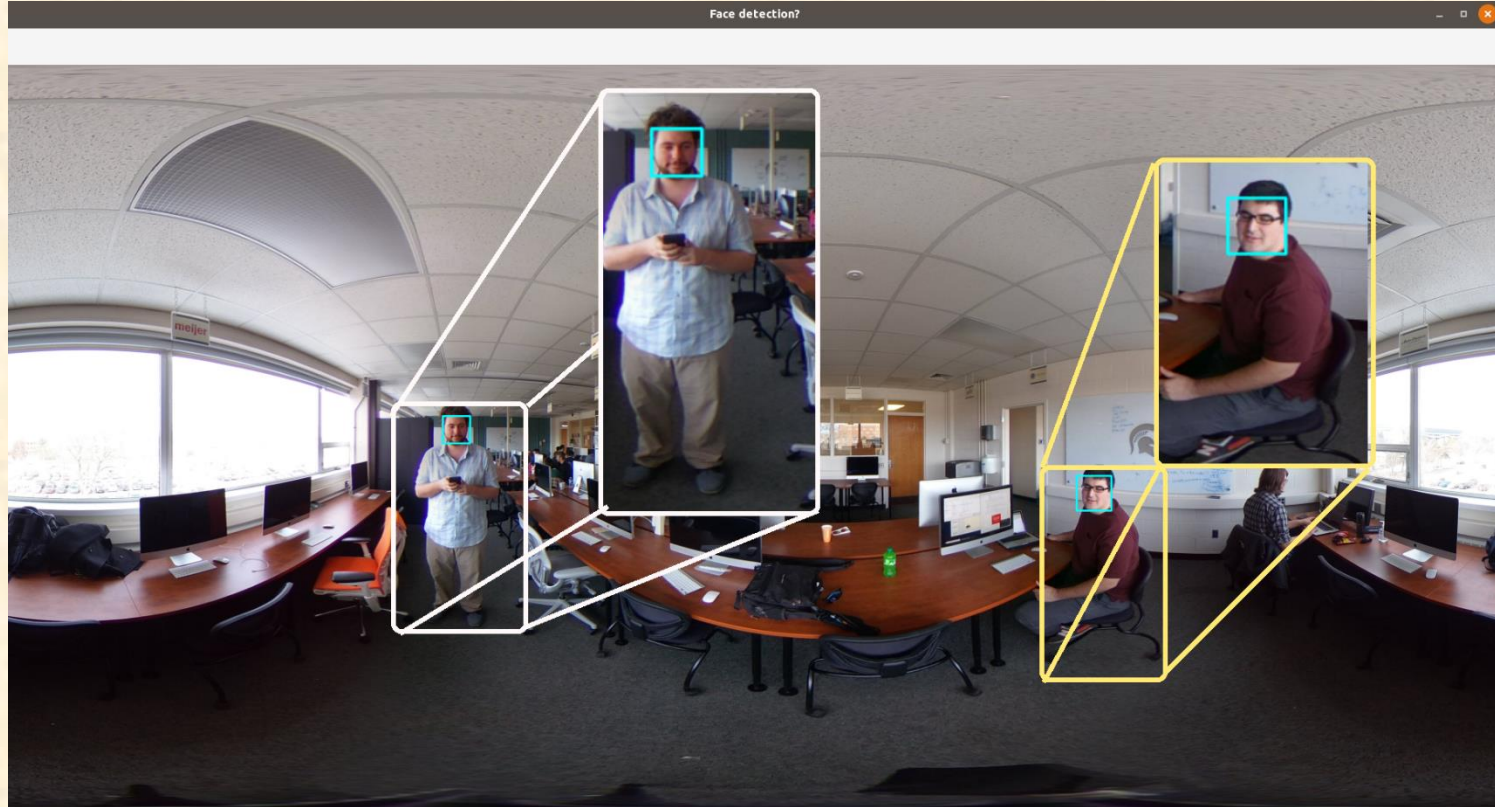
The screenshot shows a web browser window with the title "Auto-Owners" and a user named "Sean". The address bar shows the URL "webdev.cse.msu.edu/~larabel8/autoowners/inventory.php?id=1". The page header features the "Auto-Owners INSURANCE" logo. Below the header, the page is titled "Inventory View" and includes buttons for "Environments" and "Export". The main content area displays the address "Smith Home" and "324 Maple Street". A table lists inventory items with columns for Image, Object, Room, Characteristics, Notes, and an action icon.

Image	Object	Room	Characteristics	Notes	
1	sink	bathroom #1	Pedestal		
2	Shower/Tub	Bathroom #2			
2	Mirror	Bathroom #2			
3	Bed	Bedroom #1	Queen		
3	Drawer	Bedroom #1			



Team Auto-Owners Alpha Presentation

Object Detection



The Capstone Experience

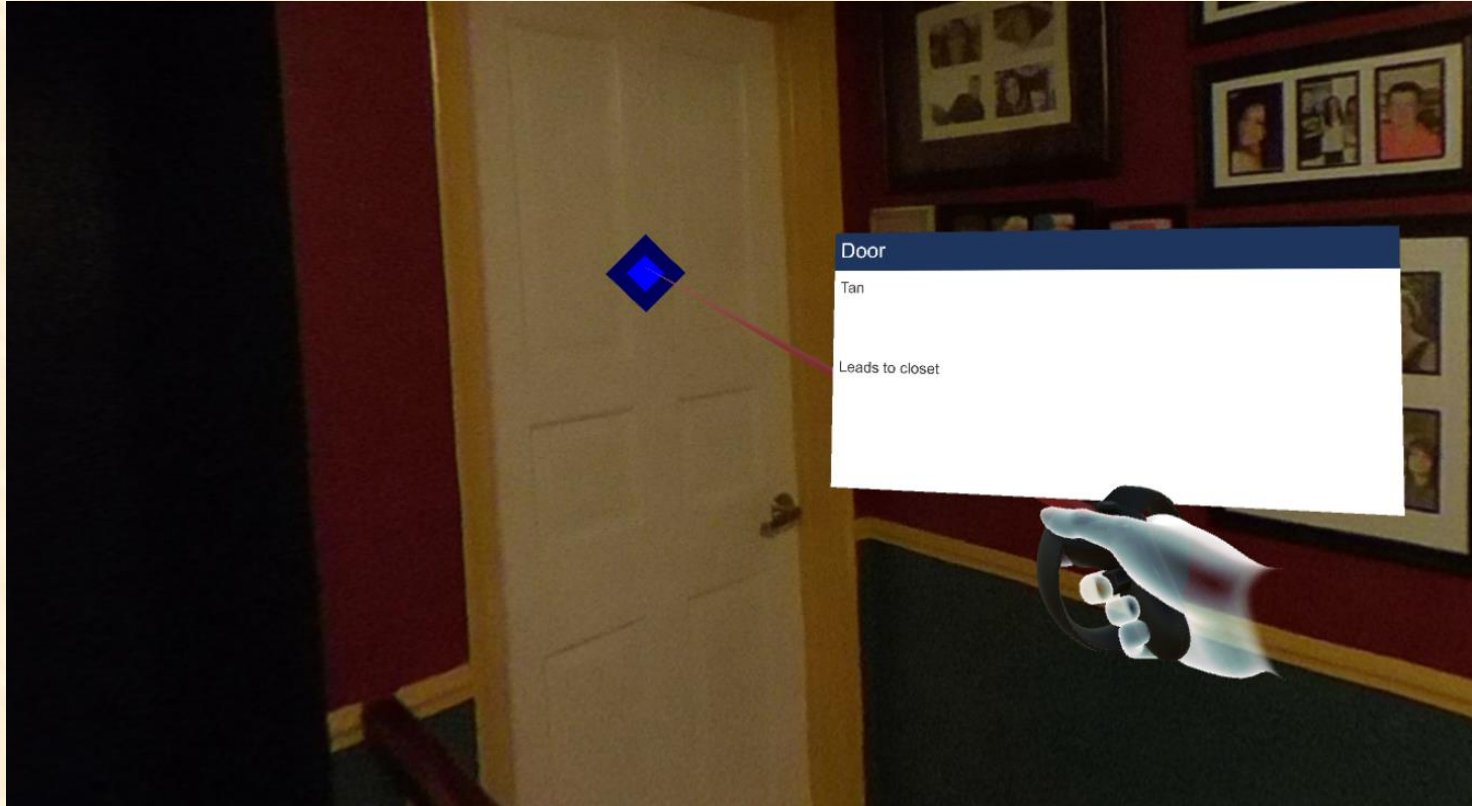




Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

VR: Selecting Object Nodes

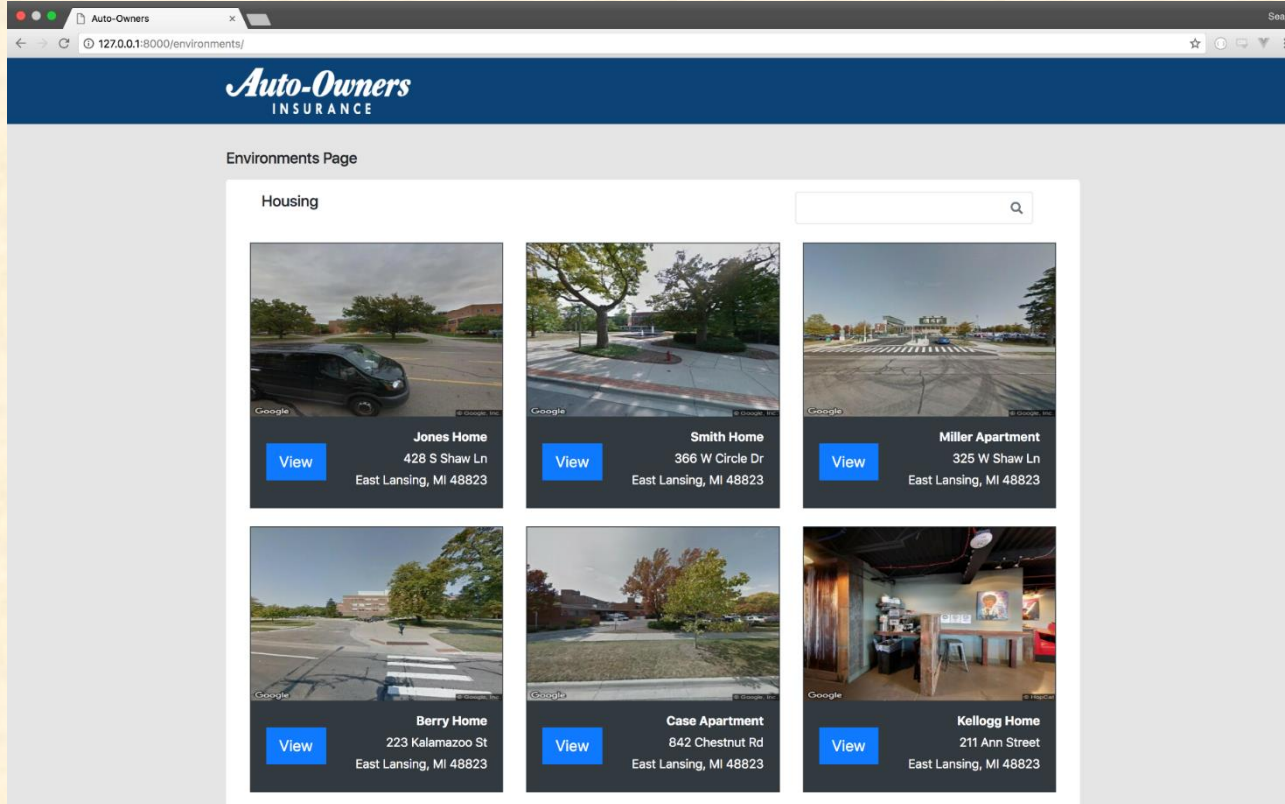




Team Auto-Owners Beta Presentation

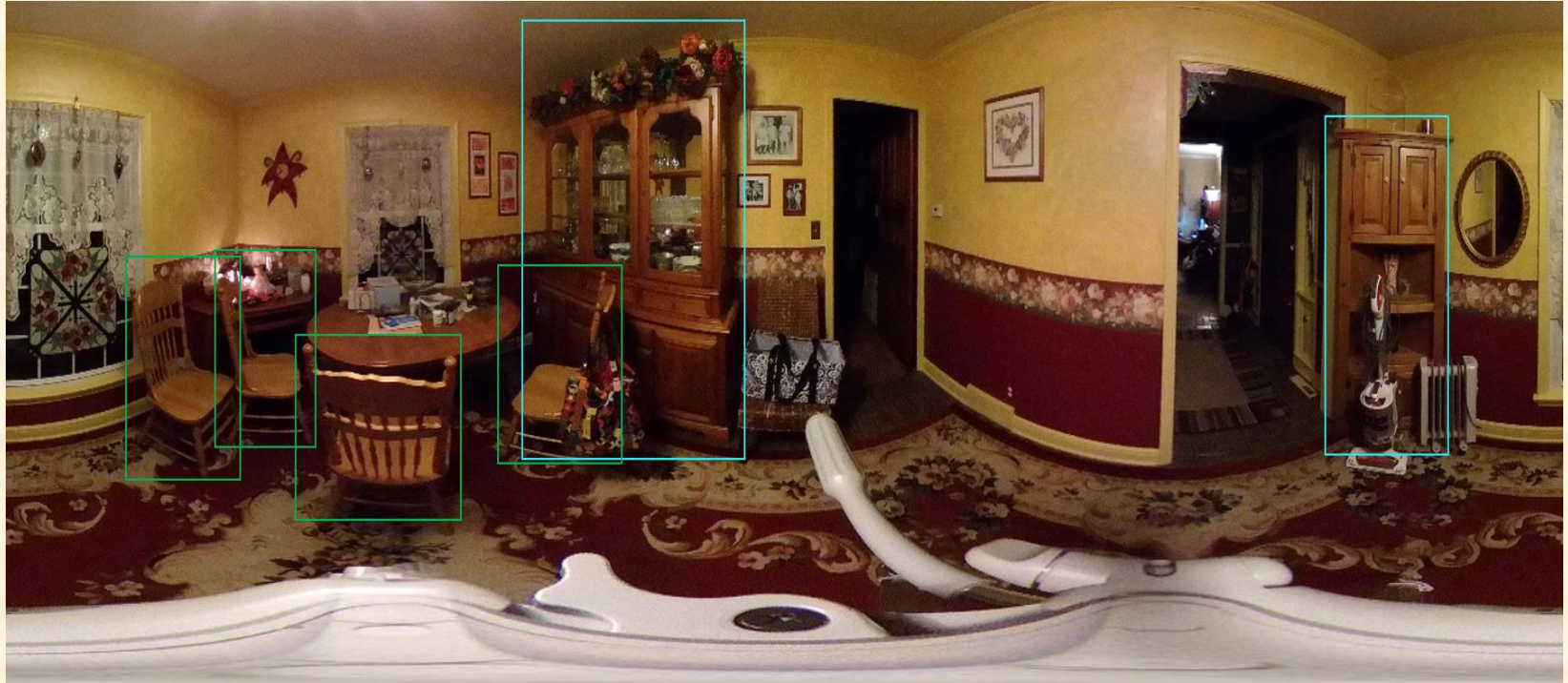
Team Auto-Owners Beta Presentation

Website Environments Page



Team Auto-Owners Beta Presentation

Object Recognition Bounding Boxes

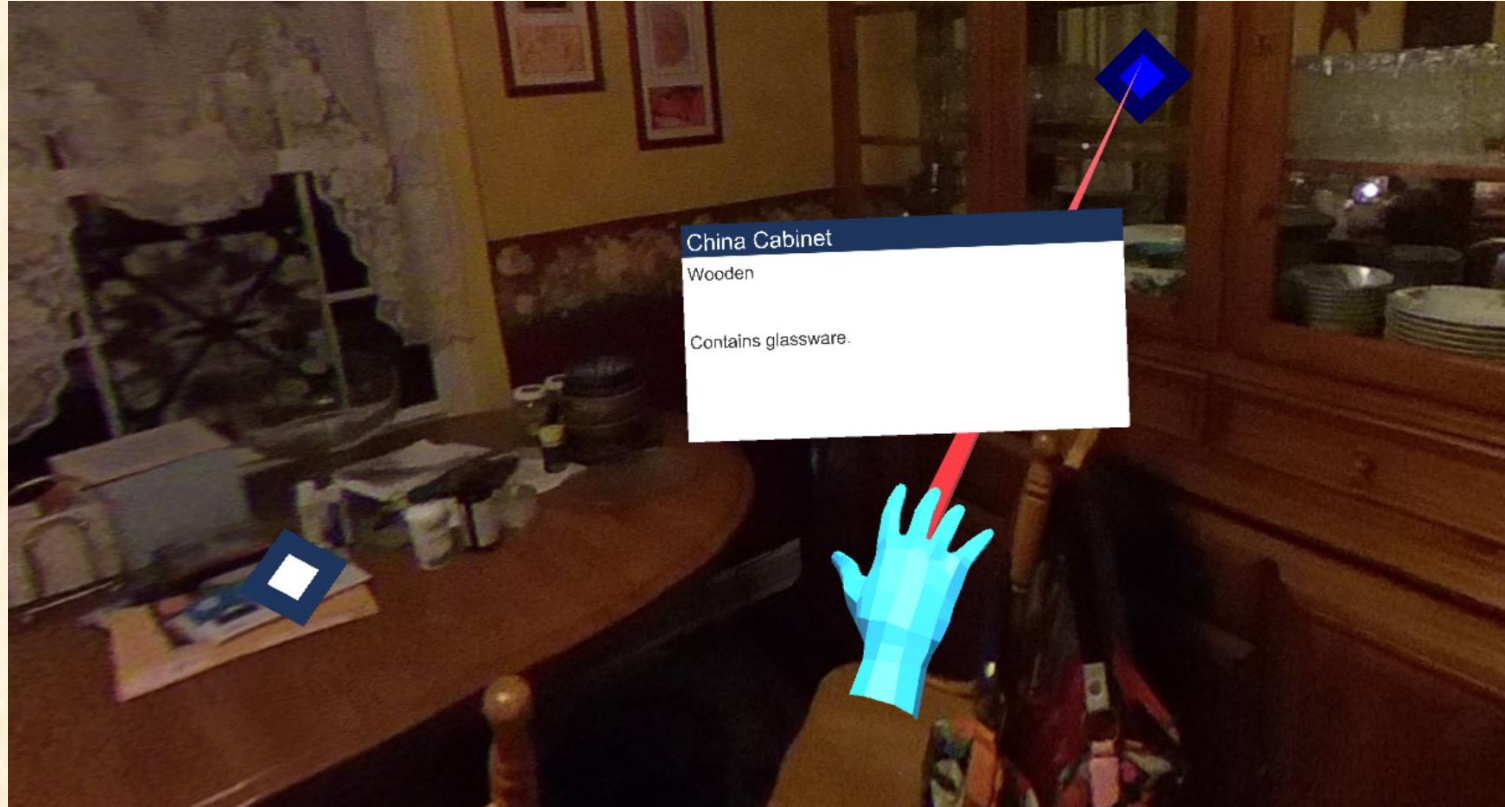




Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

VR Object Nodes and Info Display





Team Auto-Owners @ Design Day
Reece Cole, Nick Frederick, Xinyun Zhao, Zack Geizer, Sean Larabell

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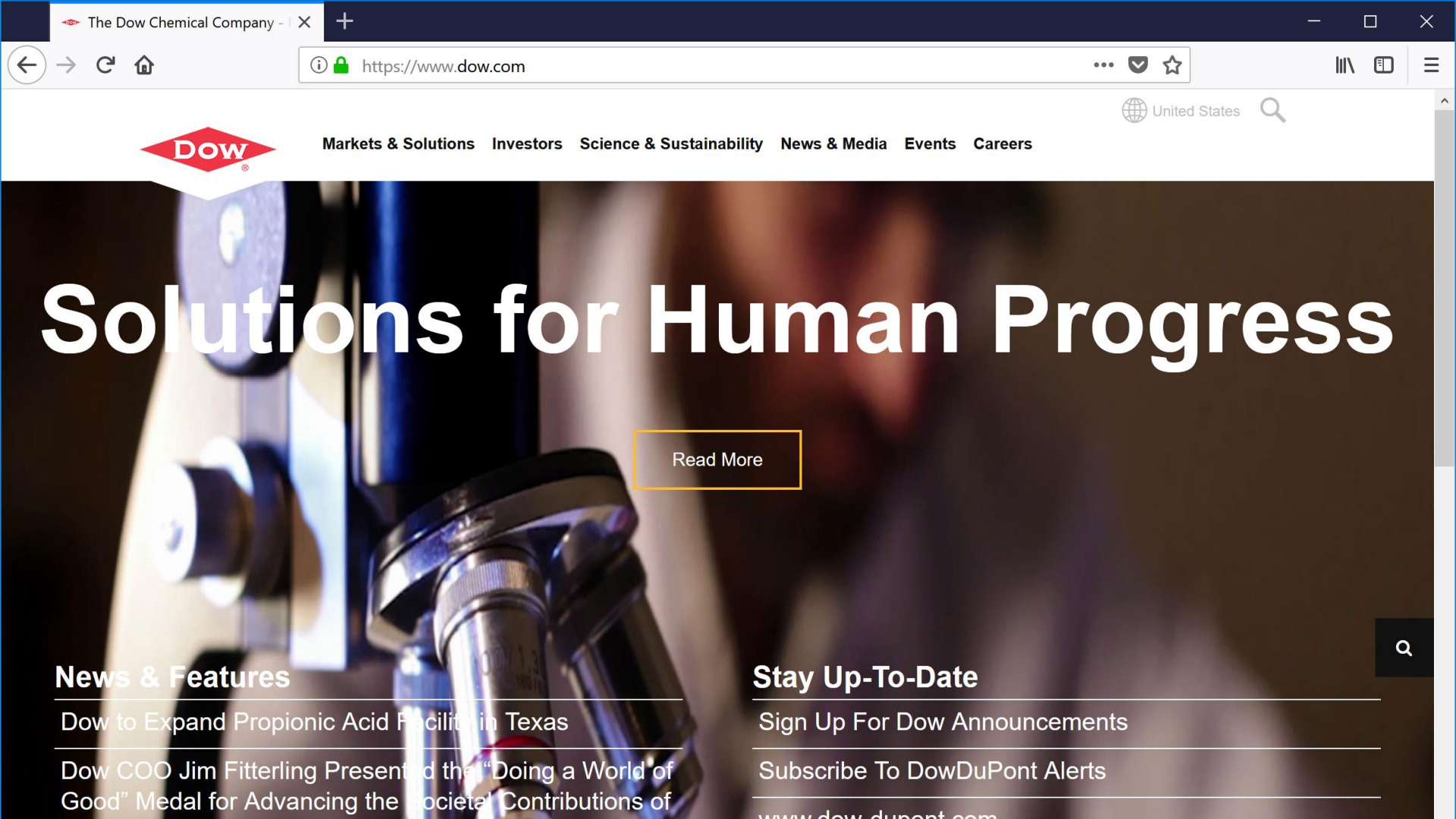
Team Dow

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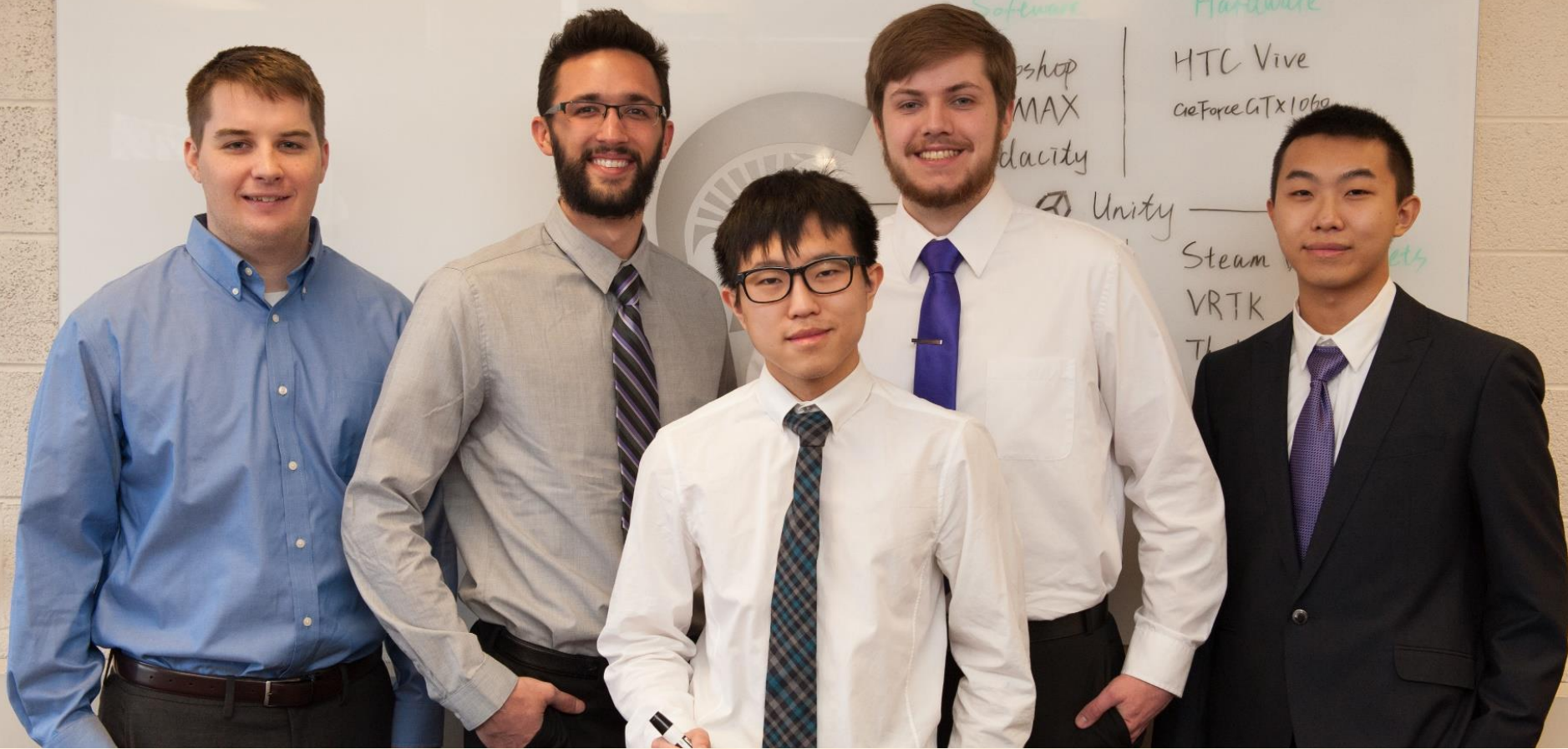
Virtual Reality Simulation for Railcar Loading

- Functionalities
 - Teach How to Load a Railcar Safely
 - Via First Person Virtual Reality Game
- Features
 - Support Two Levels of Difficulty
 - Non-Certified
 - Certified
 - Handle Various Scenarios
 - Normal Filling
 - Response to Spills
 - Manage Player Points
 - Award for Positive Actions
 - Deduct for Negative Actions
 - Enable Interaction with Game Objects
 - Personal Protective Equipment (PPE)
 - D-Rails
 - Slide Valves
 - Use Audio to Indicate When Action Needed
 - Simulate Different Weather Conditions
 - Provide Feedback to Player at Game End
- Technologies
 - Unity Game Engine
 - Vive and Touch Controllers
 - Vive SDK
 - Microsoft .NET / C#
 - Xamarin



Midland, Michigan





Team Dow

Kyle White, Matthew Smith, John Yoo, JD Hayward, David Wang

Team Dow Project Plan Presentation

Screen Mockup: The Loading Area



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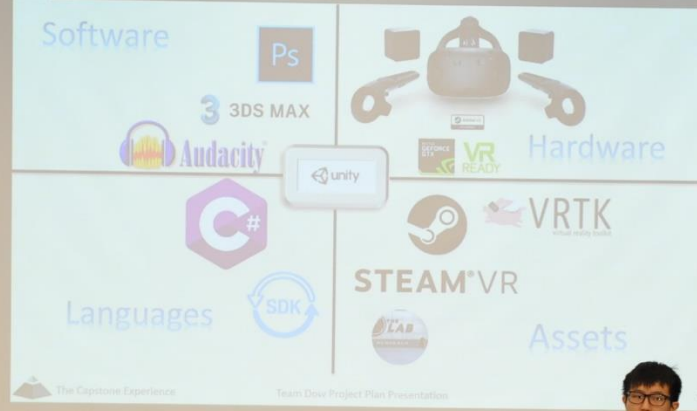
Team Dow Project Plan Presentation

Team Dow Project Plan Presentation

Architecture Diagram



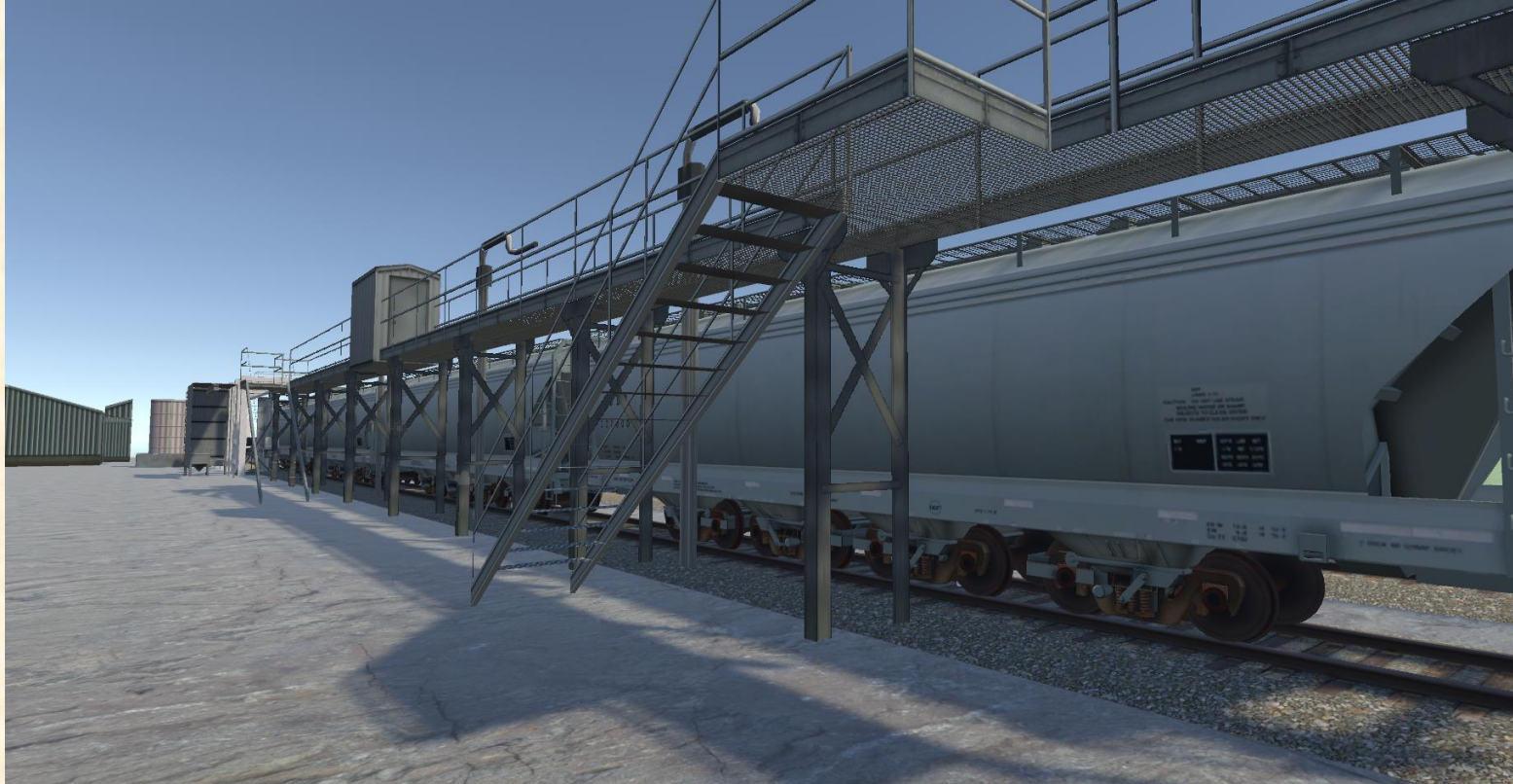
System Architecture



Team Dow
Project Plan Presentation

Team Dow Project Plan Presentation

Screen Mockup: The Railcar



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Team Dow Alpha Presentation

Team Dow Alpha Presentation

Loading Area



The Capstone Experience



Team Dow Alpha Presentation

Load Arm and Spreader

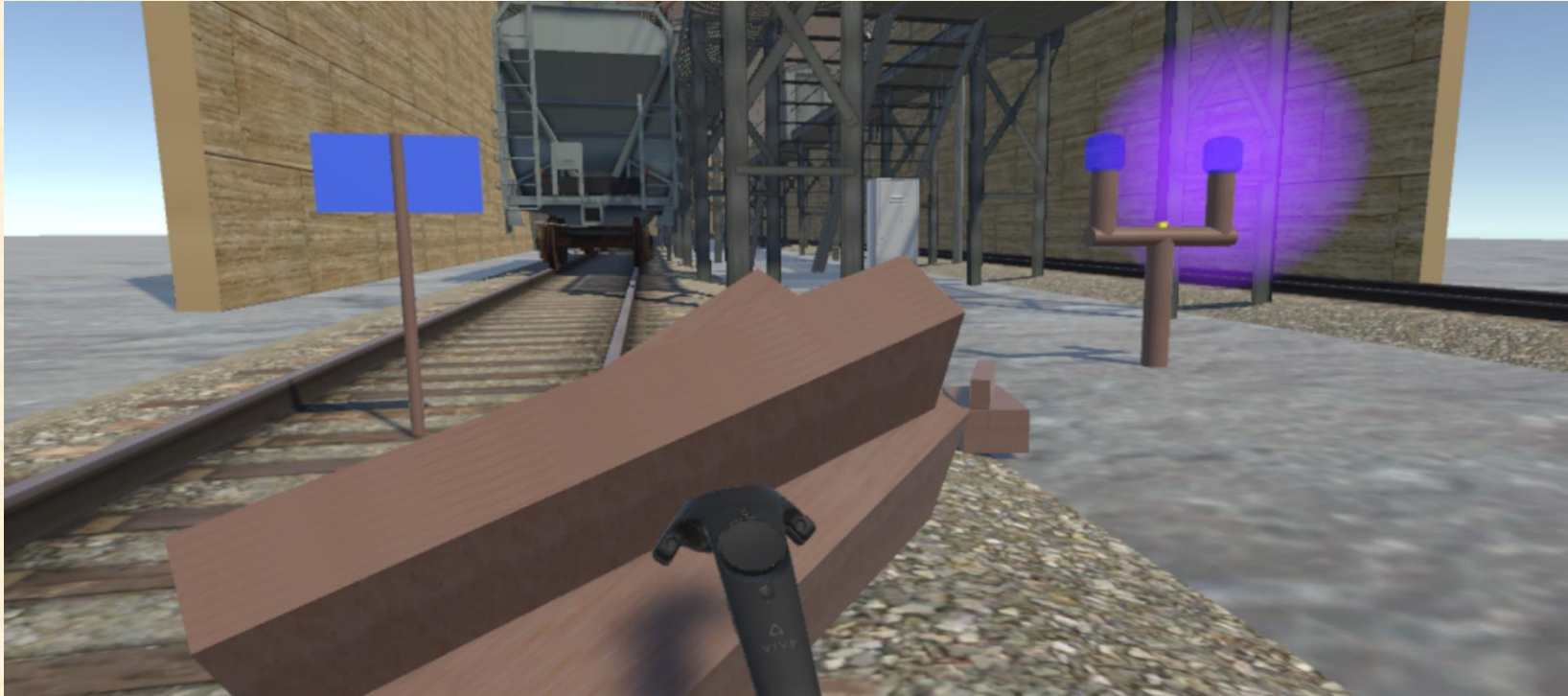




Team Dow Alpha Presentation

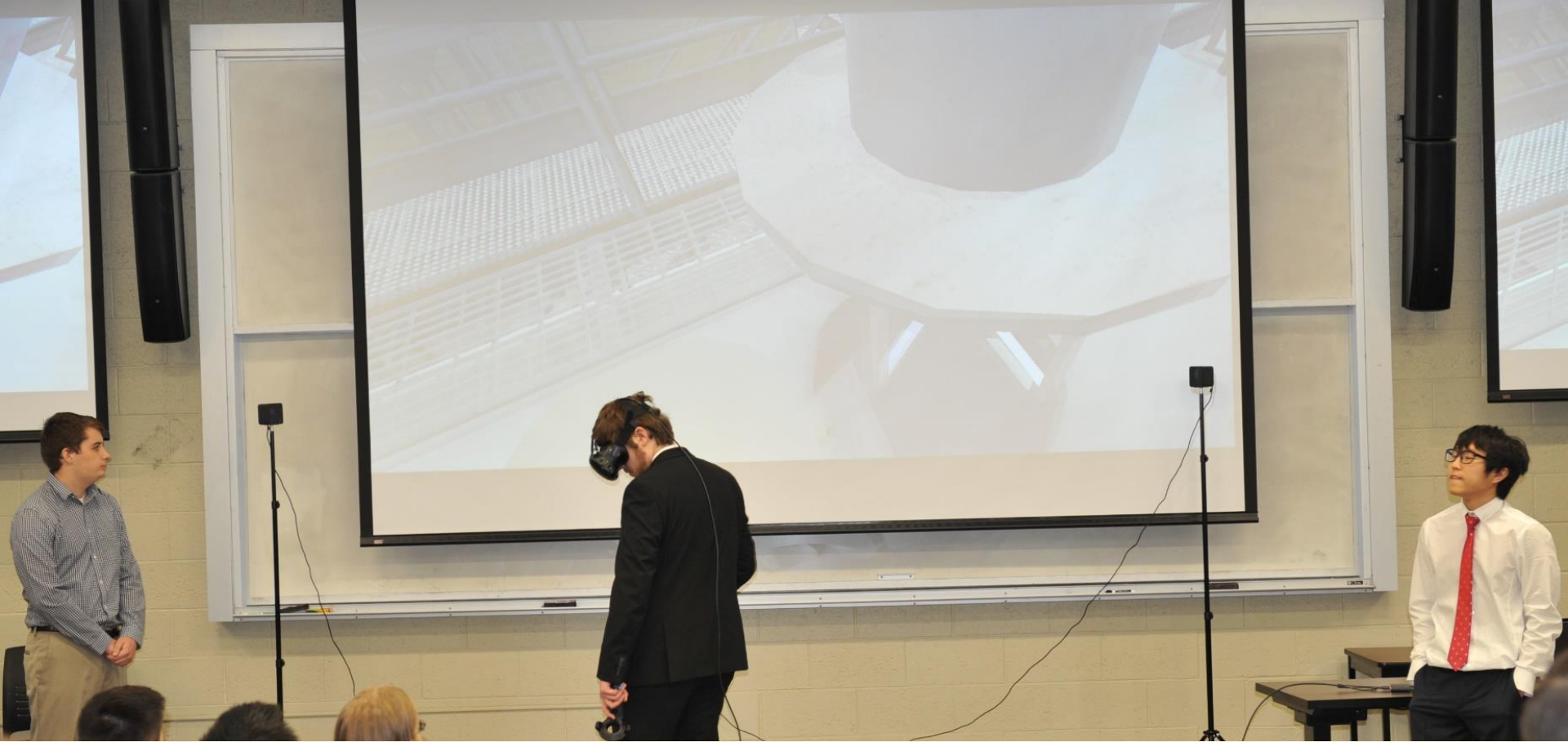
Team Dow Alpha Presentation

Derailer



The Capstone Experience





Team Dow Beta Presentation

Team Dow Beta Presentation

Load Arm and Spreader

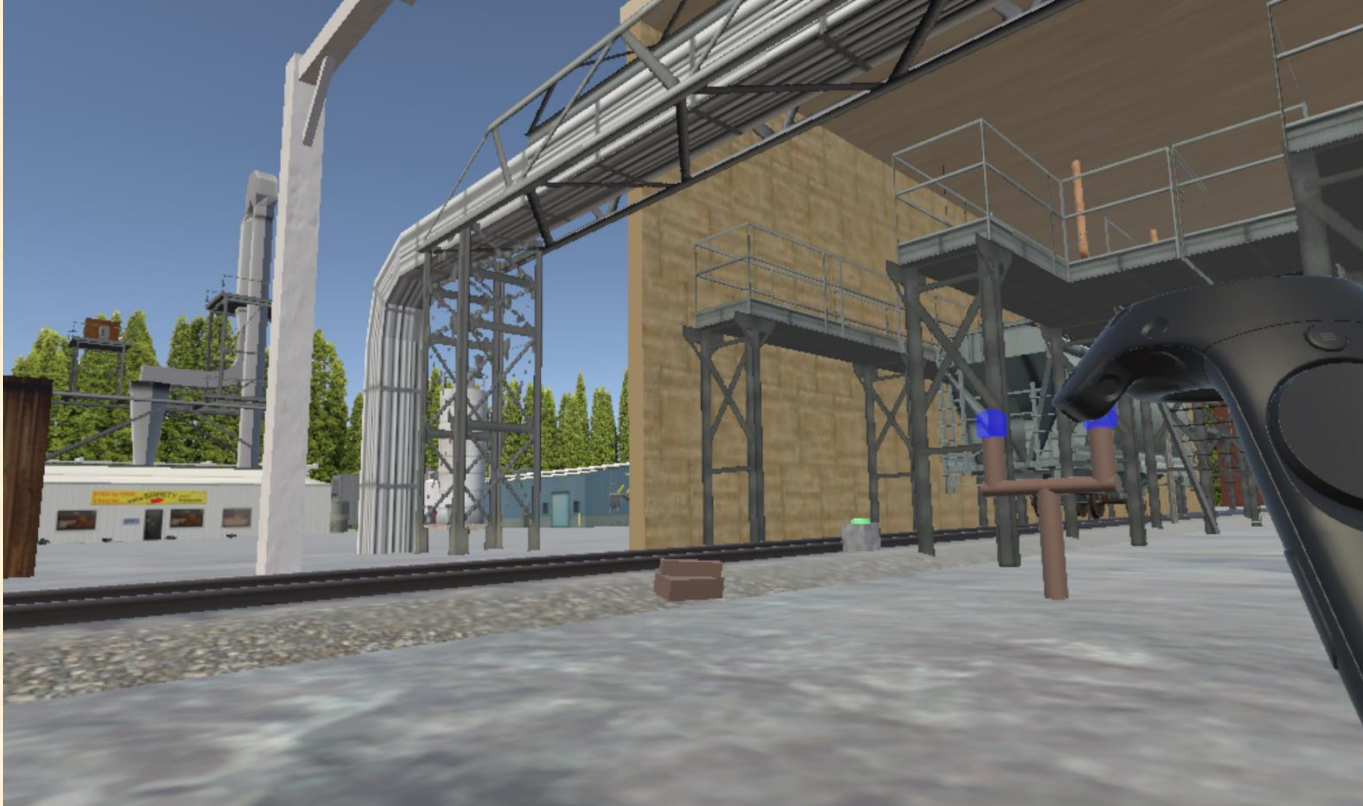


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Team Dow Beta Presentation

Derail



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Team Dow Beta Presentation

Incoming Railcar



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Team Dow @ Design Day

Matthew Smith, David Wang, Kyle White, John Yoo, JD Hayward

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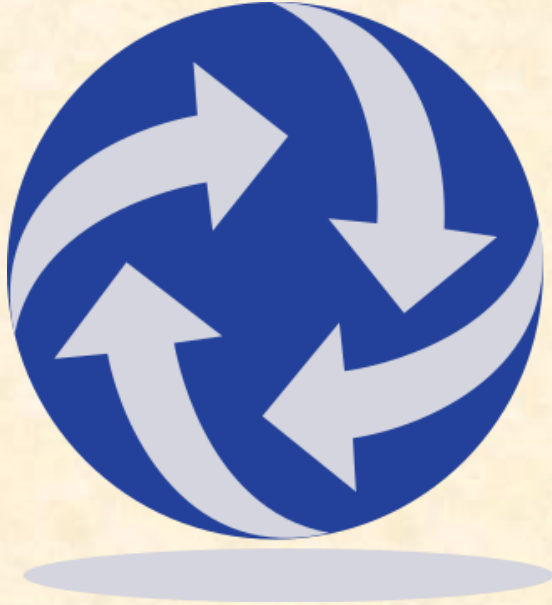
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Team DRIVEN-4

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Project Overview

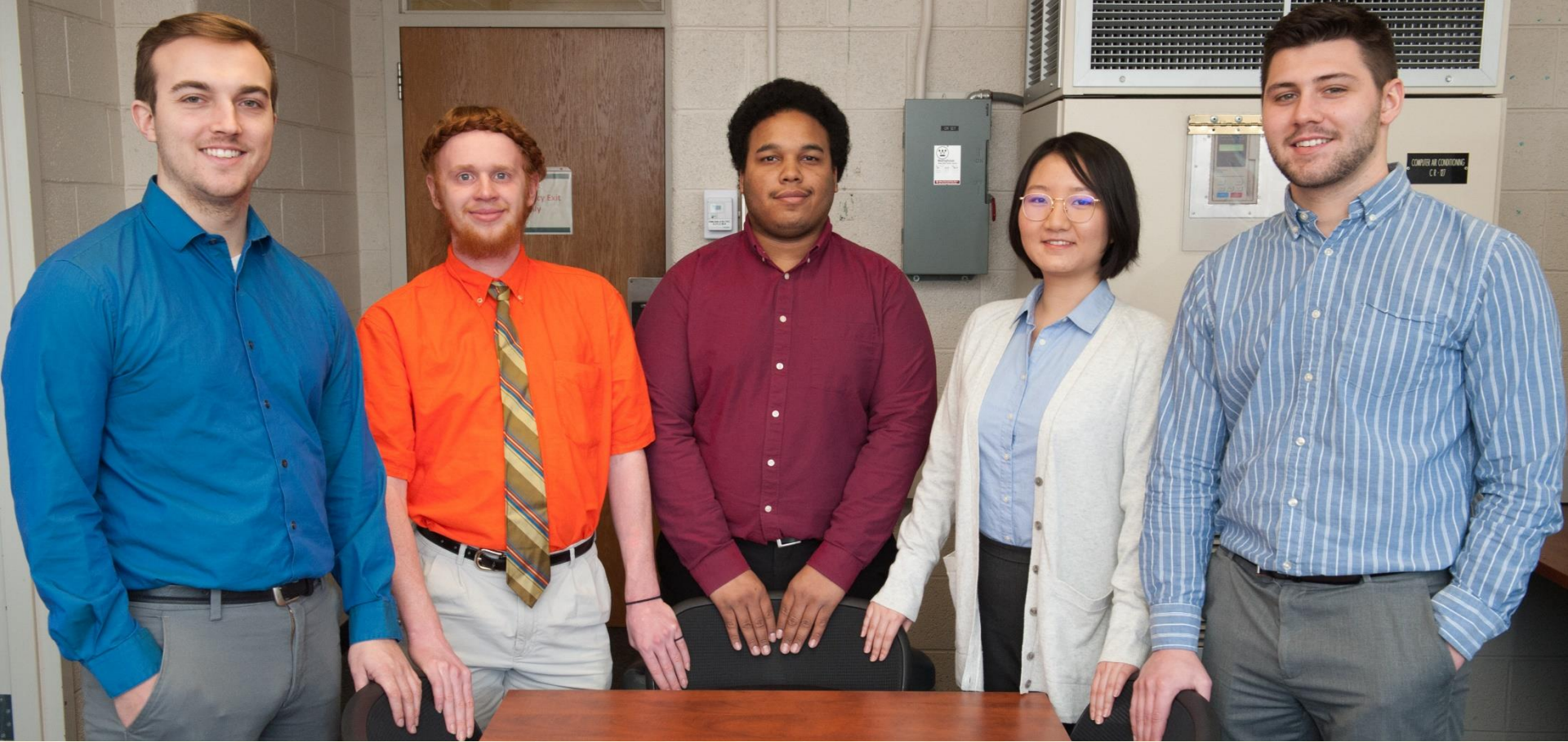
2020 Business in a Box

- Functionalities
 - Develop Futuristic Business Environment
 - Base on Internet of Things (IoT) Architecture
 - Target 2020 and Beyond
- Features
 - Model Five to Ten Components
 - Connect Components via WiFi
 - Validate and Verify Design via Simulation
 - Develop Manufacturing Processes and Artifacts
 - Demonstrate Capabilities for Collaboration and Integration
 - Utilize Various Product Development Software Systems
- Technologies
 - Computer Aided Design (CAD) / Siemens NX and PTC CREO
 - Product Lifecycle Management (PLM) / Siemens Teamcenter and PTC Windchill
 - Design Simulation Tools / PTC and Siemens
 - Factory Floor Simulation / Siemens
 - IoT Platforms / PTC ThingWorx and Siemens MindSphere
 - 3D Printing
 - Conveyor and Sight System
 - Augmented and Virtual Reality (VR/VR) / PTC Thingworx Studio



DRIVEN-4

St. Joseph, Michigan

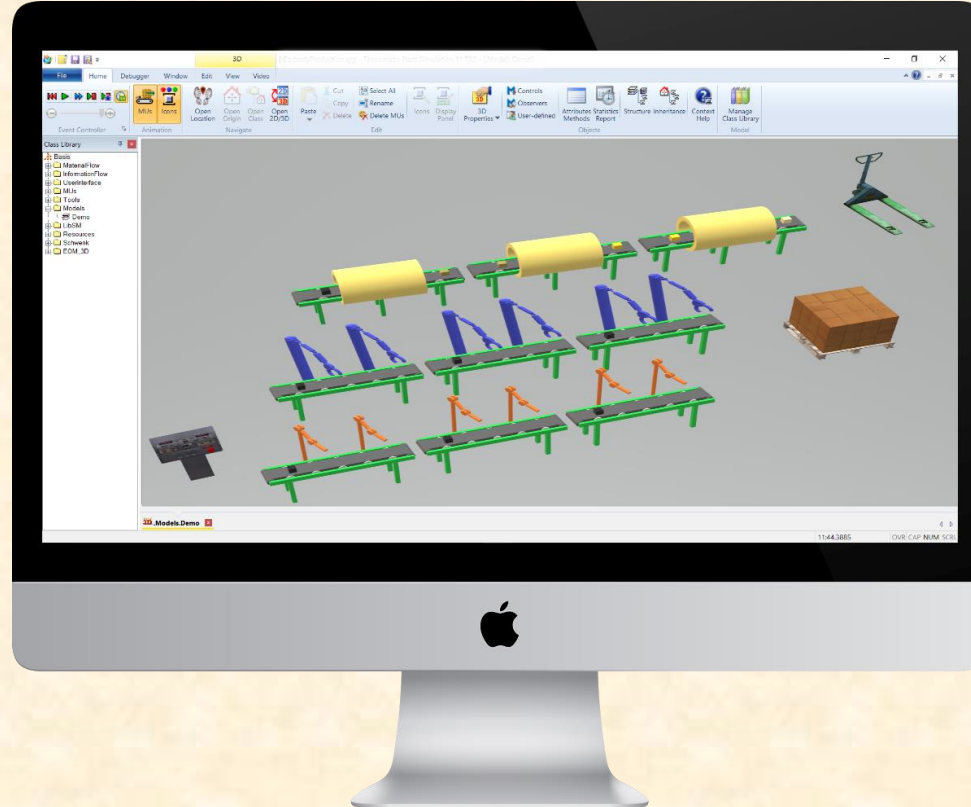


Team DRIVEN-4

Nick Mikelsavage, Brian Pinsky, Charles Carroll, Betty Wu, Sam Coffey

Team DRIVEN-4 Project Plan Presentation

Screen Mockup: Manufacturing

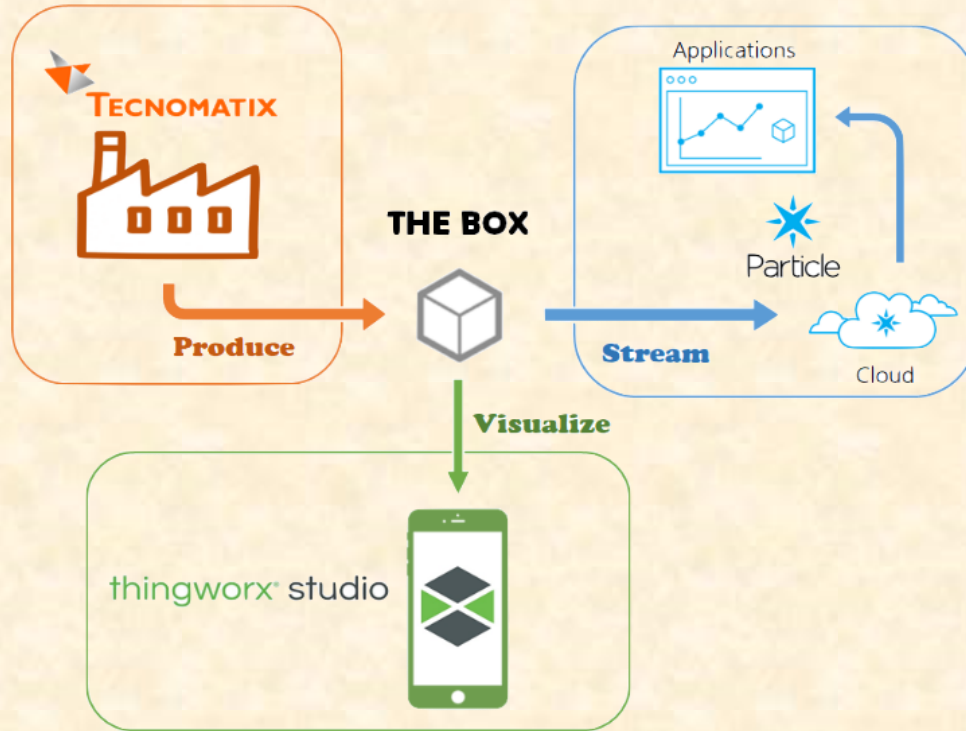




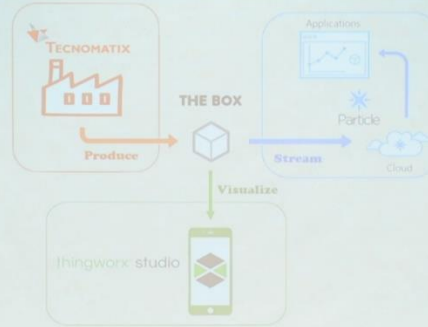
Team DRIVEN-4 Project Plan Presentation

Team DRIVEN-4 Project Plan Presentation

Architecture Diagram



System Architecture



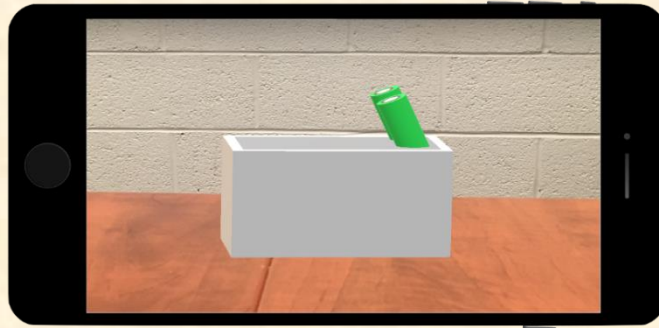
The Capstone Experience

Team DRIVEN-4 Project Plan Presentation

Team DRIVEN-4
Project Plan Presentation

Team DRIVEN-4 Project Plan Presentation

Screen Mockup: AR Service





Team DRIVEN-4 Alpha Presentation

Team DRIVEN-4 Alpha Presentation


Manufacturer's Web Portal Dashboard

Manufacturer Portal

Hi, Betty [LOG OUT](#)

[IT](#) [Engineering](#) [Marketing](#) [Service](#)

Location



Google Map data ©2018 Google

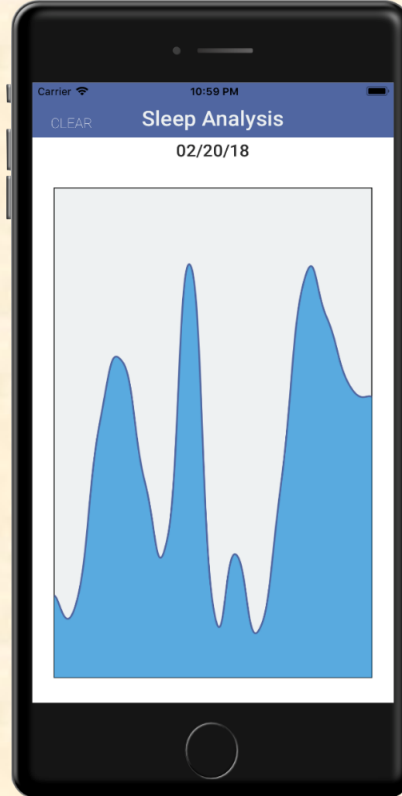
Users

#	First Name	Last Name
1	Charles	Carroll
2	Sam	Coffey
3	Nick	Mikelsavage
4	Brian	Pinskey
5	Betty	Wu
6	Fred	Bello

« 1 2 3 4 »

Team DRIVEN-4 Alpha Presentation

Customer Mobile Application

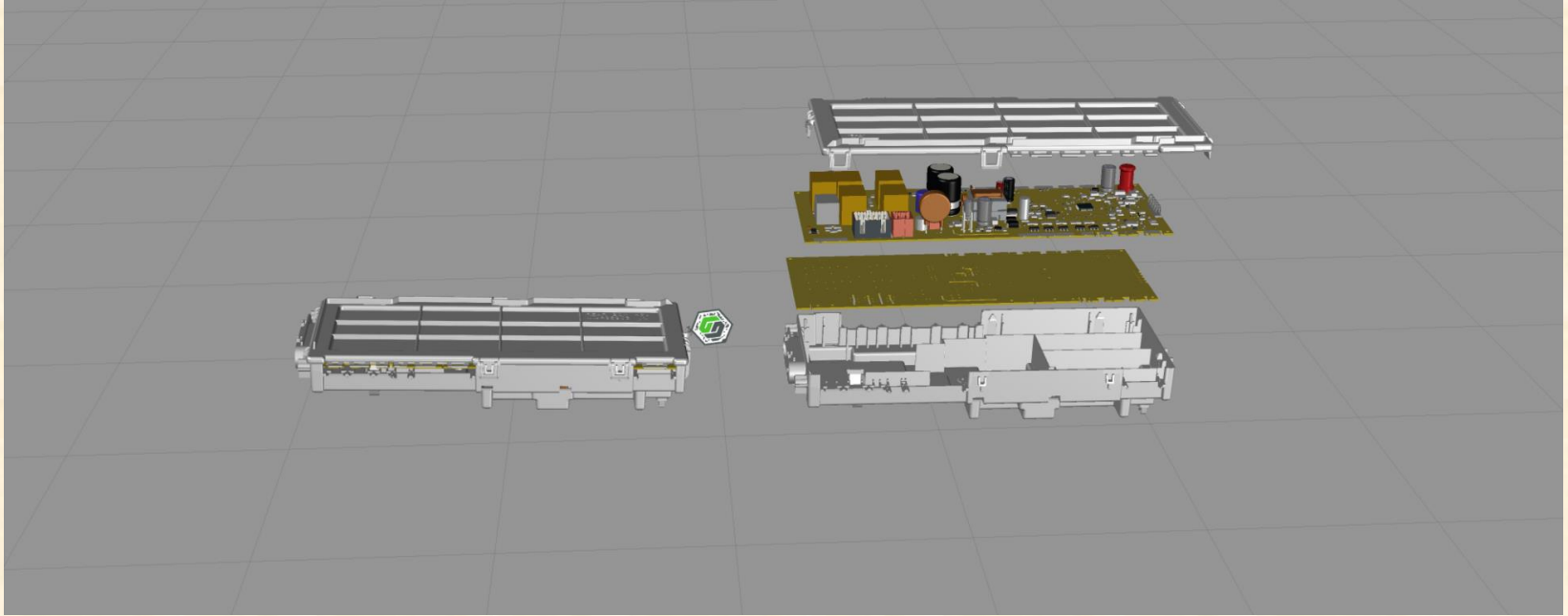




Team DRIVEN-4 Alpha Presentation

Team DRIVEN-4 Alpha Presentation

3D Model for Augmented Reality

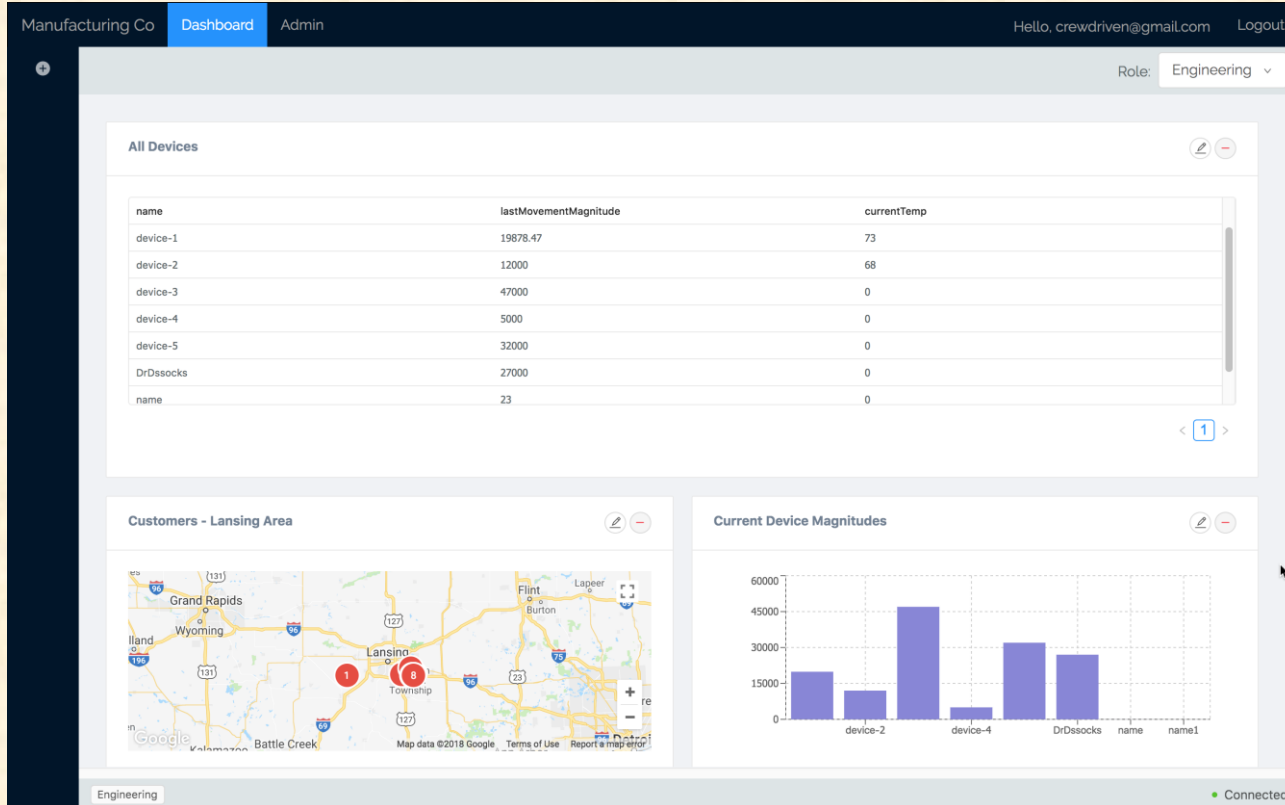




Team DRIVEN-4 Beta Presentation

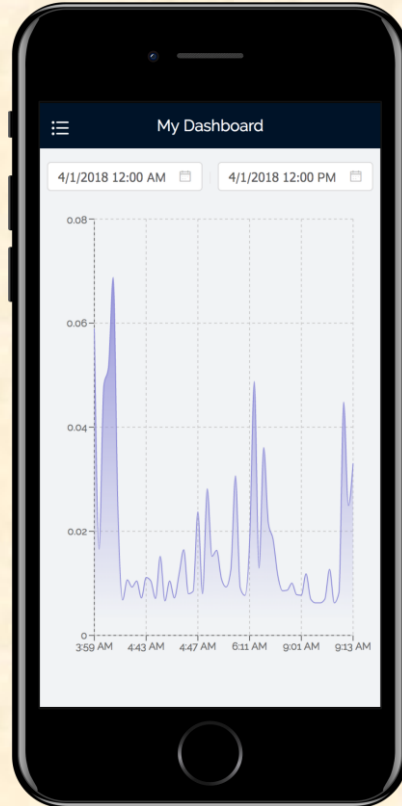
Team DRIVEN-4 Beta Presentation

Manufacturer Dashboard



Team DRIVEN-4 Beta Presentation

Customer View



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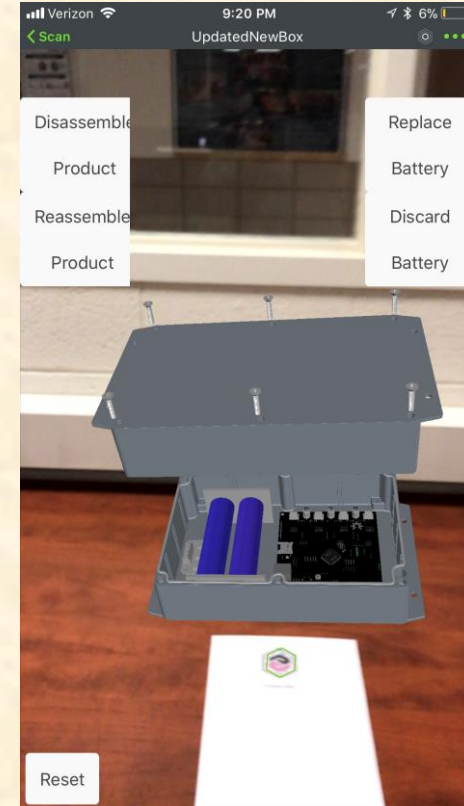
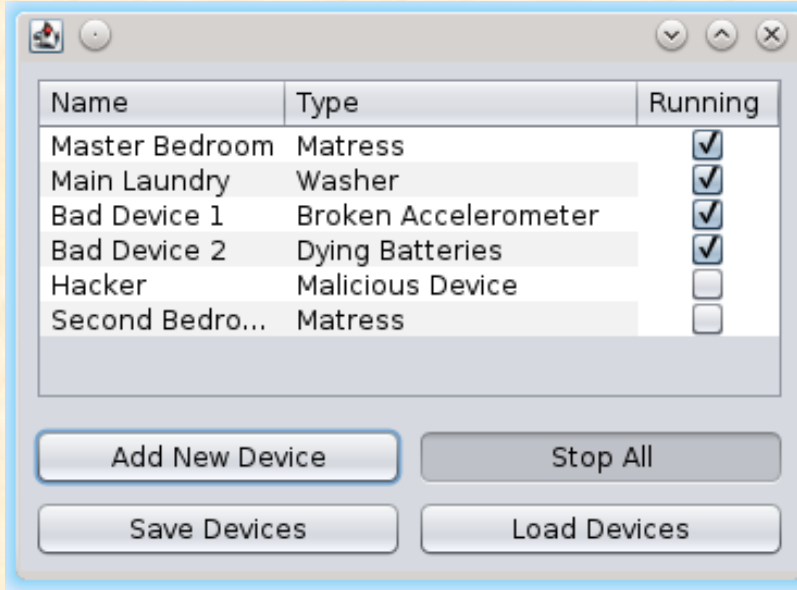


Team DRIVEN-4 Beta Presentation

Team DRIVEN-4

Beta Presentation

Device Simulator and AR





Team DRIVEN-4 @ Design Day

Nick Mikelsavage, Charles Carroll, Sam Coffey, Betty Wu, Brian Pinsky

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Team GM

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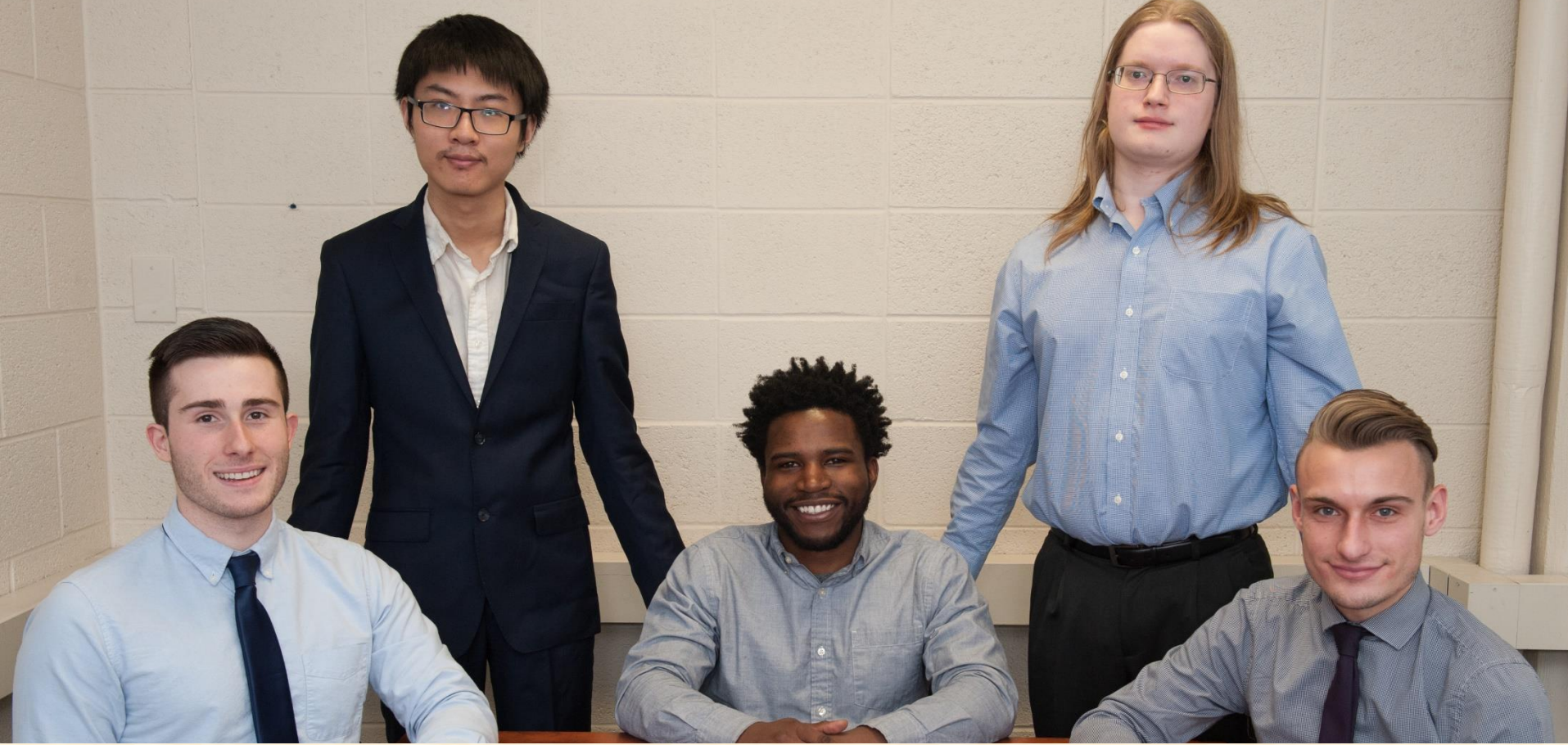
Project Overview

Plato: DevBot for Microsoft Teams

- Functionalities
 - Create and Manage Virtual Machines
 - Manage and Run Test Cases
 - Target GM Developers
- Features
 - Provide Single Unified Environment
 - Integrate with Microsoft Teams
 - Design Simplified User Controls
 - Use Natural Language Processing
- Technologies
 - CSS / HTML5 / JavaScript
 - Microsoft
 - .NET / C#
 - Bot Framework
 - Language Understanding Intelligent Services (LUIS)
 - Team Foundation Server
 - Teams / O365
 - Azure
 - Natural Language Processing (NLP)
 - RESTful Web Services and JSON



Detroit, Michigan

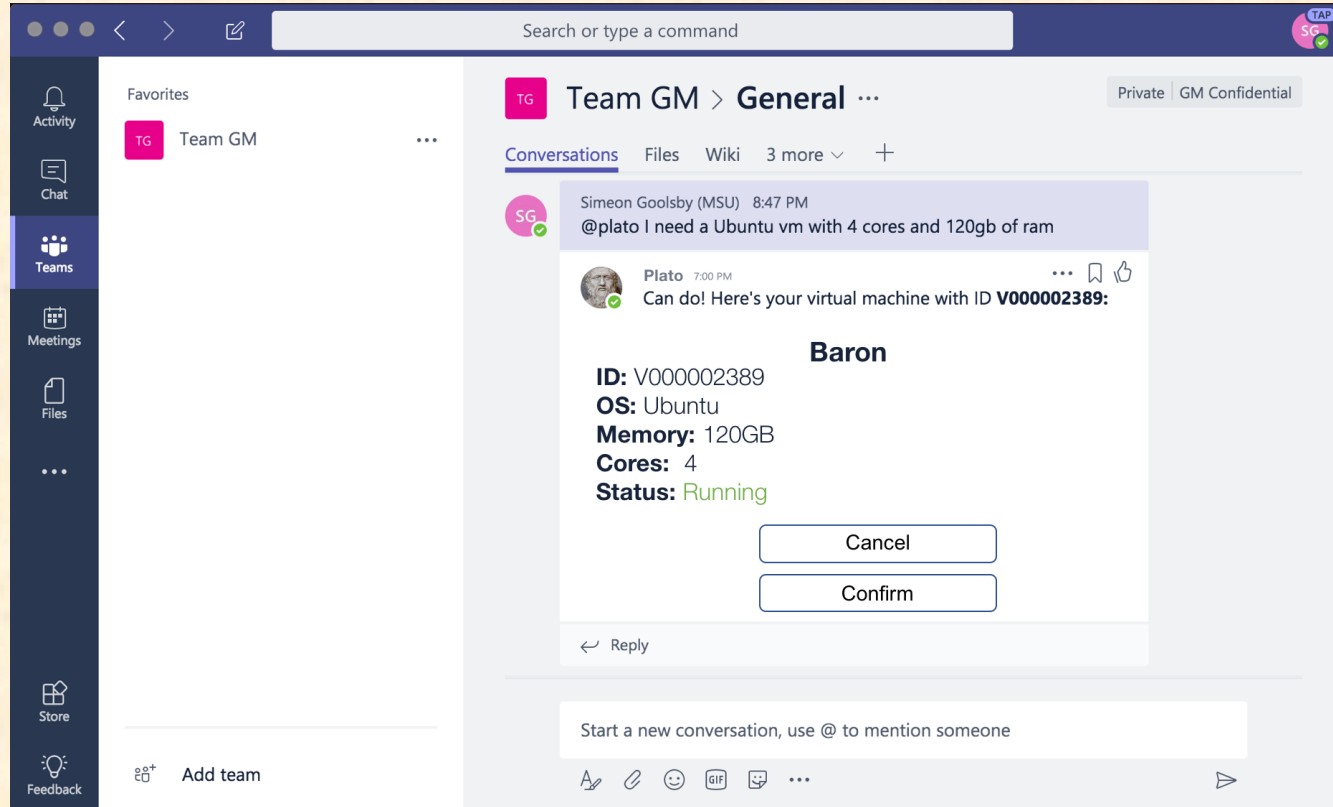


Team GM

Alex Lepird, Tao Tao, Simeon Goolsby, Matthew Eaton, Colin Coppersmith

Team GM Project Plan Presentation

Screen Mockup: VM Creation

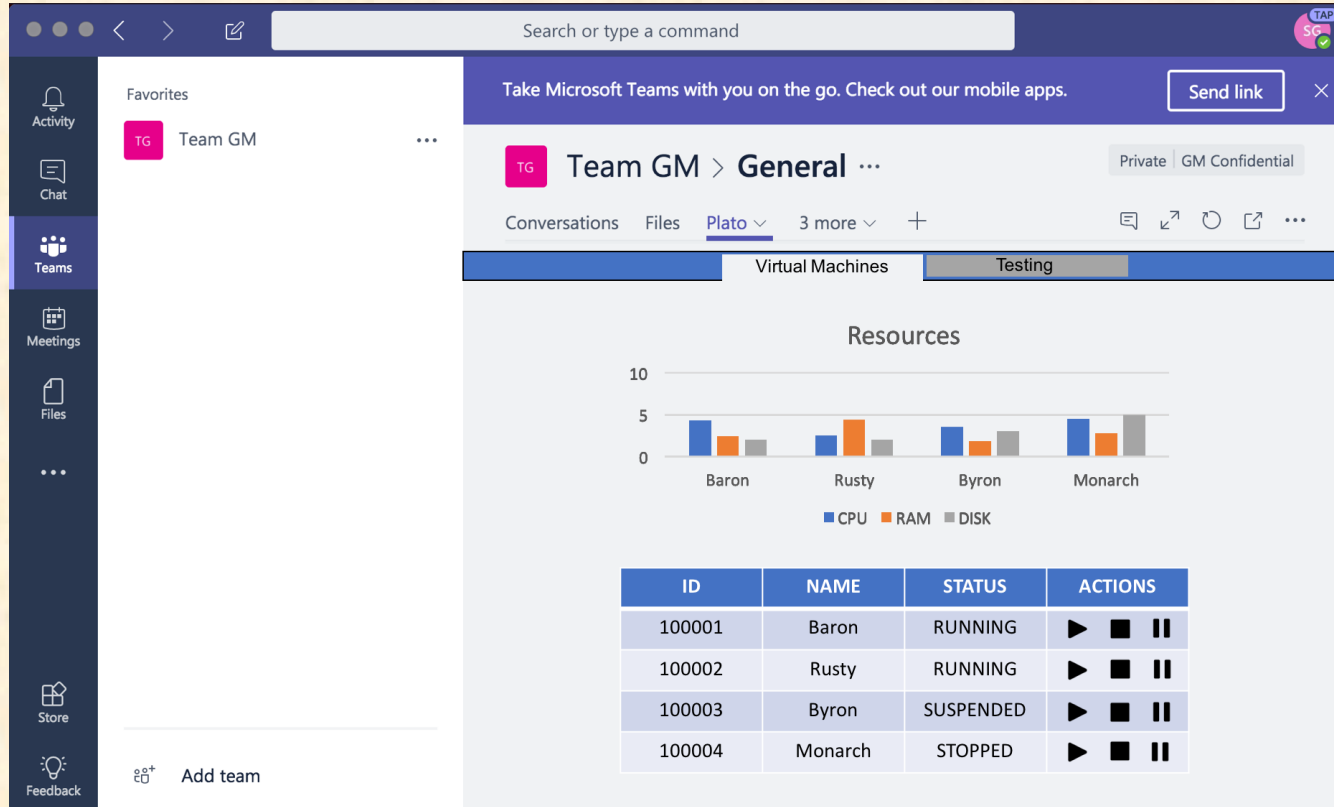




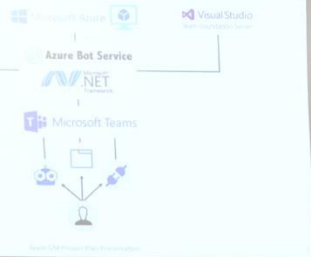
Team GM Project Plan Presentation

Team GM Project Plan Presentation

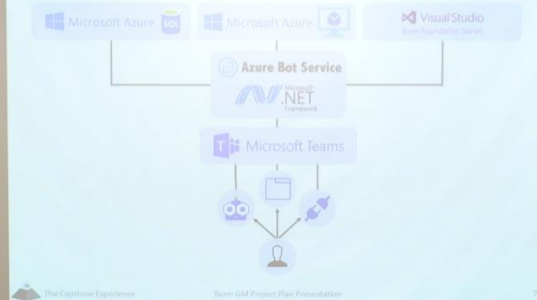
Architecture Diagram



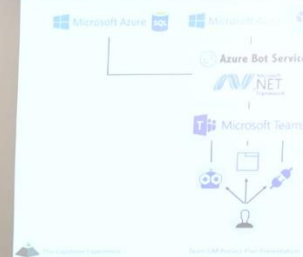
Architecture



System Architecture



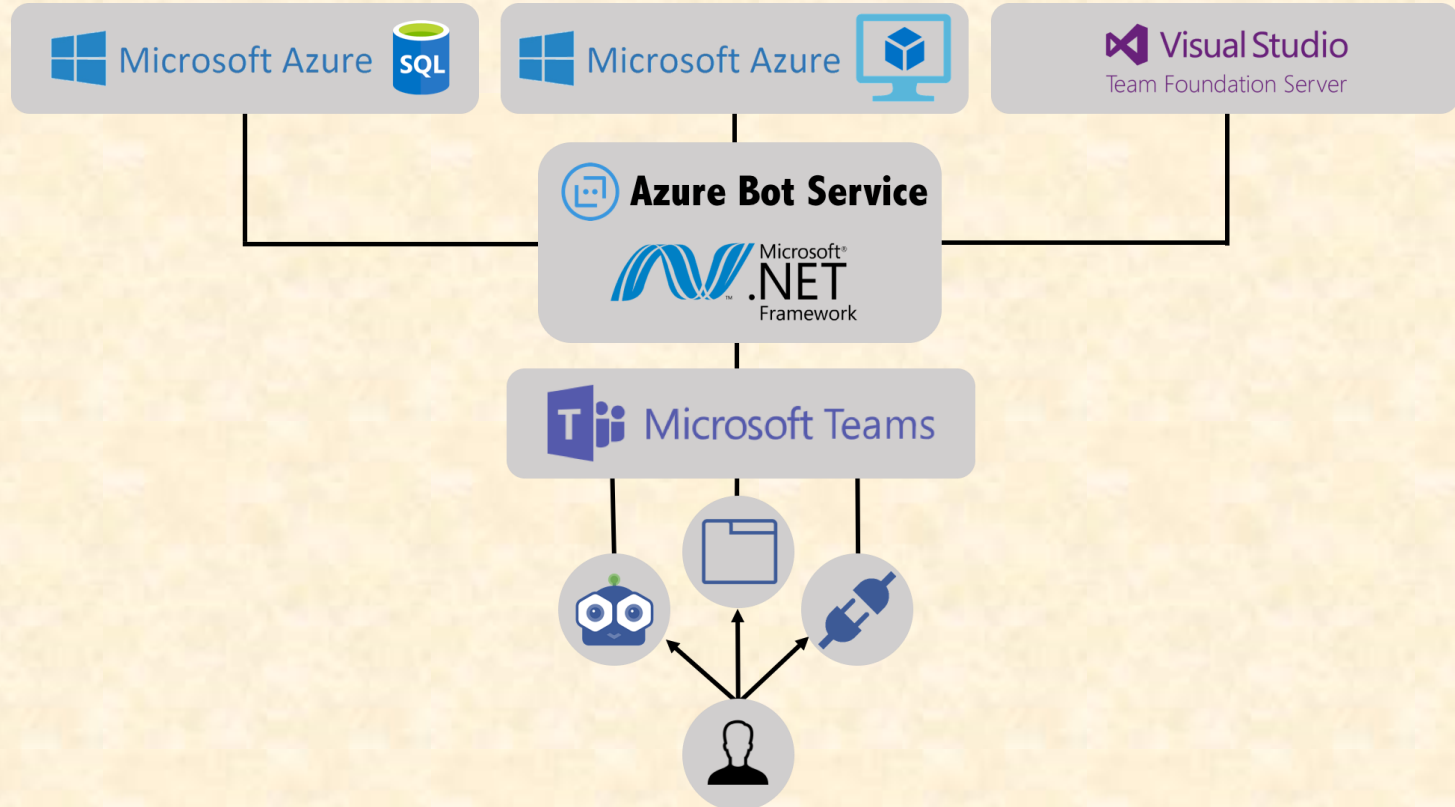
System Architecture



Team GM
Project Plan Presentation

Team GM Project Plan Presentation

Screen Mockup: Web Dashboard

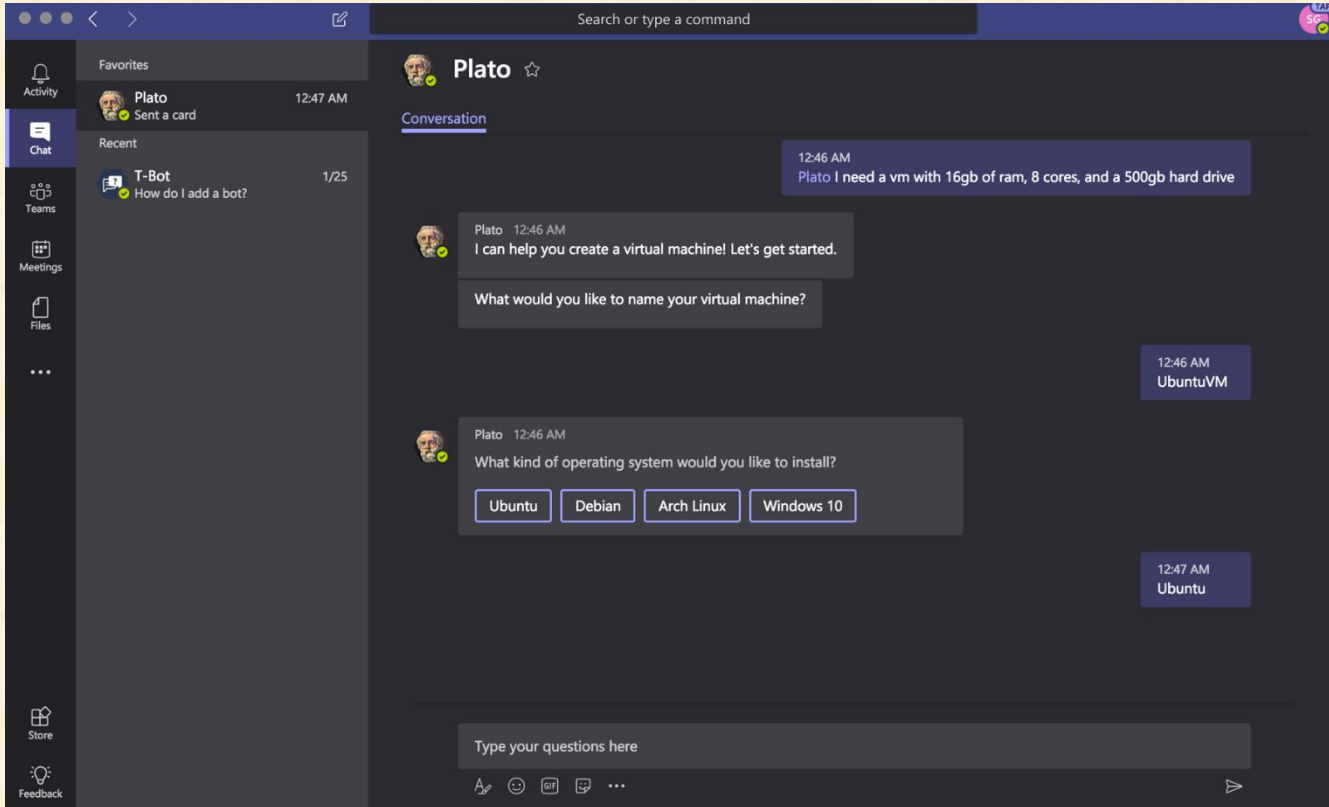




Team GM Alpha Presentation

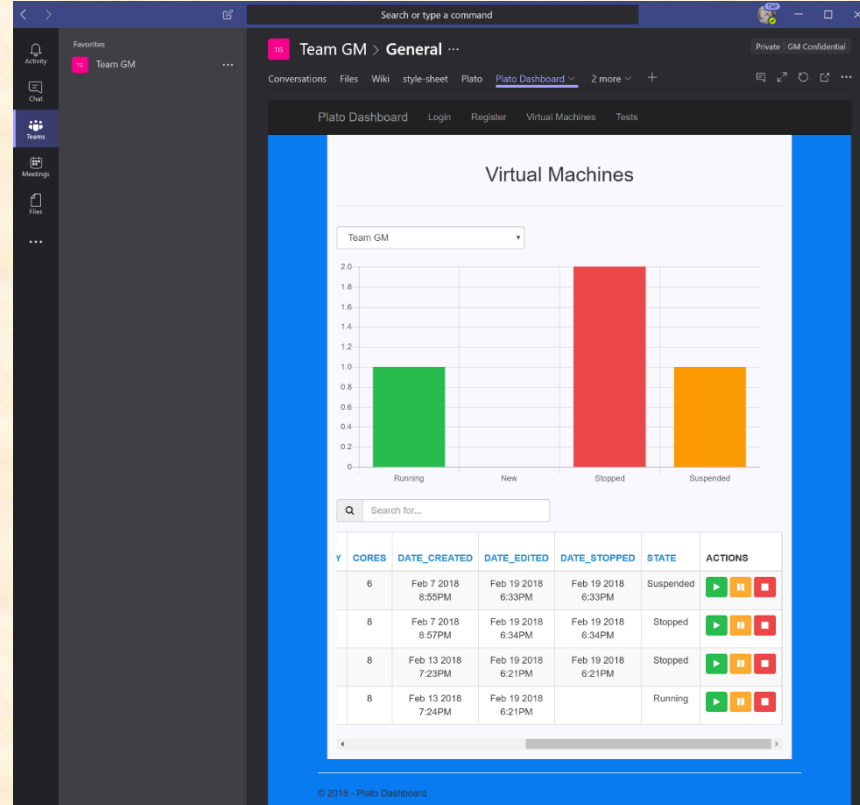
Team GM Alpha Presentation

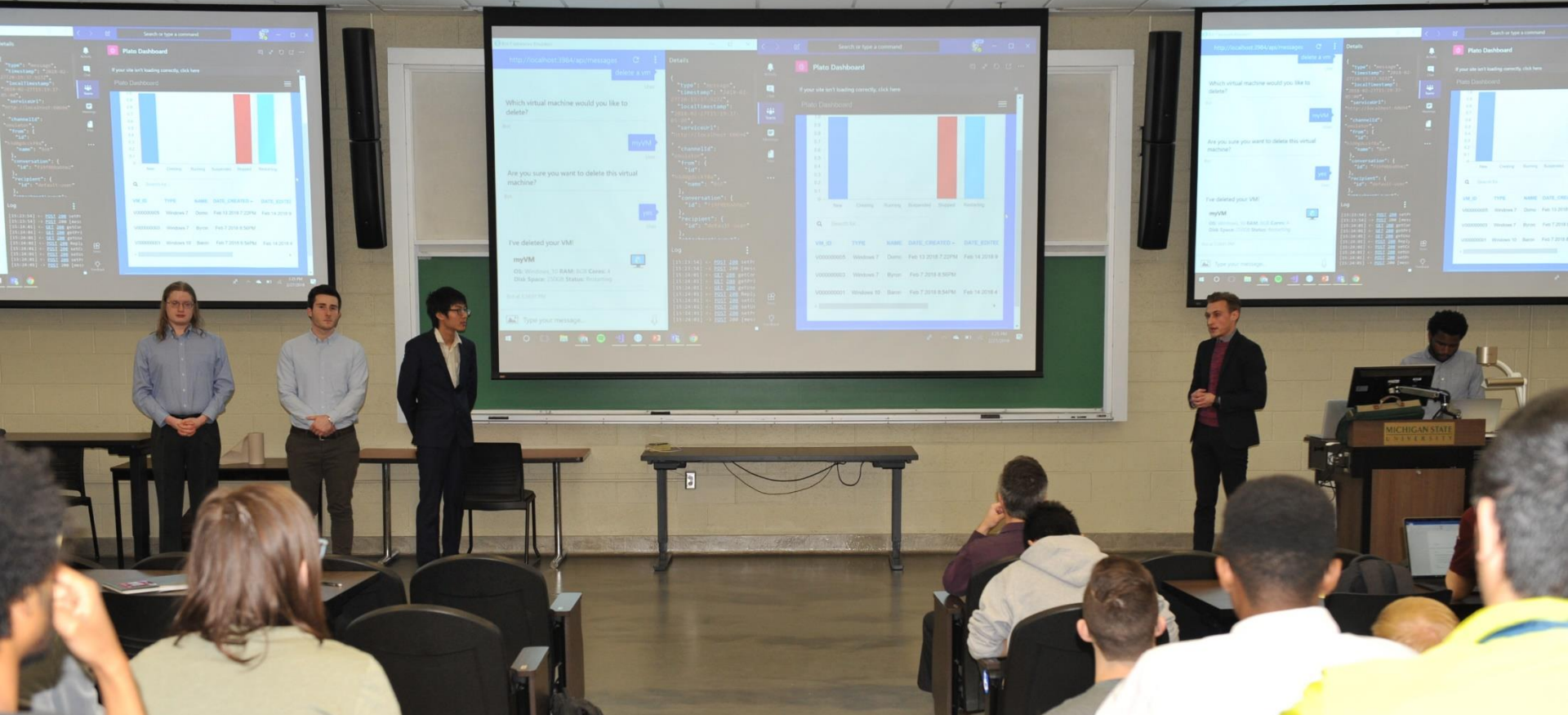
VM Creation Through Bot



Team GM Alpha Presentation

Virtual Machines Dashboard

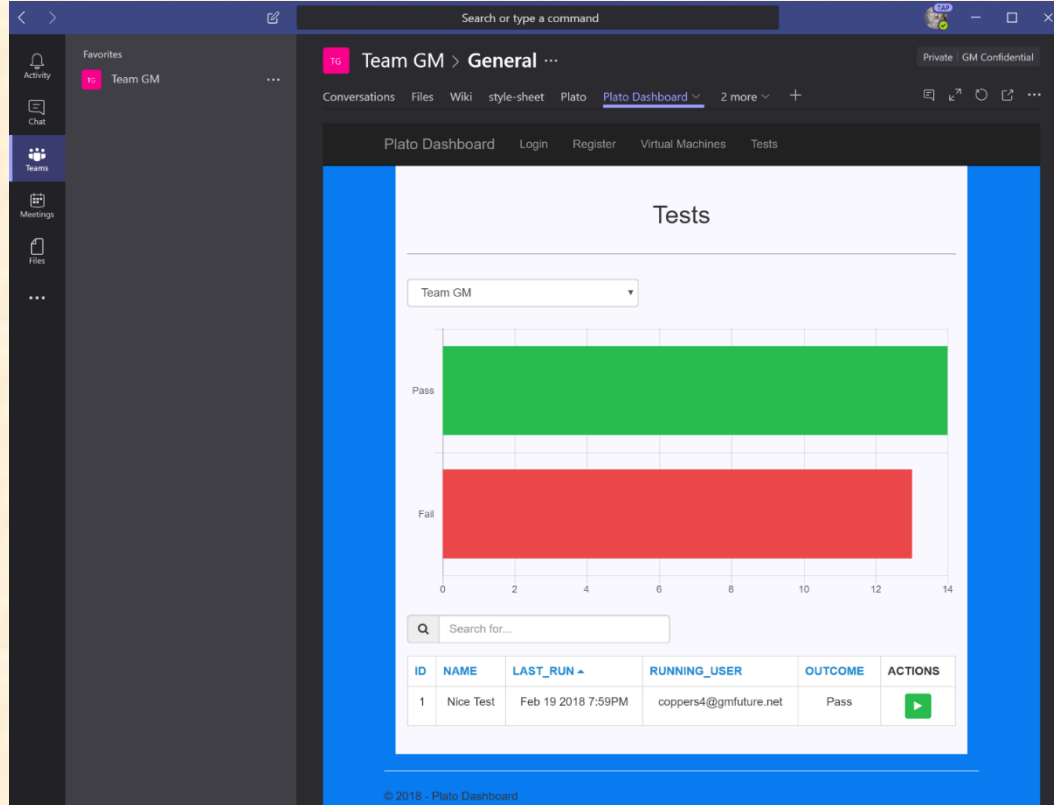




Team GM Alpha Presentation

Team GM Alpha Presentation

Information on Clicked Test

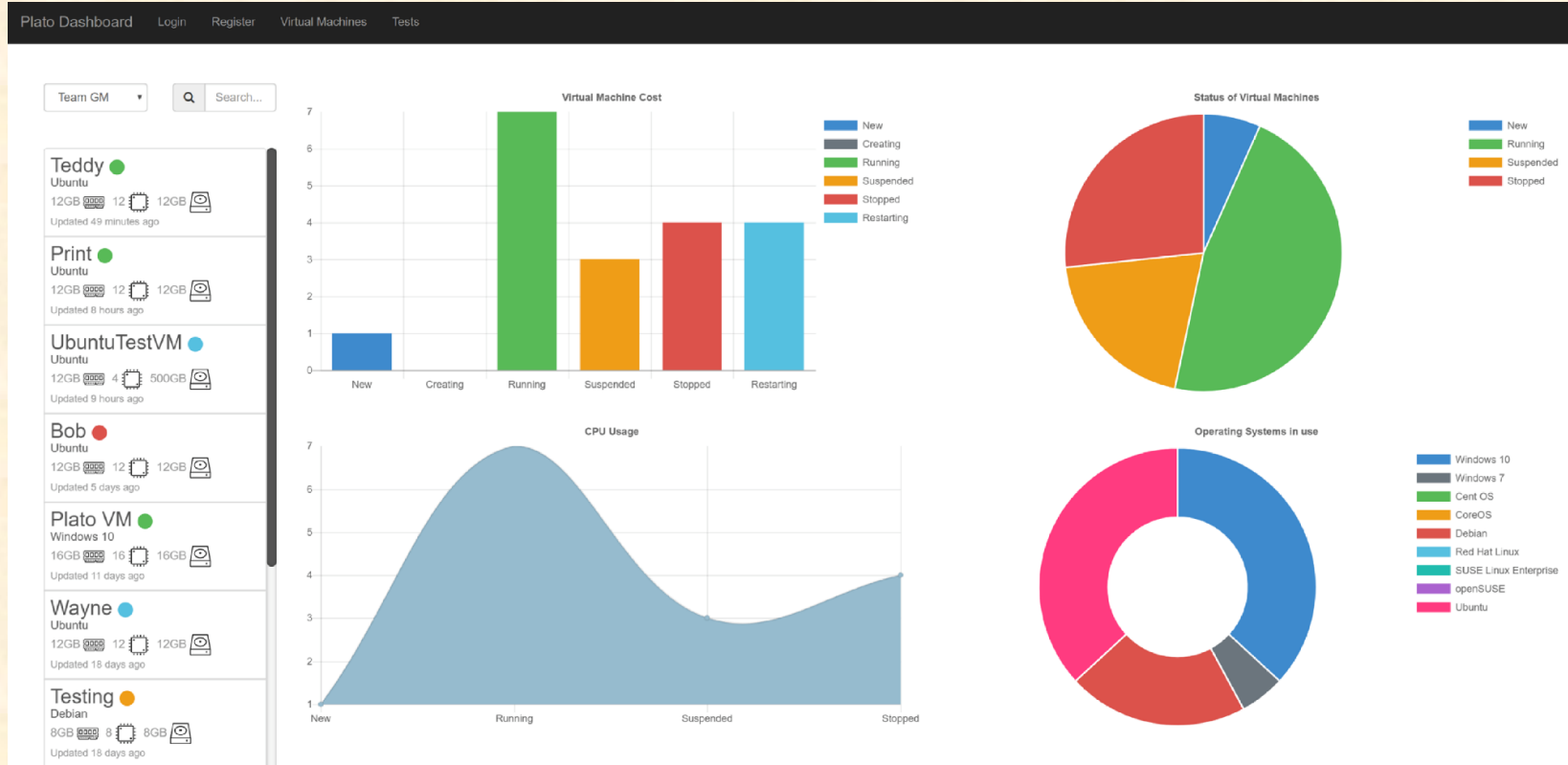




Team GM Beta Presentation

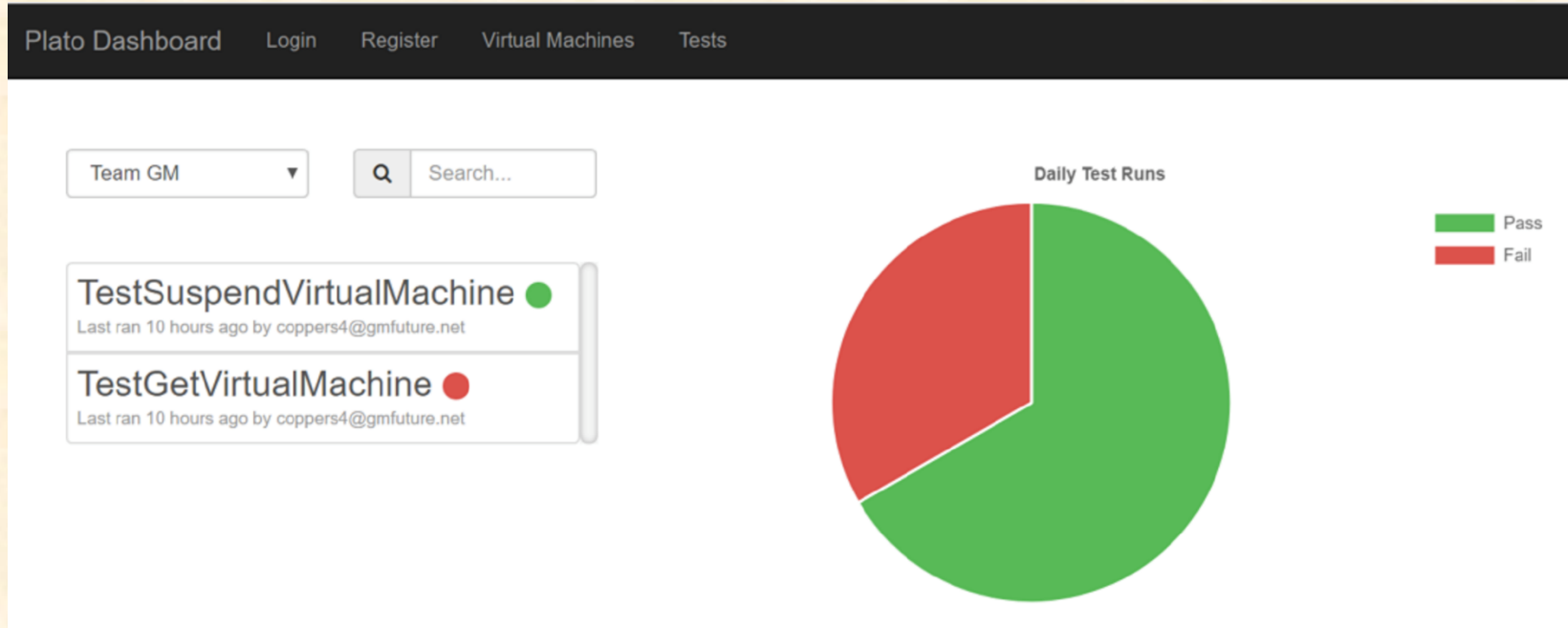
Team GM Beta Presentation

Virtual Machines Dashboard



Team GM Beta Presentation

Tests Dashboard

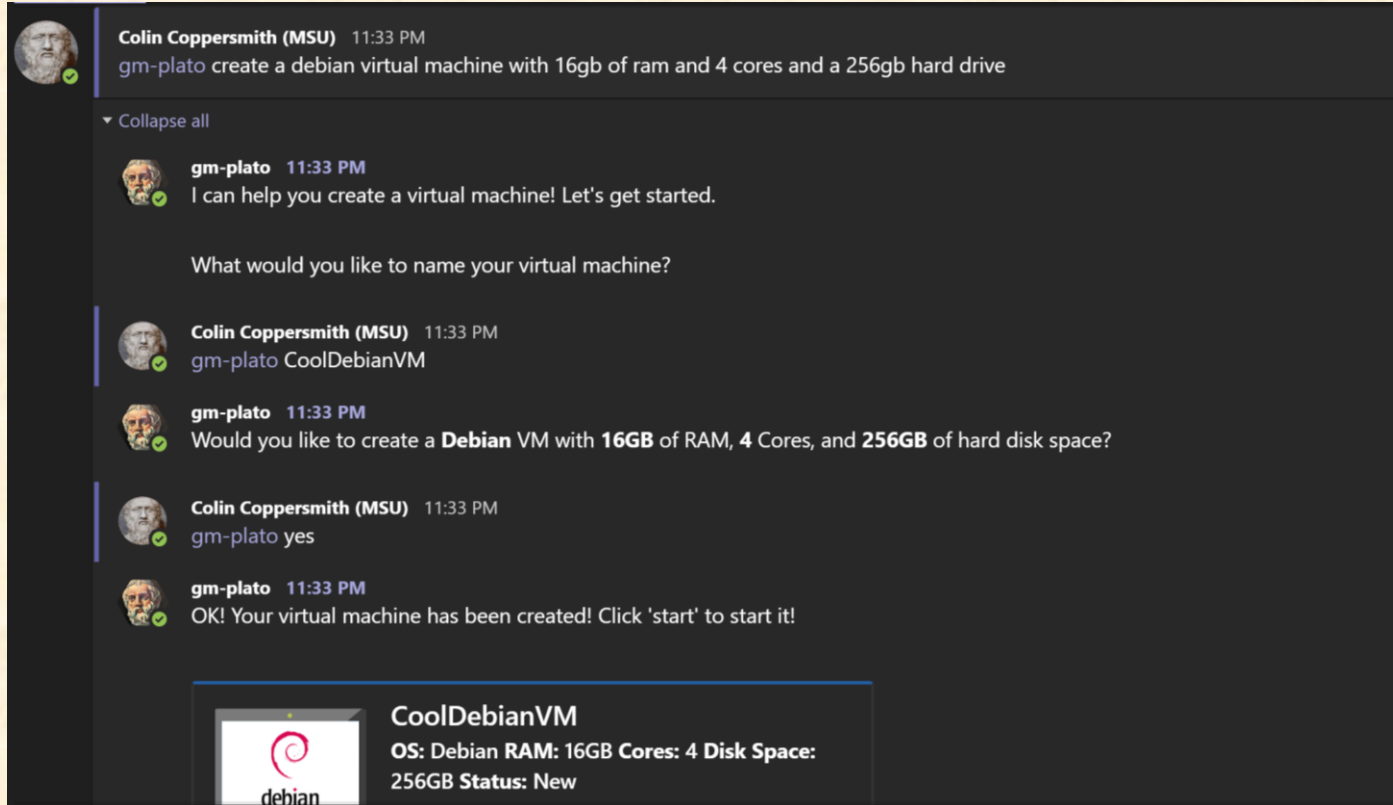





Team GM Beta Presentation


Team GM Beta Presentation

Creating a VM





 **Colin Coppersmith (MSU)** 11:33 PM
gm-plato create a debian virtual machine with 16gb of ram and 4 cores and a 256gb hard drive


▼ Collapse all


 **gm-plato** 11:33 PM
I can help you create a virtual machine! Let's get started.


What would you like to name your virtual machine?

 **Colin Coppersmith (MSU)** 11:33 PM
gm-plato CoolDebianVM

 **gm-plato** 11:33 PM
Would you like to create a **Debian** VM with **16GB** of RAM, **4** Cores, and **256GB** of hard disk space?

 **Colin Coppersmith (MSU)** 11:33 PM
gm-plato yes

 **gm-plato** 11:33 PM
OK! Your virtual machine has been created! Click 'start' to start it!

**CoolDebianVM**
OS: Debian RAM: 16GB Cores: 4 Disk Space:
256GB Status: New



Team GM @ Design Day

Tao Tao, Simeon Goolsby, Alex Lepird, Matthew Eaton, Colin Coppersmith

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Herman Miller

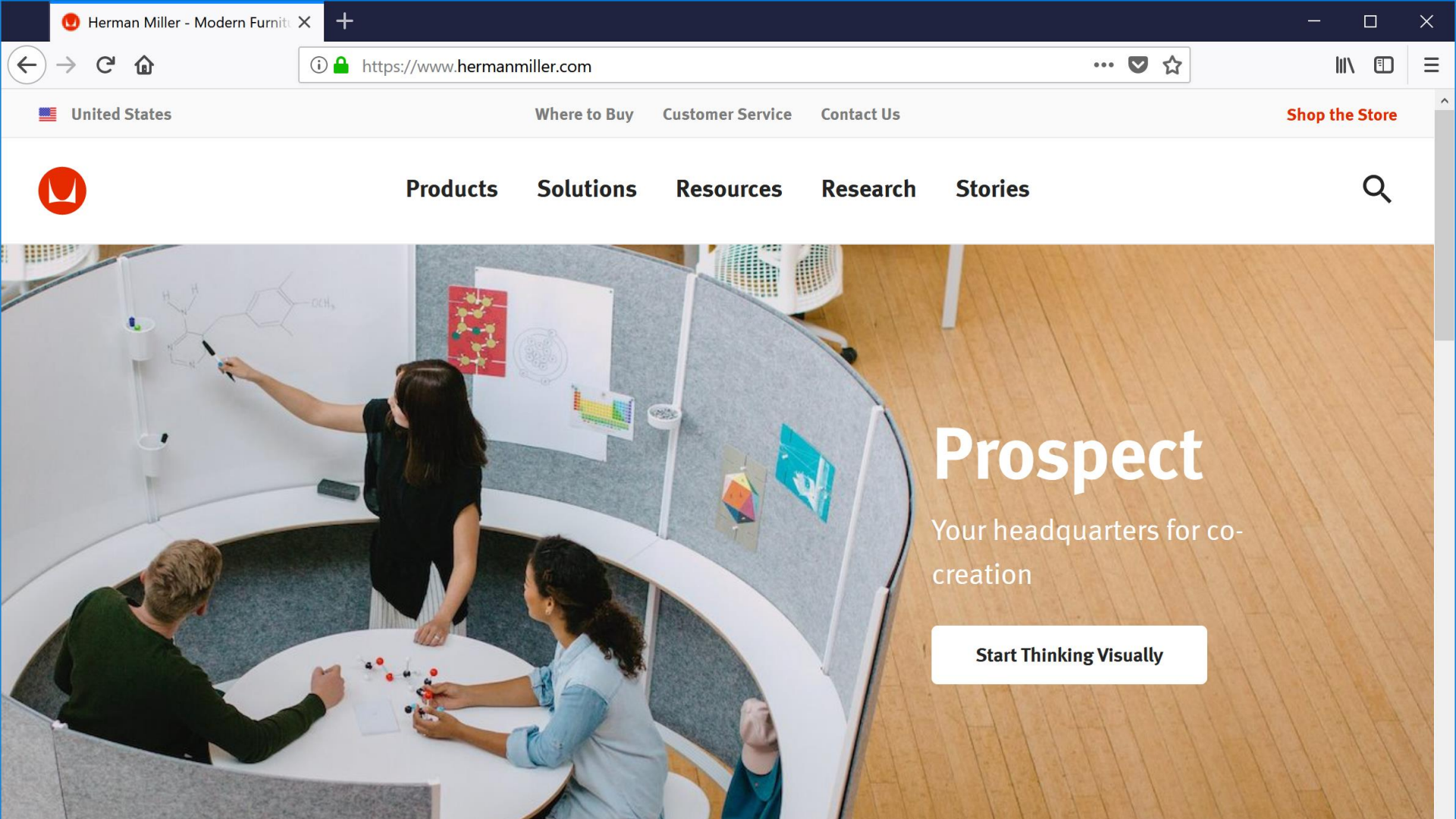
Department of Computer Science and Engineering
Michigan State University
Spring 2018



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



HermanMiller



Products

Solutions

Resources

Research

Stories



Prospect

Your headquarters for co-creation

Start Thinking Visually

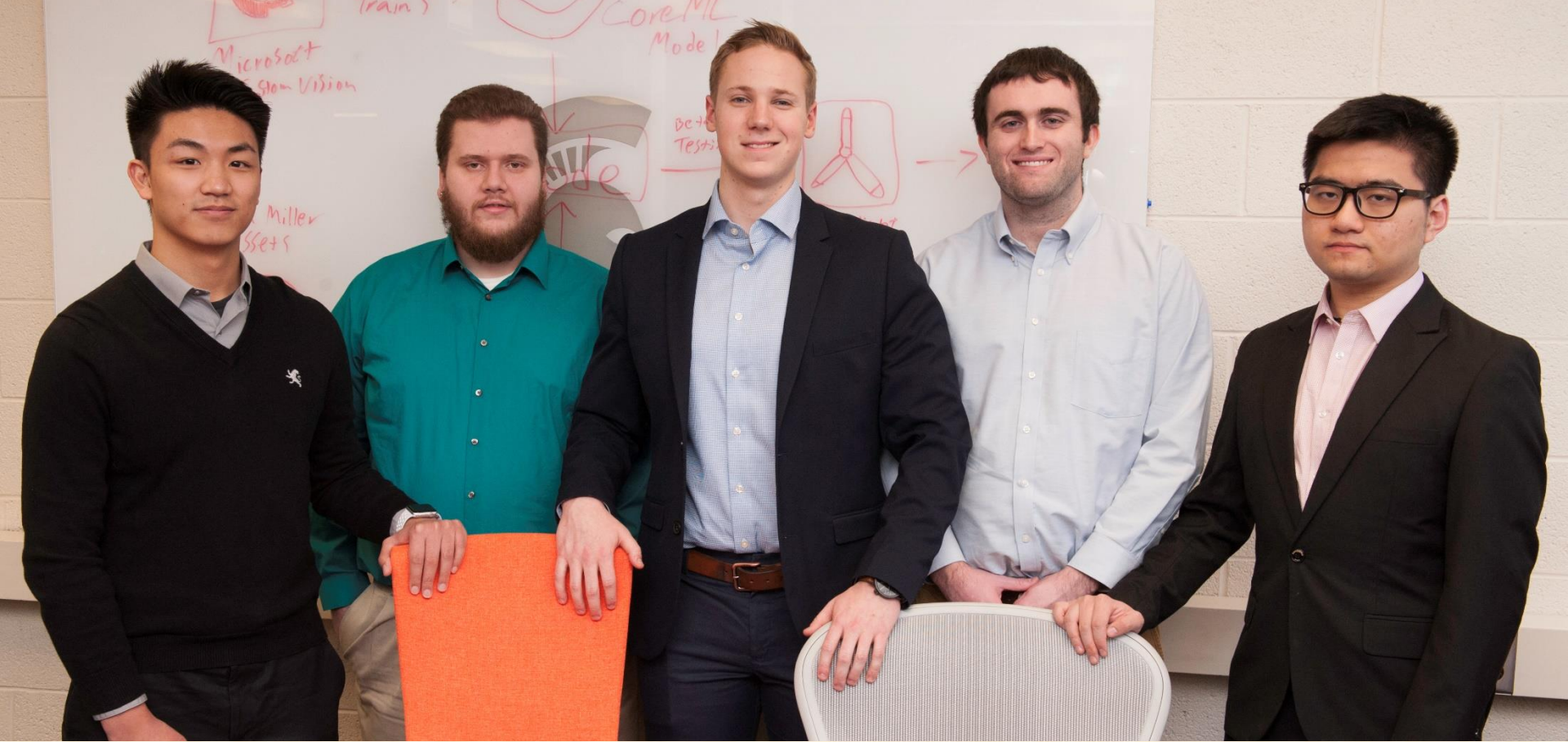
Team Herman Miller Project Overview

Adjust: Augmented Reality Chair Adjustment

- Functionalities
 - Simplify Adjusting High Performance Office Chair
 - Ergonomic
 - “Developer Chair”
 - Use Chatbot to Explain How
- Features
 - Automatically Identify Chair via Photo
 - Provide Step-by-Step Instructions
 - Customize to User’s Ergonomic Needs
 - Support Apple iOS and Google Android Devices
 - Leverage Facebook Messenger
- Technologies
 - Apple iOS / Swift
 - Google Android / Java
 - Image Processing and Recognition
 - Natural Language Processing (NLP)
 - Facebook Messenger



HermanMiller
Zeeland, Michigan



Team Herman Miller

Kevin Gaban, Mike Bremiller, Kyle Kinsey, Jacob Weber, Han Huang

Team Herman Miller Project Plan Presentation

Screen Mockup: Identifying Chair



Chair



Screen Mockup: Identifying Chair



The Capstone Experience

Team Herman Miller Project Plan
Presentation

Screen

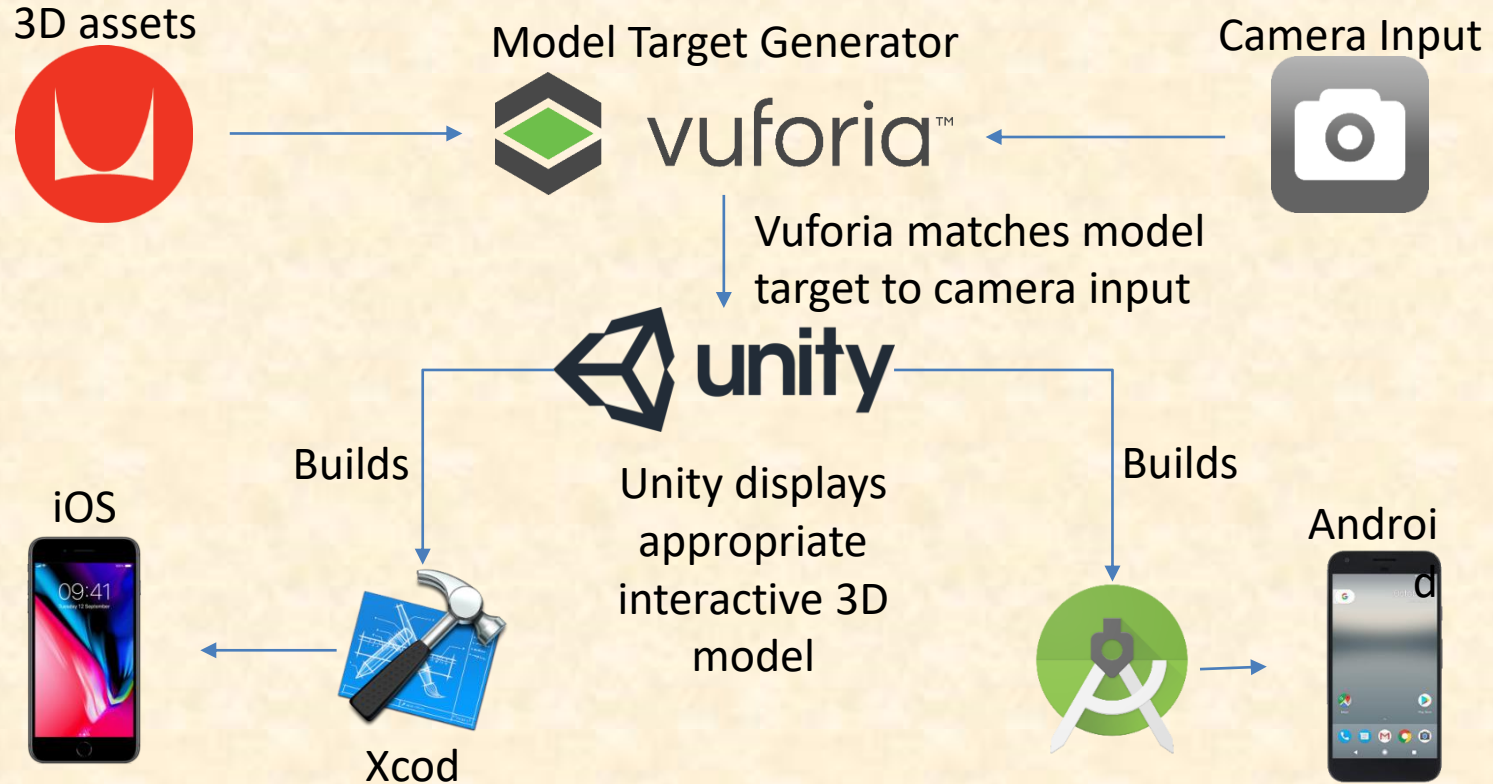


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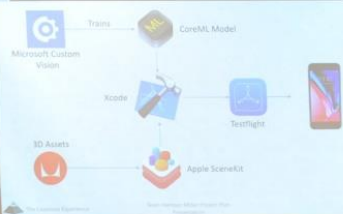
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Team Herman Miller Project Plan Presentation

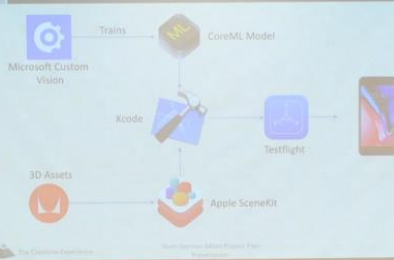
Architecture Diagram



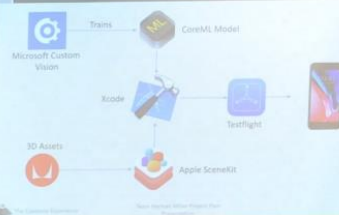
System Architecture



System Architecture



System Architecture



Team Herman Miller
Project Plan Presentation

Team Herman Miller Project Plan Presentation

Screen Mockup: Interactive 3D Model





Team Herman Miller Alpha Presentation

Team Herman Miller Alpha Presentation

Interactive Model

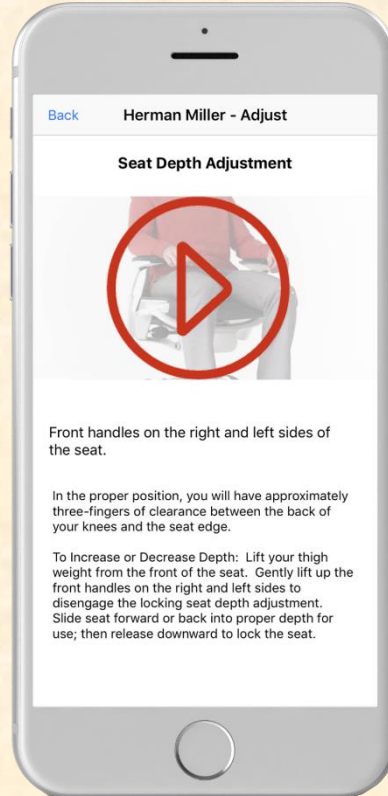


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Adjustment Instructions

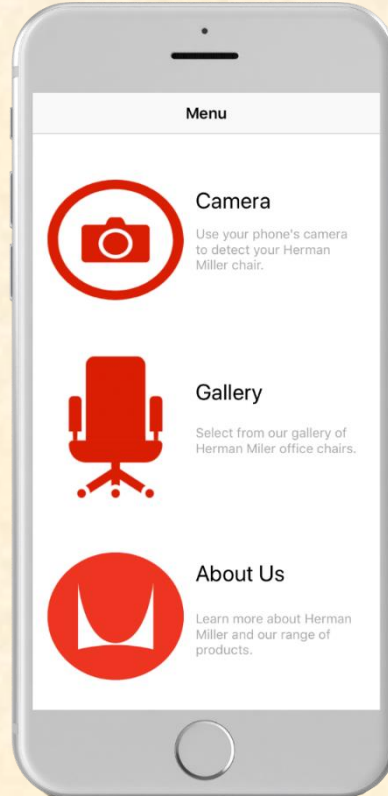




Team Herman Miller Alpha Presentation

Team Herman Miller Alpha Presentation

Main Menu

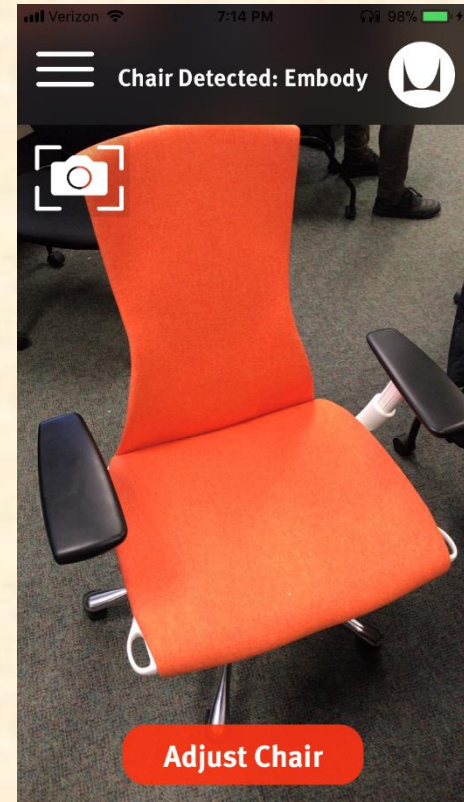




Team Herman Miller Beta Presentation

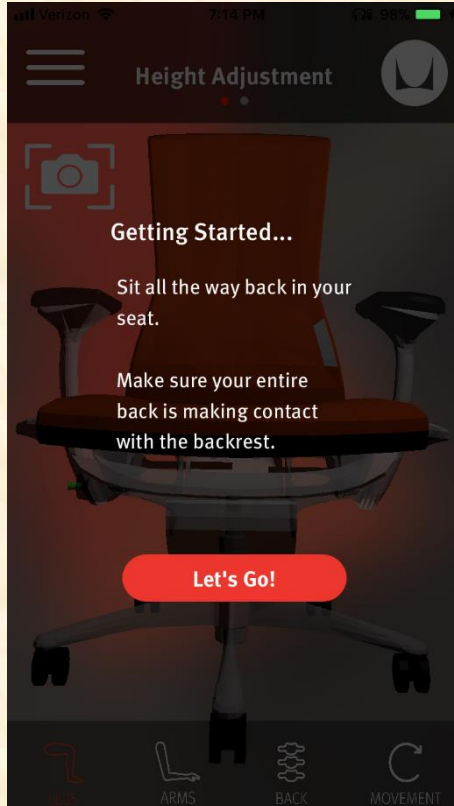
Team Herman Miller Beta Presentation

Chair Detection Interface



Team Herman Miller Beta Presentation

Interactive Adjustment Interface

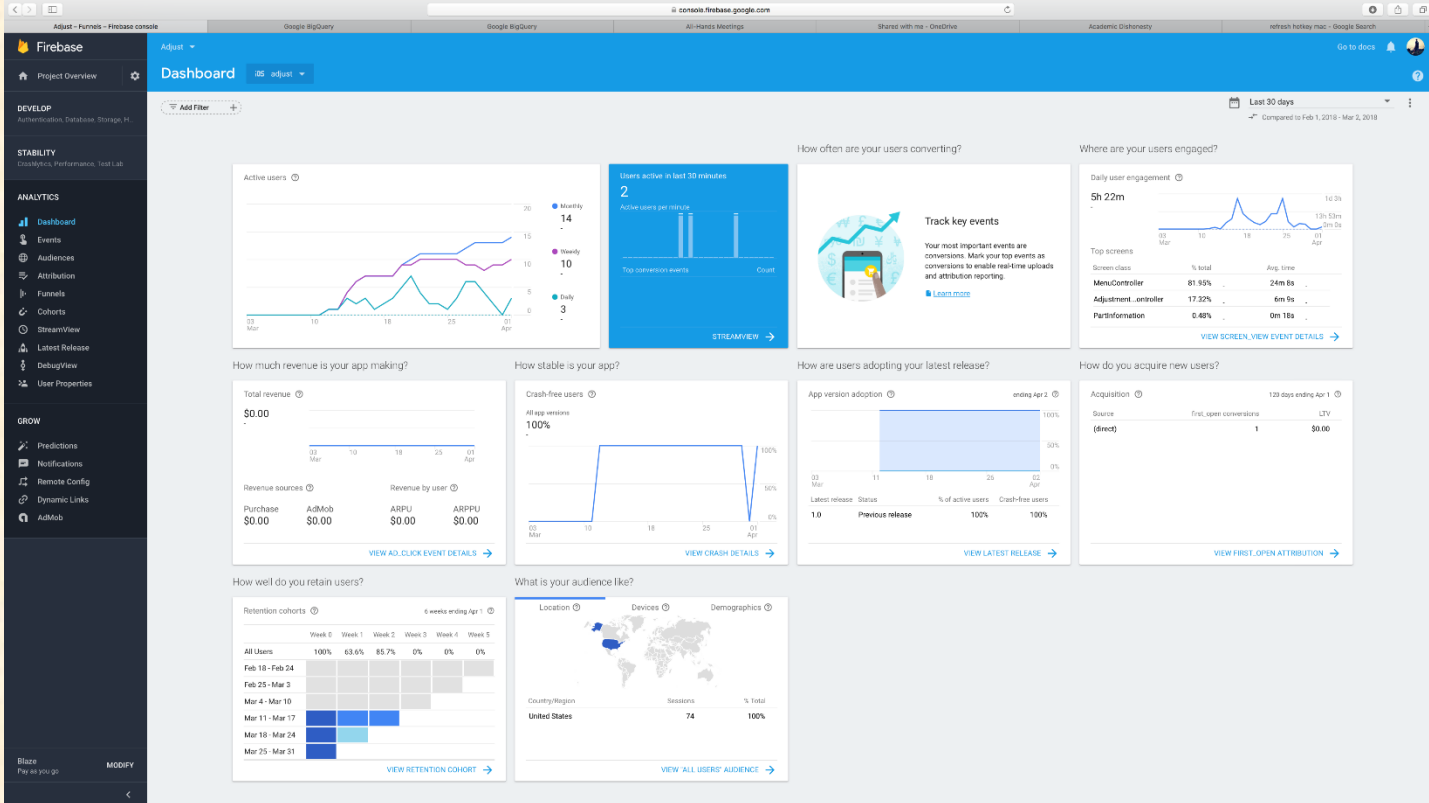




Team Herman Miller Beta Presentation

Team Herman Miller Beta Presentation

Firestore Analytics Dashboard





Team Herman Miller @ Design Day
Kevin Gaban, Jacob Weber, Mike Bremiller, Kyle Kinsey, Han Huang

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The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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...to Professionals*

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Sign In | Create an Account

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All

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Departments

Online Shopping

mPerks Rewards

Weekly Ads

Pharmacy

Services

Explore More

Santa Bucks are back!

last time this year!

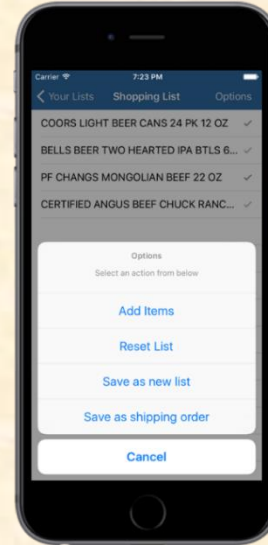
save over \$50



Team Meijer Project Overview

Thrifty: Personal Shopping Assistant

- Functionalities
 - Streamline Shopping Experience
 - Leverage Mobile App
 - Interact by Voice or Chatting
- Features
 - Create Mobile Apps
 - Apple iOS
 - Google Android
 - Determine Product Information
 - Location in Store
 - Stock
 - Sale
 - Coupon
 - Compare Prices to Other Stores
 - Integrate with mPerks
 - Send Notifications to In-Store Team Members
- Technologies
 - Microsoft
 - .NET Framework (C# / ASP.NET)
 - Bot Framework
 - Language Understanding Intelligent Service (LUIS)
 - Azure
 - Application Insights
 - Visual Studio
 - Xamarin
 - Meijer Web Services
 - SQL Server / MongoDB



meijer

Grand Rapids, Michigan



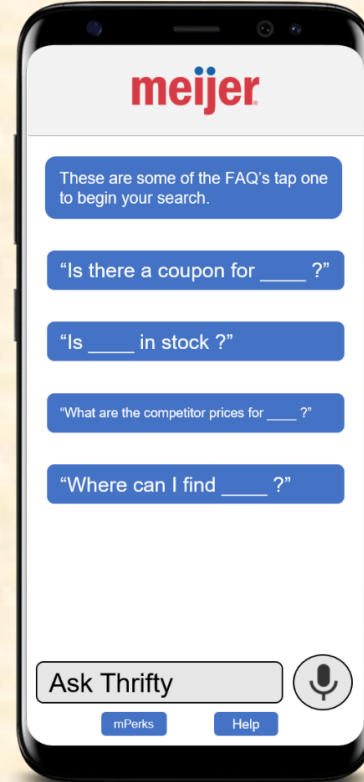
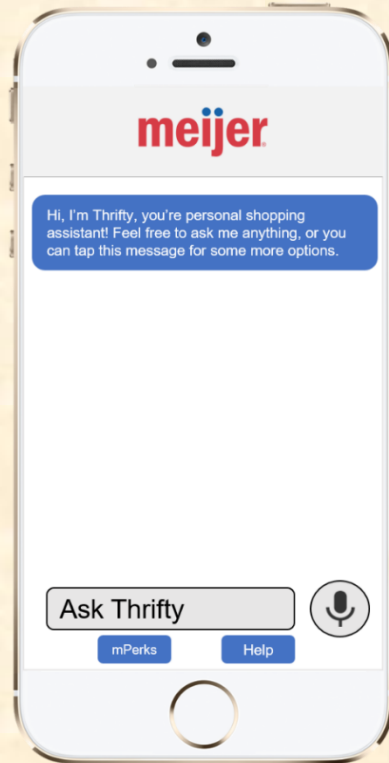


Team Meijer

Emerson Chen, Zach Richardson, Megan Lippert, Jacob Bonesteel, Aaron Carlso

Team Meijer Project Plan Presentation

Screen Mockup: Chat Interface

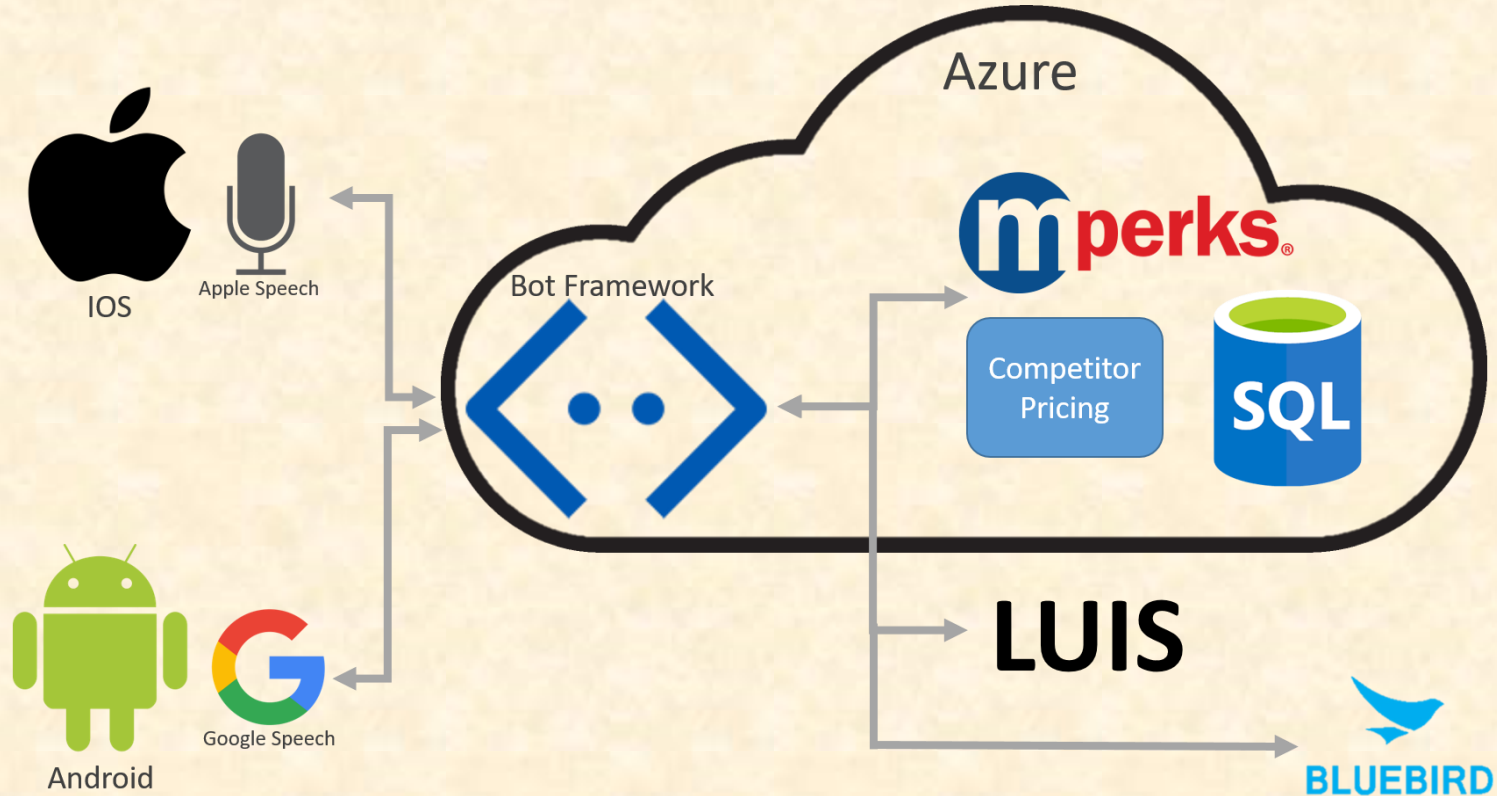




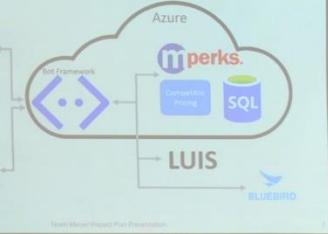
Team Meijer Project Plan Presentation

Team Meijer Project Plan Presentation

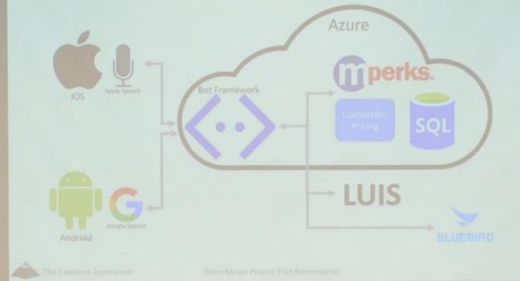
Architecture Diagram



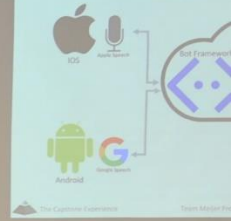
Architecture



System Architecture



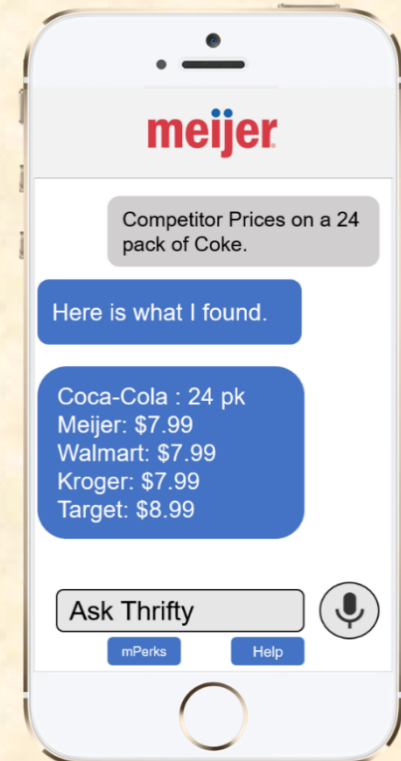
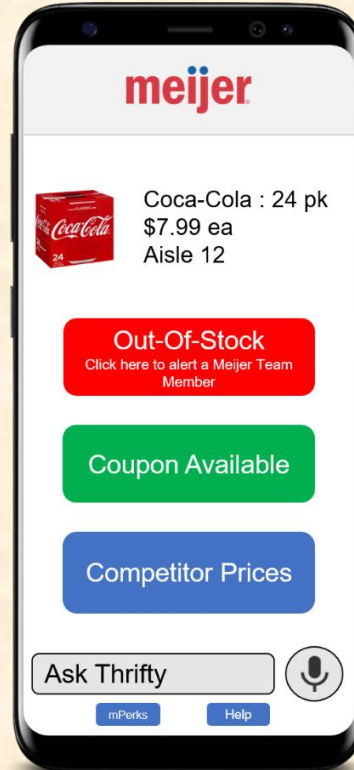
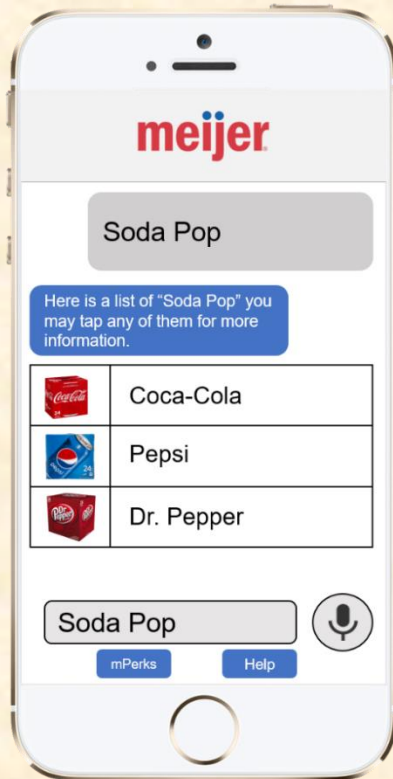
System Architect



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Project Plan Presentation

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Screen Mockup: Functionality

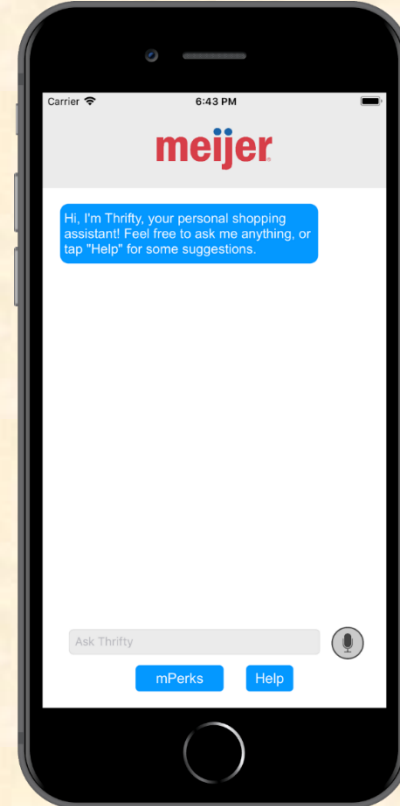
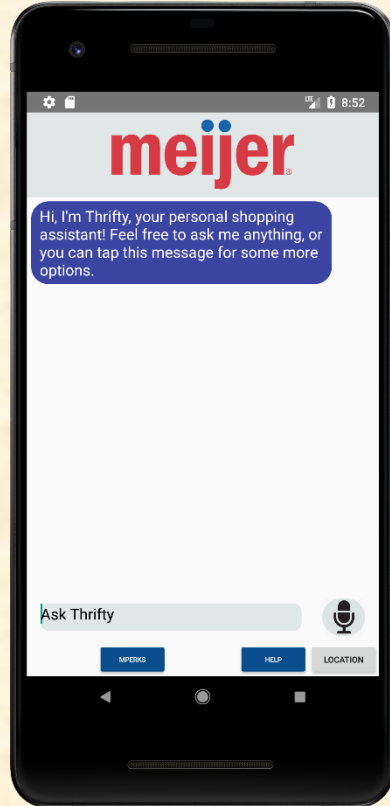




Team Meijer Alpha Presentation

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Home Screen

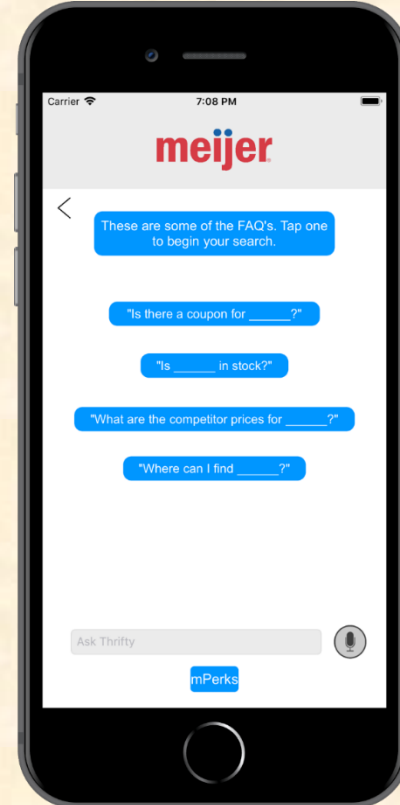
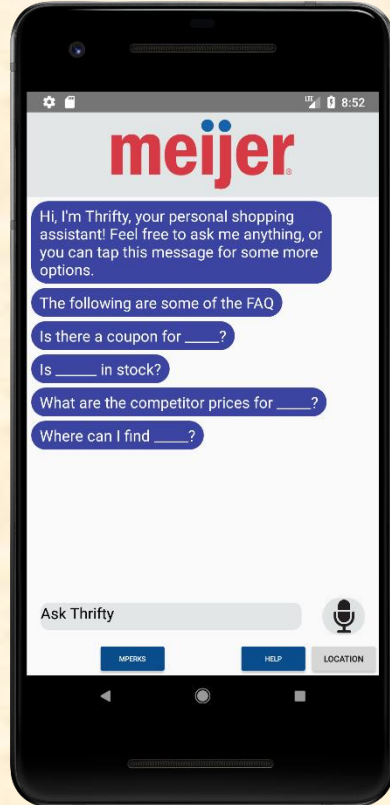


The Capstone Experience



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Help Manual

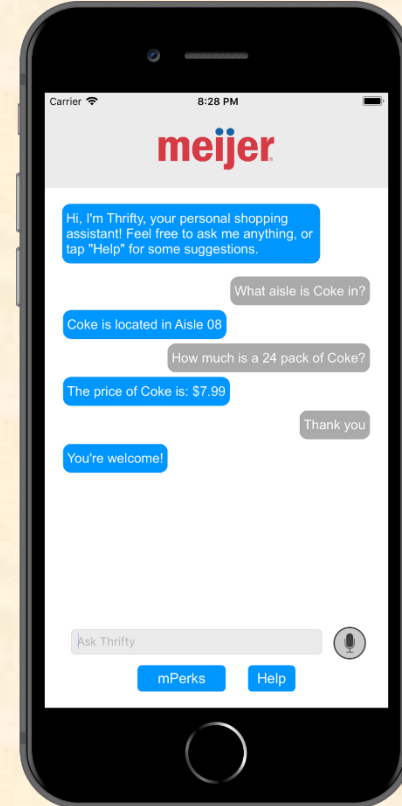
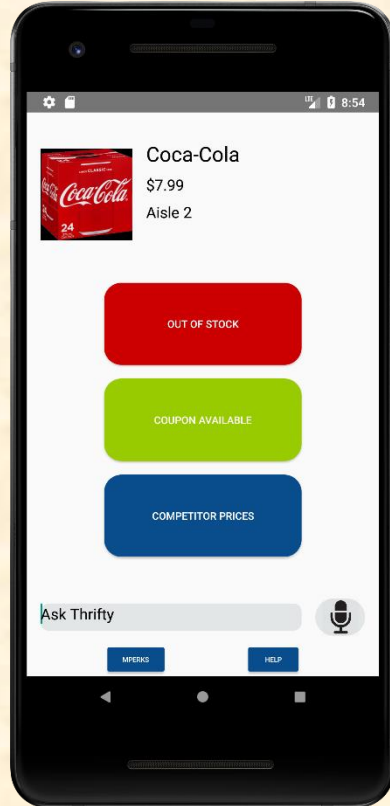




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Product Page and Conversations

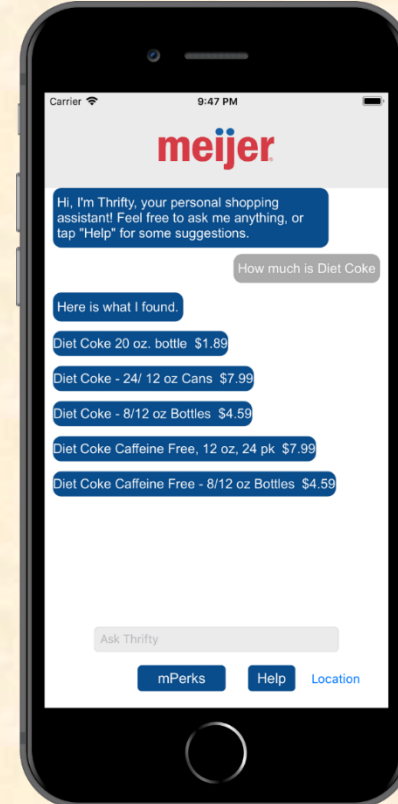
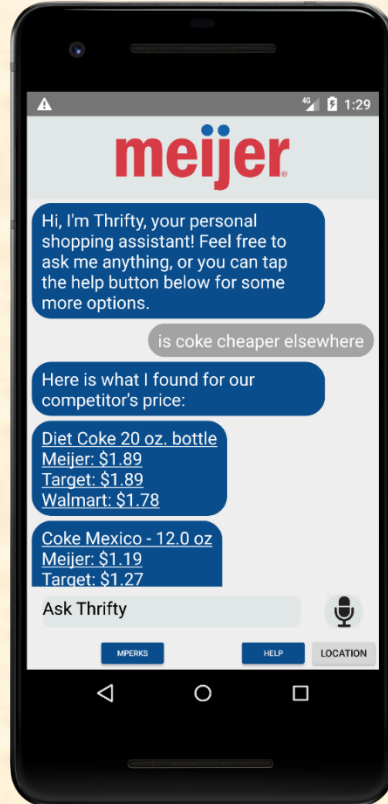




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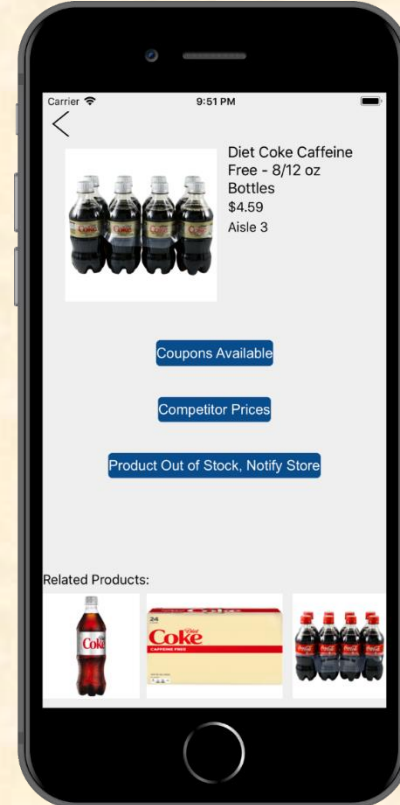
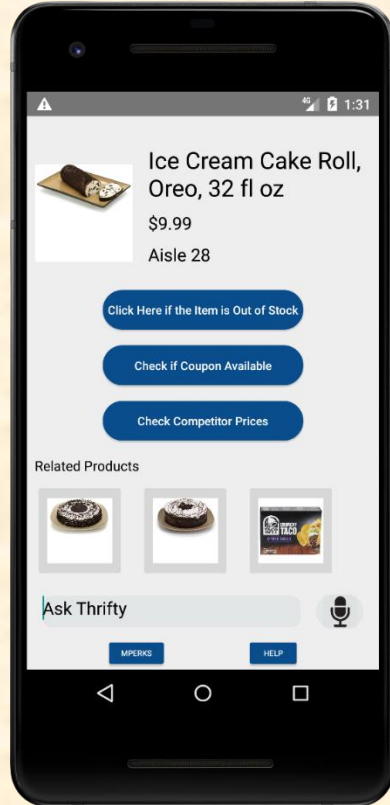
Team Meijer Beta Presentation

Chat Interface



Team Meijer Beta Presentation

Product Page

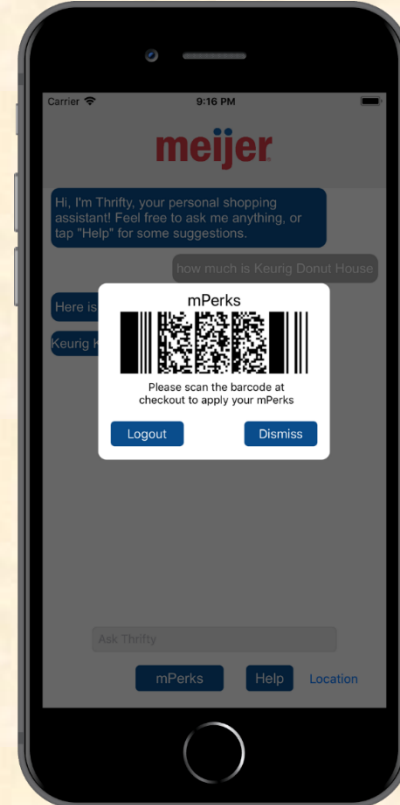
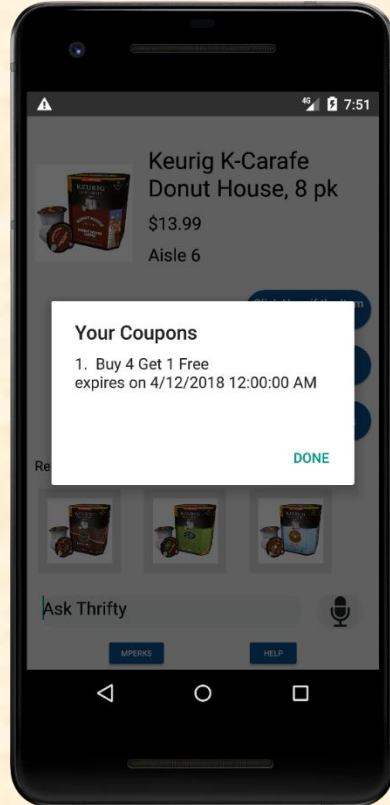




Team Meijer Beta Presentation

Team Meijer Beta Presentation

mPerks





Team Meijer @ Design Day

Jacob Bonesteel, Aaron Carlso, Megan Lippert, Zach Richardson, Emerson Chen

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Team Michigan State University

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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[A-Z INDEX](#)

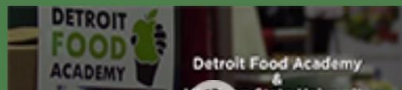
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[MAPS](#)



MSUVIEW

Detroit Food Academy and



MSUTODAY

How race and gender shape the American dream

EVENTS

DEC. 15

Fall 2017 advanced

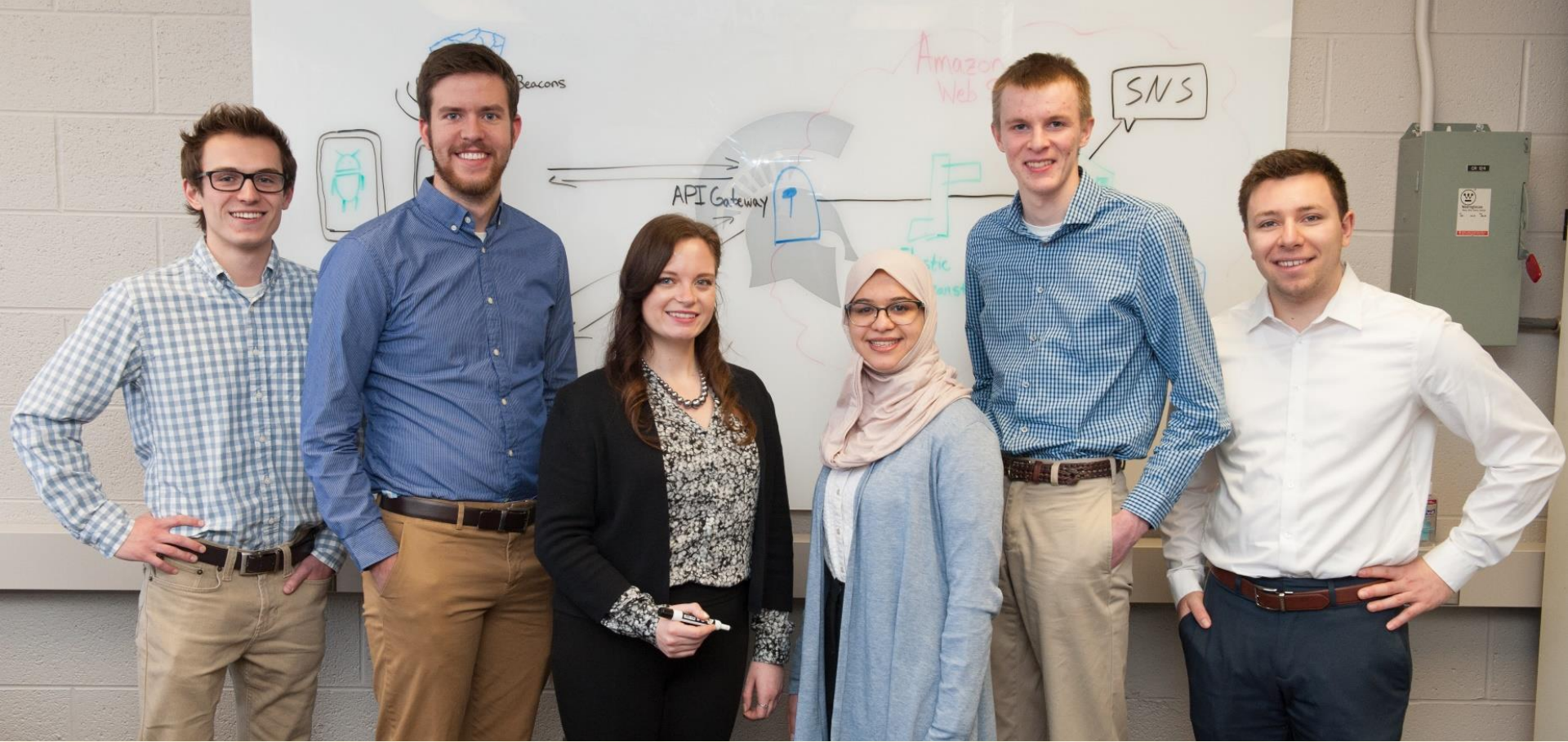
Team Michigan State University Project Overview

Pulse: Classroom Engagement System

- Functionalities
 - Provide Real-Time Feedback and Communication During Class
 - Keep Track of Student Attendance
- Features
 - Provide Web App for Instructors
 - Create Questions, Surveys and Quizzes
 - Open Questions and Quizzes at Specific Times
 - View and Save Results in Real Time
 - Class Results with Charts and Graphs
 - Individual Results
 - Push Content to Student Devices
 - View Student Questions and Comments
 - Track and View Class Attendance
 - Provide Mobile App for Students
 - Answer Survey and Quiz Questions During Class
 - View Instructor-Posted Content
 - Post Questions and Comments
 - Take Attendance with Mobile Devices via iBeacons
- Technologies
 - Apple iOS / Swift
 - Google Android / Java or Kotlin
 - Amazon Web Services (AWS)
 - iBeacons



Information Technology Services
East Lansing, Michigan

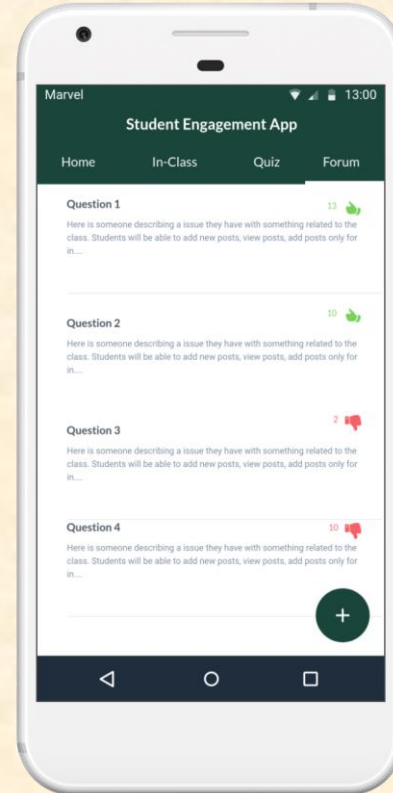
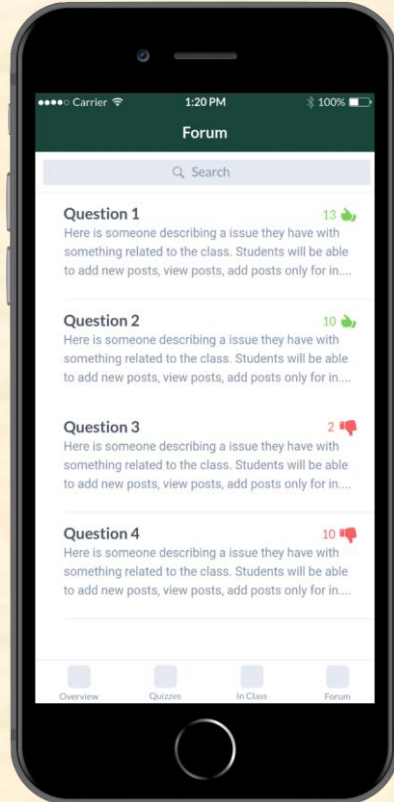


Team Michigan State University

Owen McMahon, Adam Blaida, Lauren Malik, Yaqeen Al-Marhoon, David York, Andrew Schafer

Team Michigan State University Project Plan Presentation

Android and iOS Design

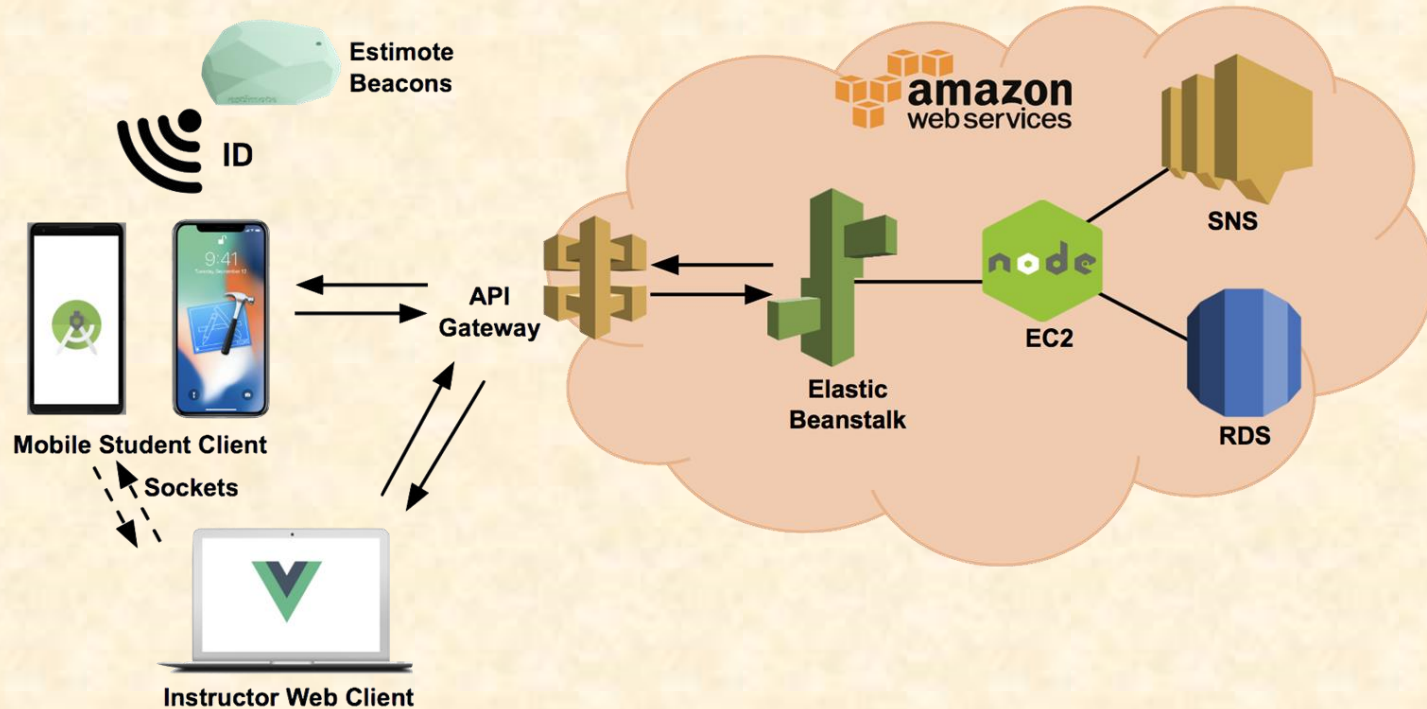


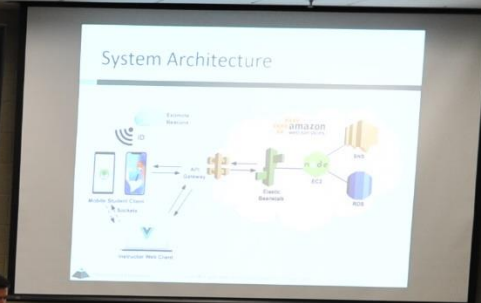
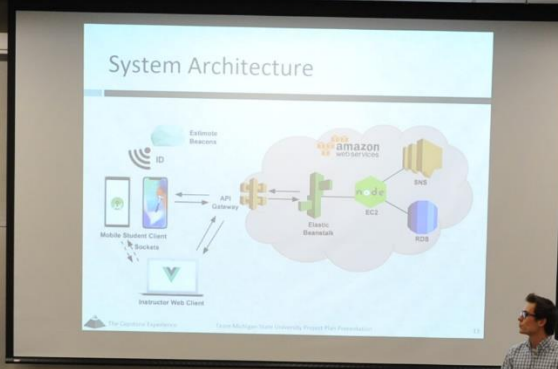
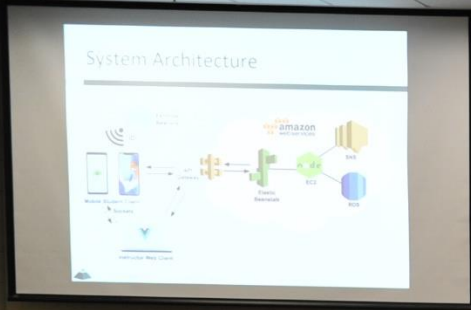


Team Michigan State University
Project Plan Presentation

Team Michigan State University Project Plan Presentation

Architecture Diagram





Team Michigan State University
Project Plan Presentation

Team Michigan State University Project Plan Presentation

Screen Mockup: Forums - Web

The screenshot shows a web forum interface for Michigan State University. The top navigation bar is dark green with the university name on the left and a user profile 'Sparty' on the right. Below this is a green sub-navigation bar with links: Home, Forum (selected), In-class Quizzes, Quizzes, and Instructor Tools. A left sidebar lists course categories: CSE100, CSE232, CSE260, and IAH201, each with a dropdown arrow. The main content area displays two announcements: 'Updated Syllabus' and 'Midterm Information', both posted by Dan Daniels on 1/22/18 at 10:00AM. Below these is a 'Sort By:' dropdown menu set to 'Relevant'. A list of six example questions follows, each with a vote count in a colored triangle (orange for positive, blue for negative) and the text 'This is an example question, anyone have an answer?'. The questions are posted by Dan Daniels on 1/22/18 at 10:00AM. The vote counts are 18, 10, 9, 4, 1, and -1 respectively.

Michigan State University

Sparty

CSE100

Home Forum In-class Quizzes Quizzes Instructor Tools

Home
Forum
In-class Quizzes
Quizzes
Instructor Tools

CSE232

CSE260

IAH201

Updated Syllabus
Posted by Dan Daniels 1/22/18 10:00AM

Midterm Information
Posted by Dan Daniels 1/22/18 10:00AM

Sort By: Relevant

18 This is an example question, anyone have an answer?
Posted by Dan Daniels 1/22/18 10:00AM

10 This is an example question, anyone have an answer?
Posted by Dan Daniels 1/22/18 10:00AM

9 This is an example question, anyone have an answer?
Posted by Dan Daniels 1/22/18 10:00AM

4 This is an example question, anyone have an answer?
Posted by Dan Daniels 1/22/18 10:00AM

1 This is an example question, anyone have an answer?
Posted by Dan Daniels 1/22/18 10:00AM

-1 This is an example question, anyone have an answer?
Posted by Dan Daniels 1/22/18 10:00AM





Team Michigan State University
Alpha Presentation

Team Michigan State University Alpha Presentation

Web Home

The screenshot displays a web application for Michigan State University, specifically for the course CSE 100: Computer Science as a Profession. The interface is divided into several sections:

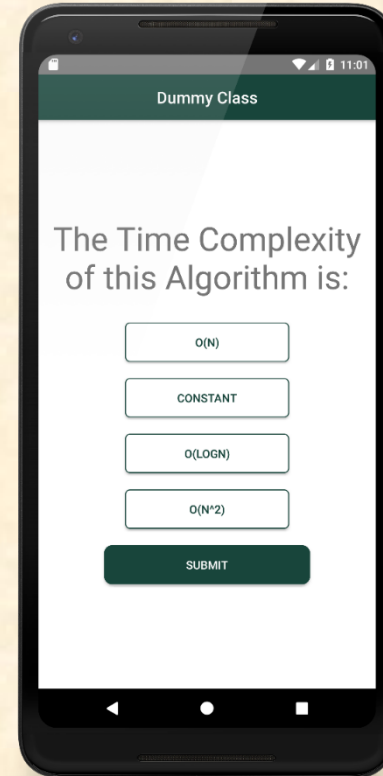
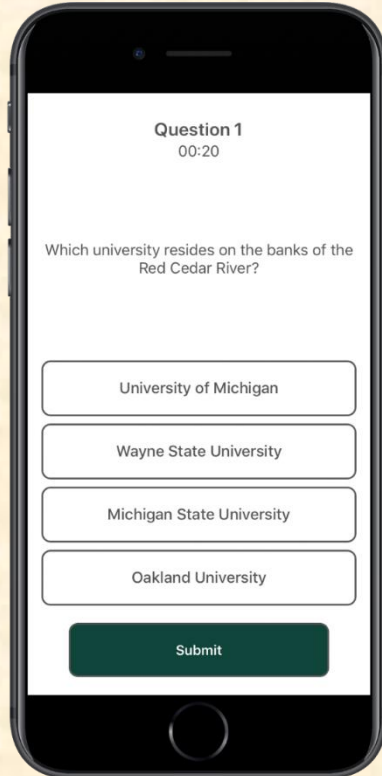
- Navigation Bar:** A green bar at the top with links for Home, Assignments, Sessions, Forum, and Instructor Tools. A sidebar on the left lists course numbers: CSE 100, CSE 231, and HST 101.
- Course Information:** A section on the left containing details such as Instructor: Mark McCullen, Meeting Time: MWF 10:20-11:10, and Class Location: 1345 EB. A "Links" button is also present.
- Class Resources:** A section on the left with three green buttons labeled "Lectures", "Grades", and "Assignments".
- Important Dates:** A section on the right listing key dates: Next lecture: 2/10/18 10:20-11:10, Next lab: 2/12/18 3:00-4:20, and Project 2 Due: 2/15/18.
- Forum:** A section on the right displaying a list of discussion posts. The first post is titled "Hi 🐼: This is an example post." and includes a paragraph of text. Subsequent posts discuss topics like "Vector vs Linked List", "Exam 3", "Specific topics for final", "Pointers", "Seg Fault Issue", and "Copy Constructor How-To".

The footer of the application indicates it is the "Classroom Engagement App ALPHA".



Team Michigan State University Alpha Presentation

Mobile Questions

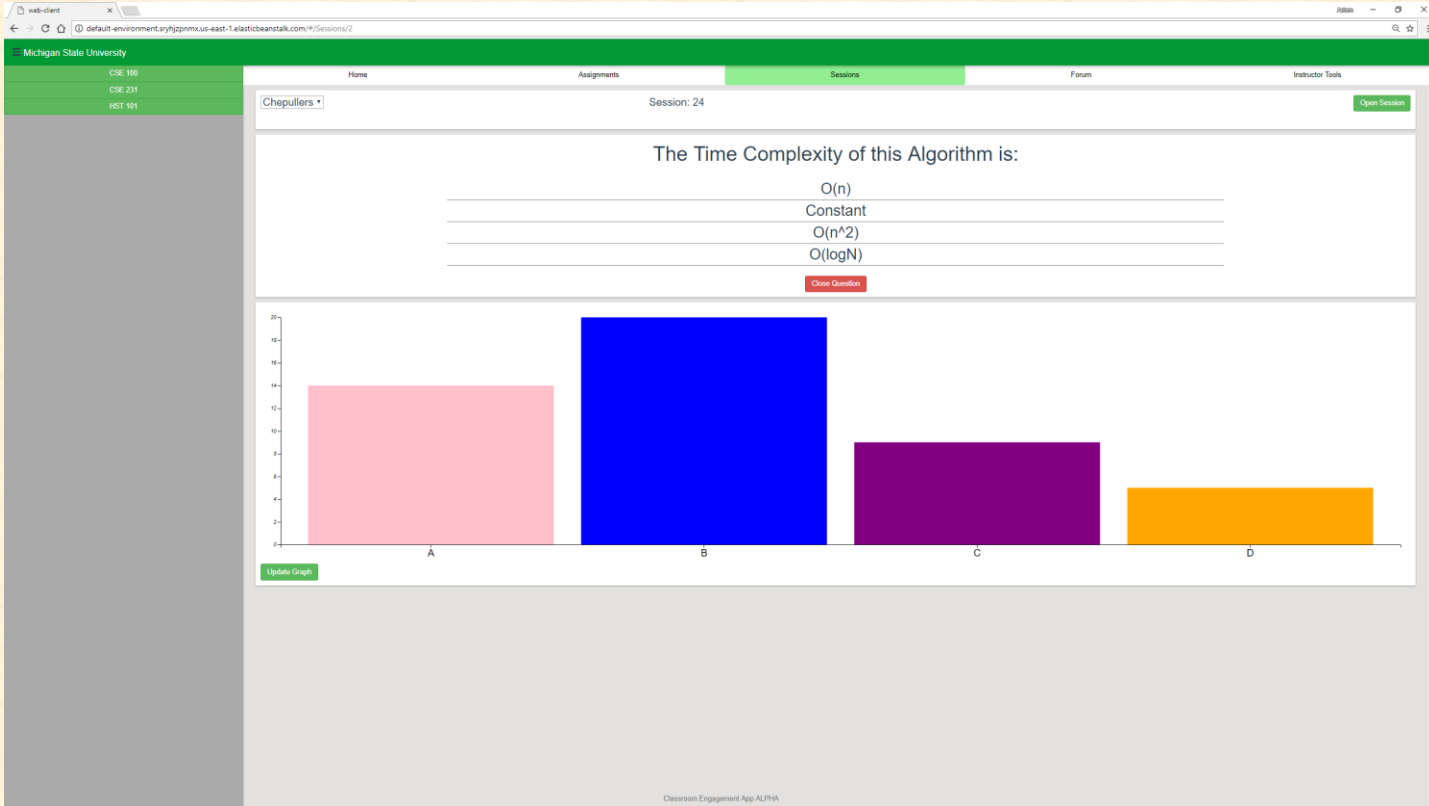




Team Michigan State University Alpha Presentation

Team Michigan State University Alpha Presentation

Web Question View





Team Michigan State University
Beta Presentation

Team Michigan State University Beta Presentation

Web Forum

Michigan State University

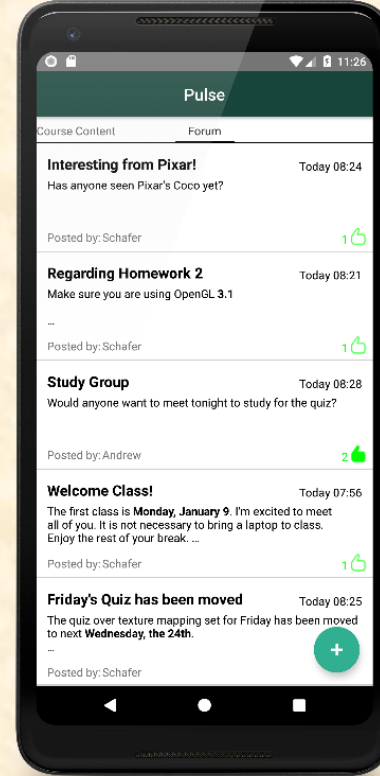
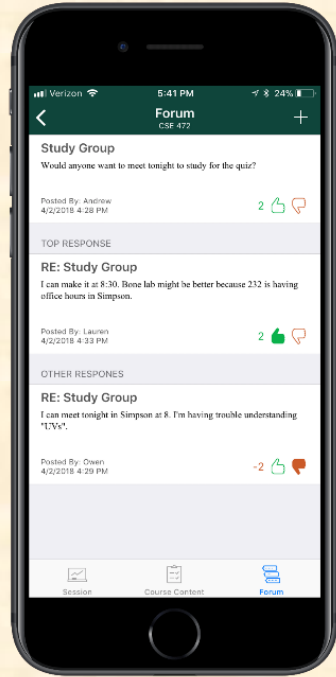
Signed in as Andrew Switch user

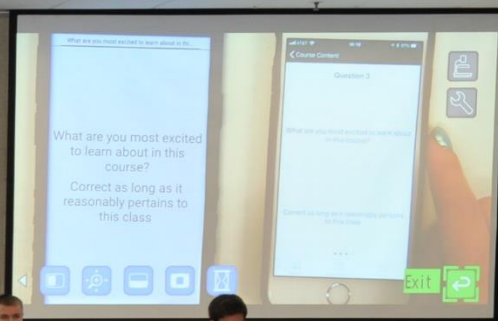
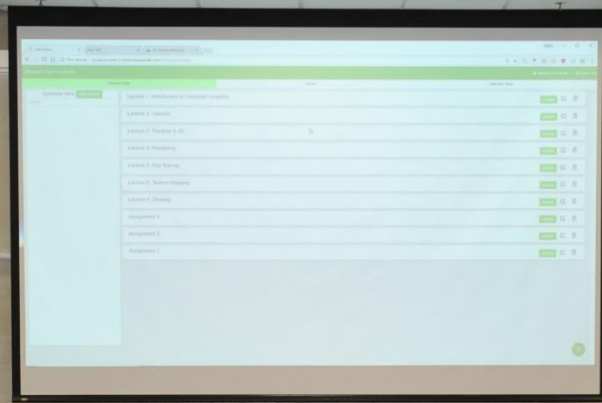
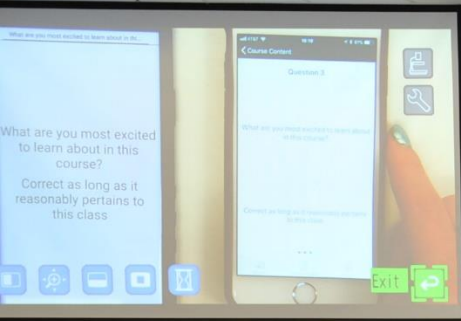
Question Set	Forum	Instructor Tools
CSE 472		
Quiz on Friday has been moved. The quiz over ray tracing and OpenGL will be next week, Tuesday the 12th.		Posted at 04/02/2018 03:22 PM by Andrew in 1
<div>0</div> <div>👍👎🔗🗑️📄📌 Pinned Post</div>		
Problem Solved 👍 Thanks for the help everyone!		Posted at 04/02/2018 03:23 PM by student in 1
<div>2</div> <div>👍👎🔗🗑️📄📌 Pinned Post</div>		
Study Group Would anyone like to meet to prepare for the quiz Friday?		Posted at 04/02/2018 03:26 PM by student in 1
<div>2</div> <div>👍👎🔗🗑️📄📌 Pinned Post</div>		
Homework 2 Reminder A lot of you have forgotten to change the app name from "app_name" to your username. If you were one of these forgetful souls, please resubmit.		Posted at 04/02/2018 03:29 PM by Andrew in 1
<div>1</div> <div>👍👎🔗🗑️📄📌 Pinned Post</div>		
Problems with Visual Studio It is brought to my attention that many of you are having trouble with step8. Make sure you are using version 5.0 of OpenGL plugin.		Posted at 04/02/2018 03:25 PM by Ar + 1
<div>1</div> <div>👍👎🔗🗑️📄📌 Pinned Post</div>		

Classroom Engagement App ALPHA

Team Michigan State University Beta Presentation

Mobile - Forum

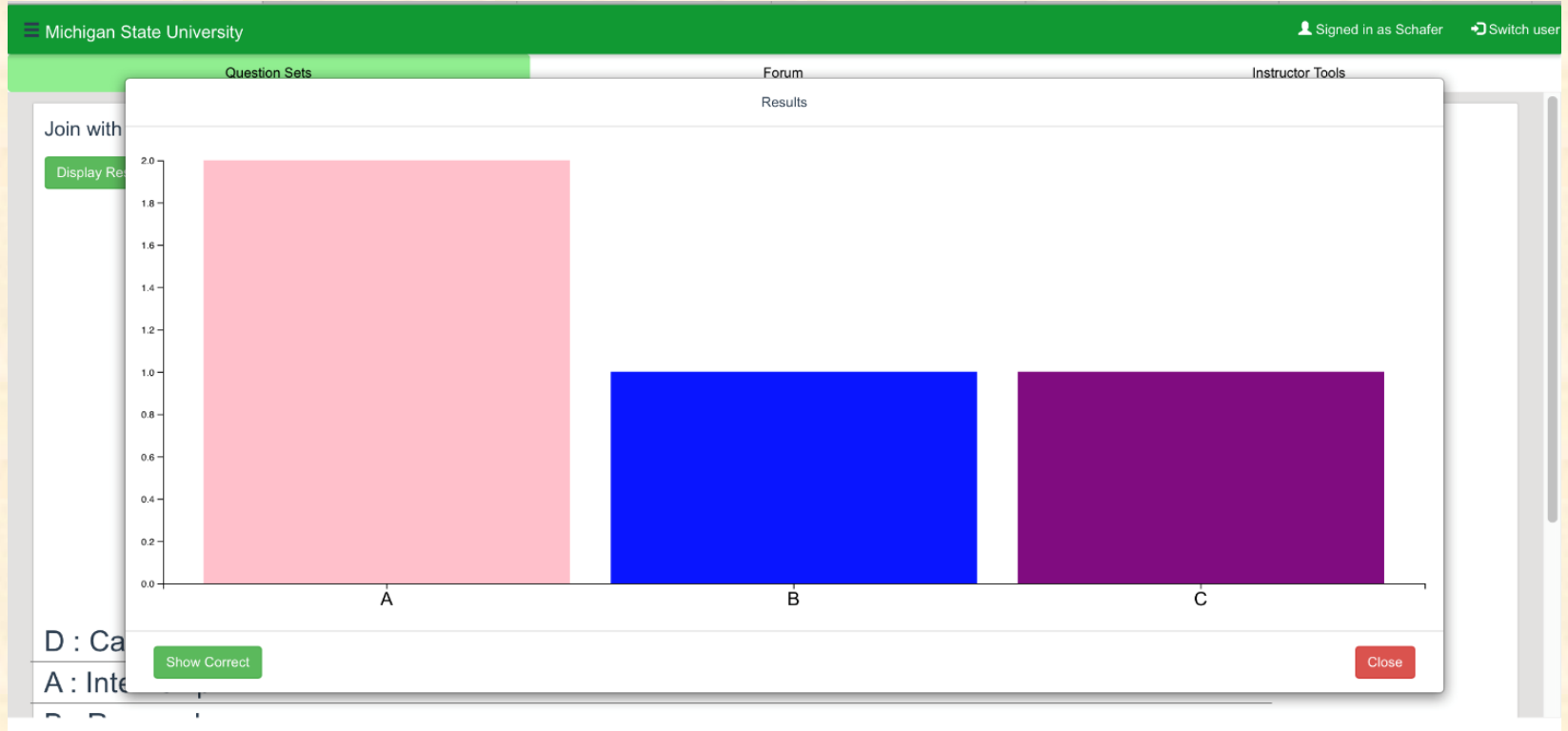




Team Michigan State University
Beta Presentation

Team Michigan State University Beta Presentation

Web Question View – Short Answer





Team Michigan State University @ Design Day

David York, Andrew Schafer, Lauren Malik, Yaqeen Al-Marhoon, Owen McMahon, Adam Blaida

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The Capstone Experience

Team Mozilla

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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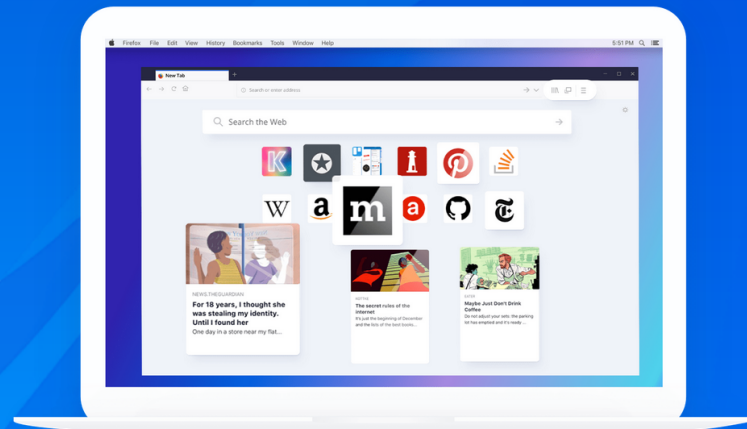
Firefox[®]

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The new **Firefox**

Fast for good.

With 2x the speed, built-in privacy protection and Mozilla behind it, the new Firefox is the better way to browse.

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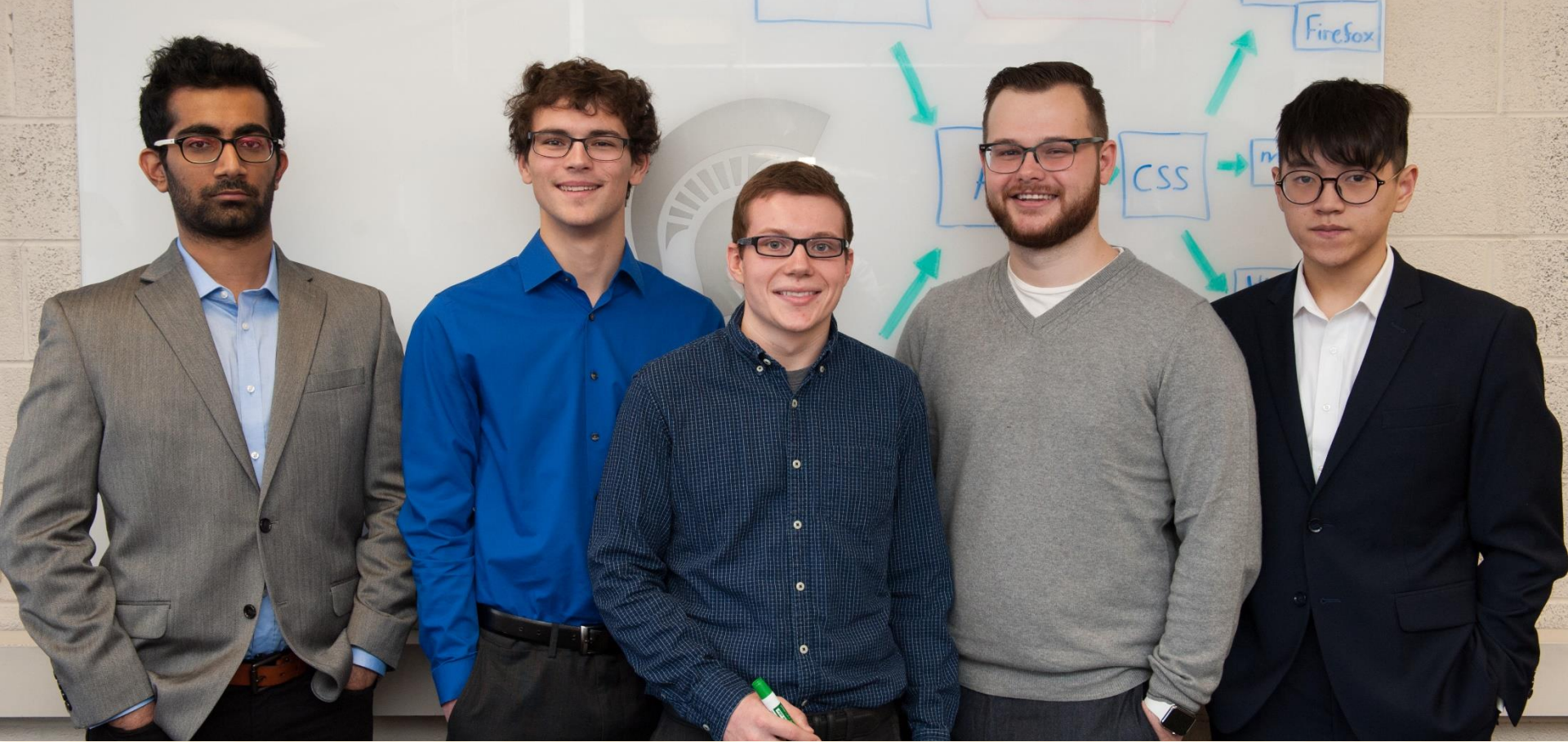
Team Mozilla Project Overview

Dark Theme Darkening

- Functionalities
 - Increase Customizability of Firefox
 - Leverage Firefox Quantum Theming API
- Features
 - Provide Ability to Customize New Areas
 - Menus
 - Sidebars
 - In-Product Pages
 - Apply CSS Custom Variables and JavaScript
 - Leverage Inter-Process Communication
 - Pass Messages
 - Between Privileged and Unprivileged Code
 - Support Apple macOS, Microsoft Windows and Linux
 - Ship with Future Release of Firefox
- Technologies
 - CSS
 - JavaScript
 - Python
 - XUL / XBL / HTML
 - Mercurial
 - IRCCloud
 - Bugzilla
 - Review Board
 - Microsoft Windows
 - Apple macOS
 - Linux



Mountain View, California

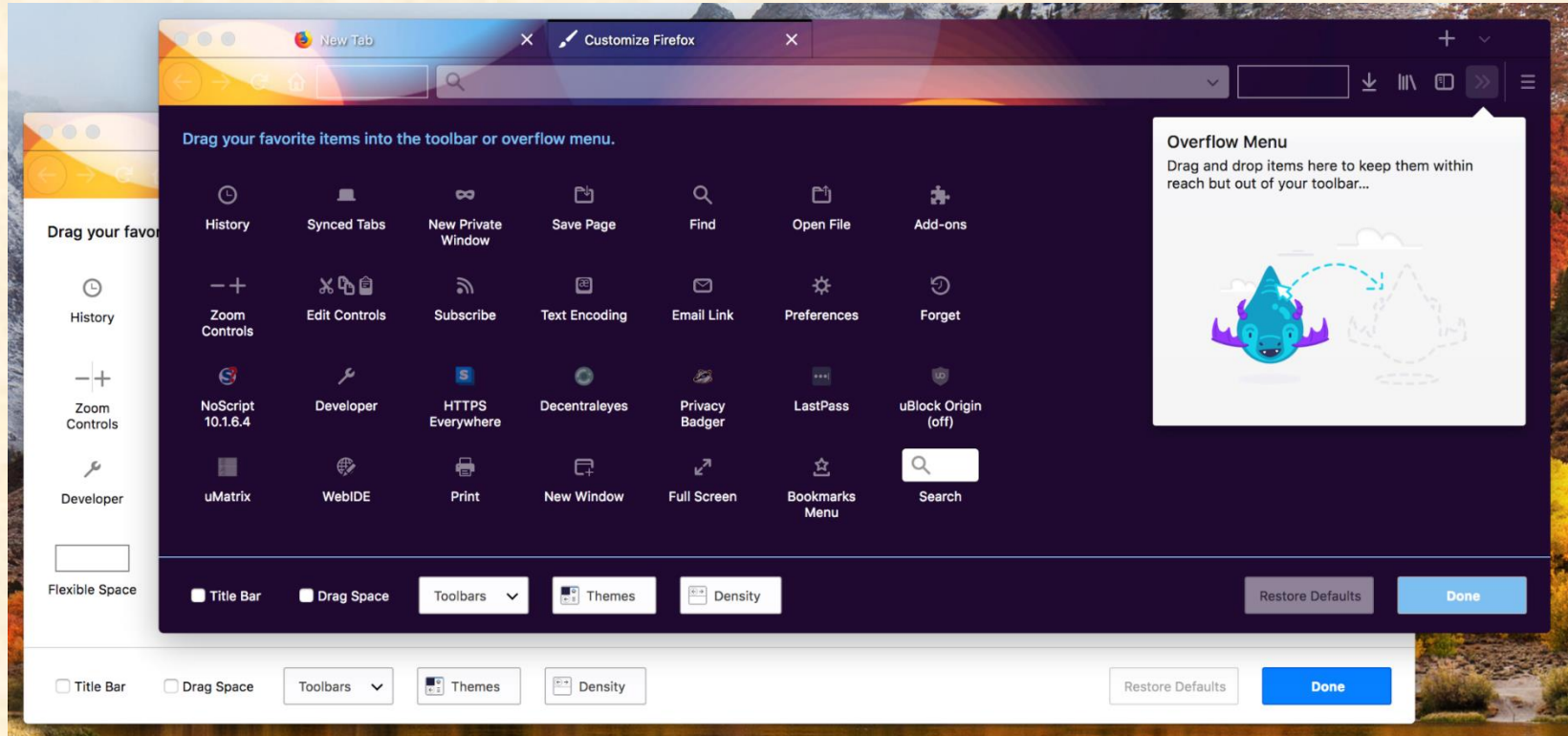


Team Mozilla

Vivek Dhingra, Connor Masini, Dyl Stokes, Bogdan Pozderca, Zhengyi Lian

Team Mozilla Project Plan Presentation

Screen Mockup: In-Product Page

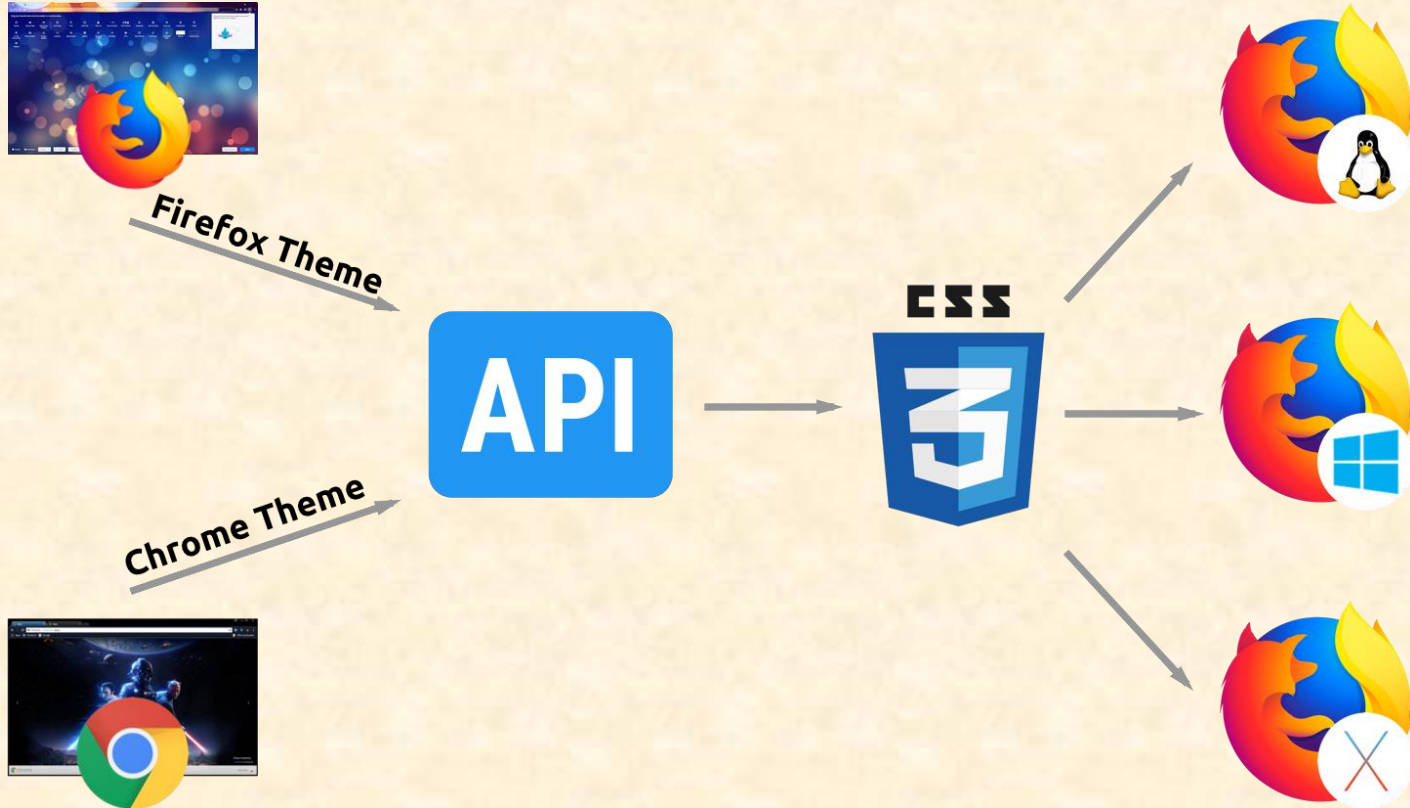




Team Mozilla Project Plan Presentation

Team Mozilla Project Plan Presentation

Architecture Diagram

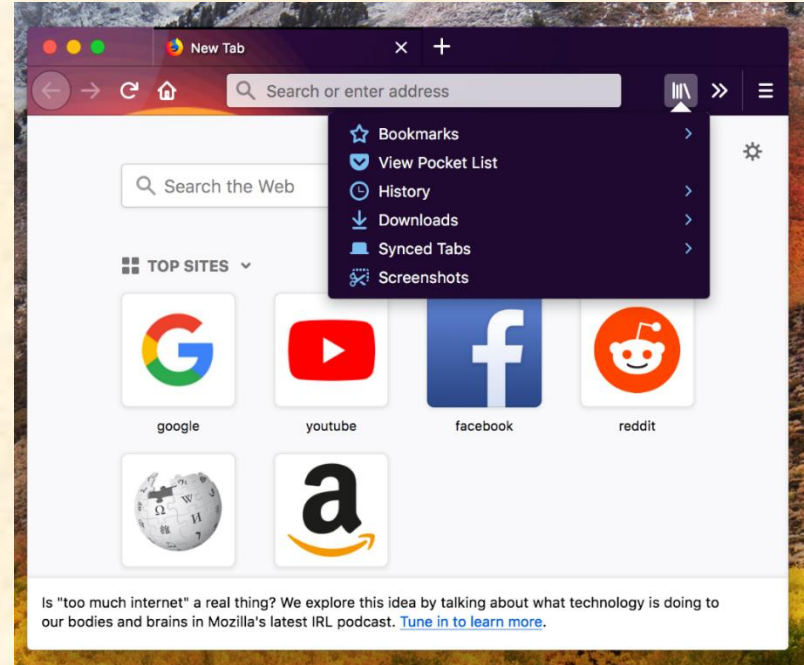
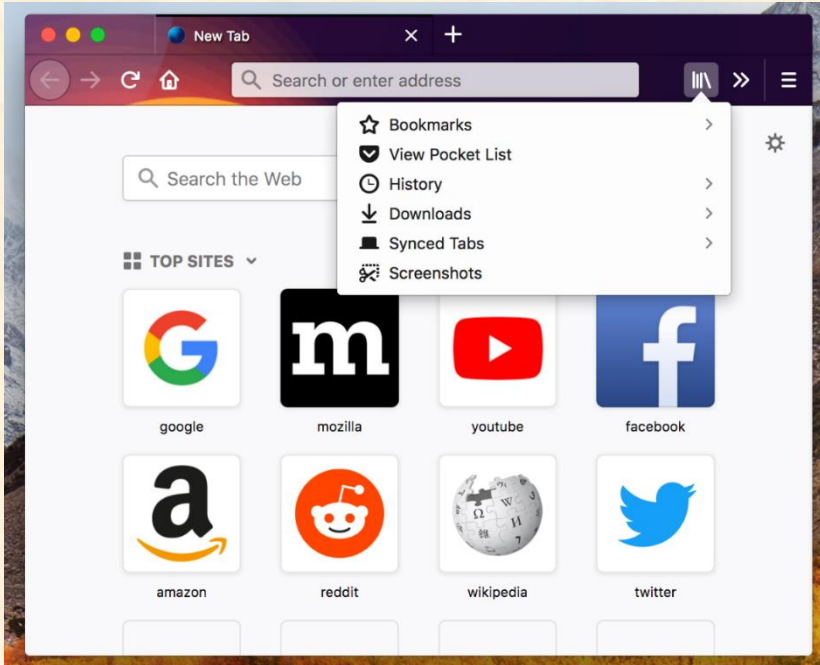




Team Mozilla Project Plan Presentation

Team Mozilla Project Plan Presentation

Screen Mockup: Menus





```
const themes = [
  {
    name: 'Alpha',
    images: [
      'backgrounds/alpha.jpg',
    ],
    colors: {
      background: '#f0f0f0',
      text: 'white',
    },
    fonts: {
      primary: 'serif',
      secondary: 'sans-serif',
    },
    layout: {
      header: 'Alpha',
      footer: 'Alpha',
    },
  },
];

// ... other code ...
```

Alpha Presentation Initial Theme

```
const themes = [
  {
    name: 'Alpha',
    images: [
      'backgrounds/alpha.jpg',
    ],
    colors: {
      background: '#f0f0f0',
      text: 'white',
    },
    fonts: {
      primary: 'serif',
      secondary: 'sans-serif',
    },
    layout: {
      header: 'Alpha',
      footer: 'Alpha',
    },
  },
];

// ... other code ...
```

Temporary Extensions

Alpha Presentation Initial Theme

This extension has a temporary ID: `alpha-theme`

Extension ID	Version	Location
<code>alpha-theme</code>	1.0.0	<code>chrome://extensions/</code>

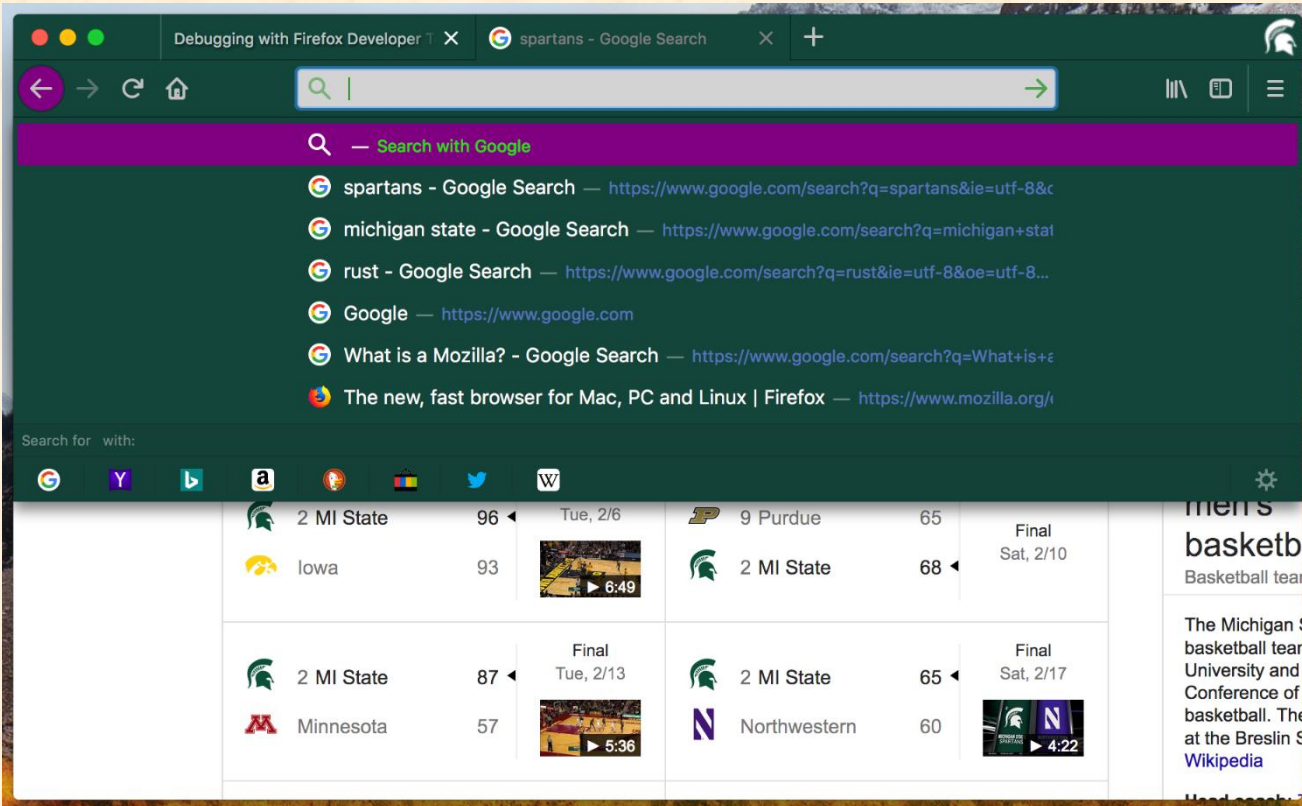
```
const themes = [
  {
    name: 'Alpha',
    images: [
      'backgrounds/alpha.jpg',
    ],
    colors: {
      background: '#f0f0f0',
      text: 'white',
    },
    fonts: {
      primary: 'serif',
      secondary: 'sans-serif',
    },
    layout: {
      header: 'Alpha',
      footer: 'Alpha',
    },
  },
];

// ... other code ...
```

Alpha Presentation Initial Theme

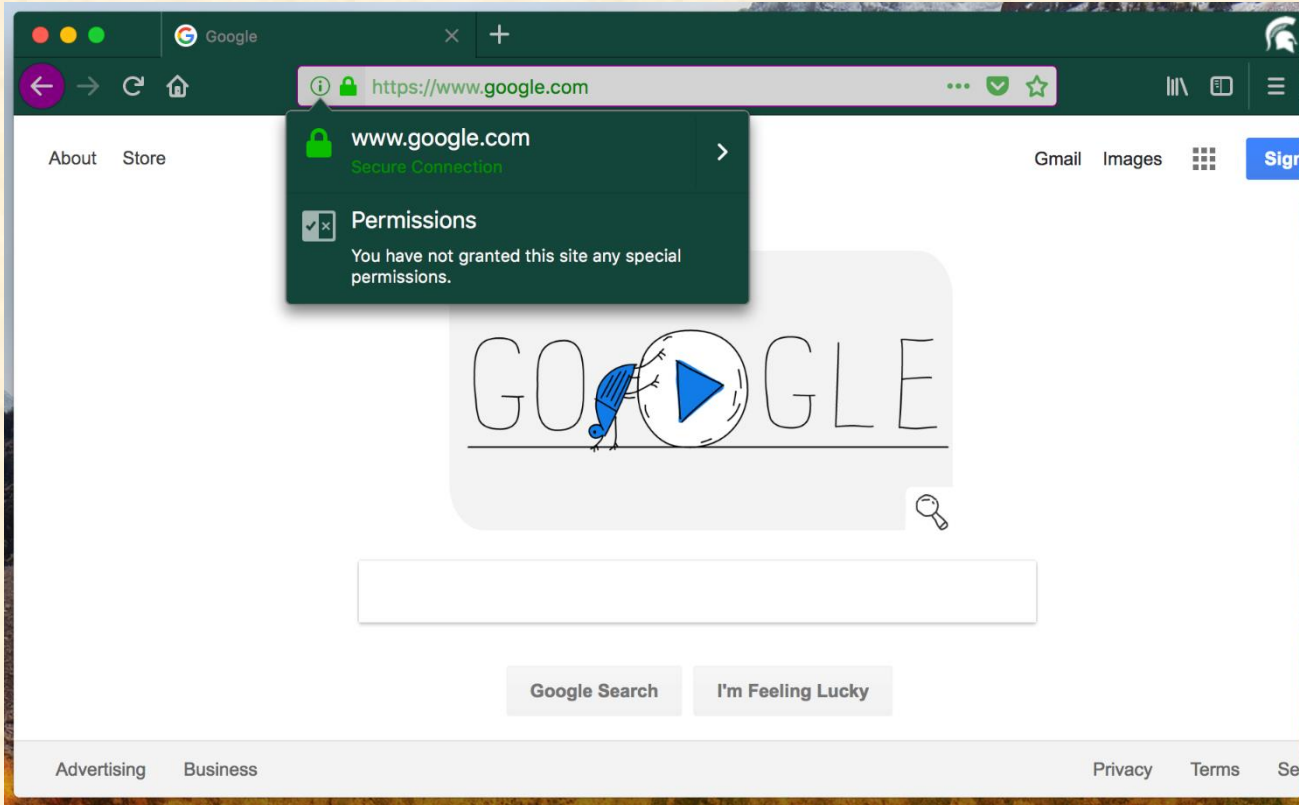
Team Mozilla Alpha Presentation

Auto-Complete Styling



Team Mozilla Alpha Presentation

Popup Styling

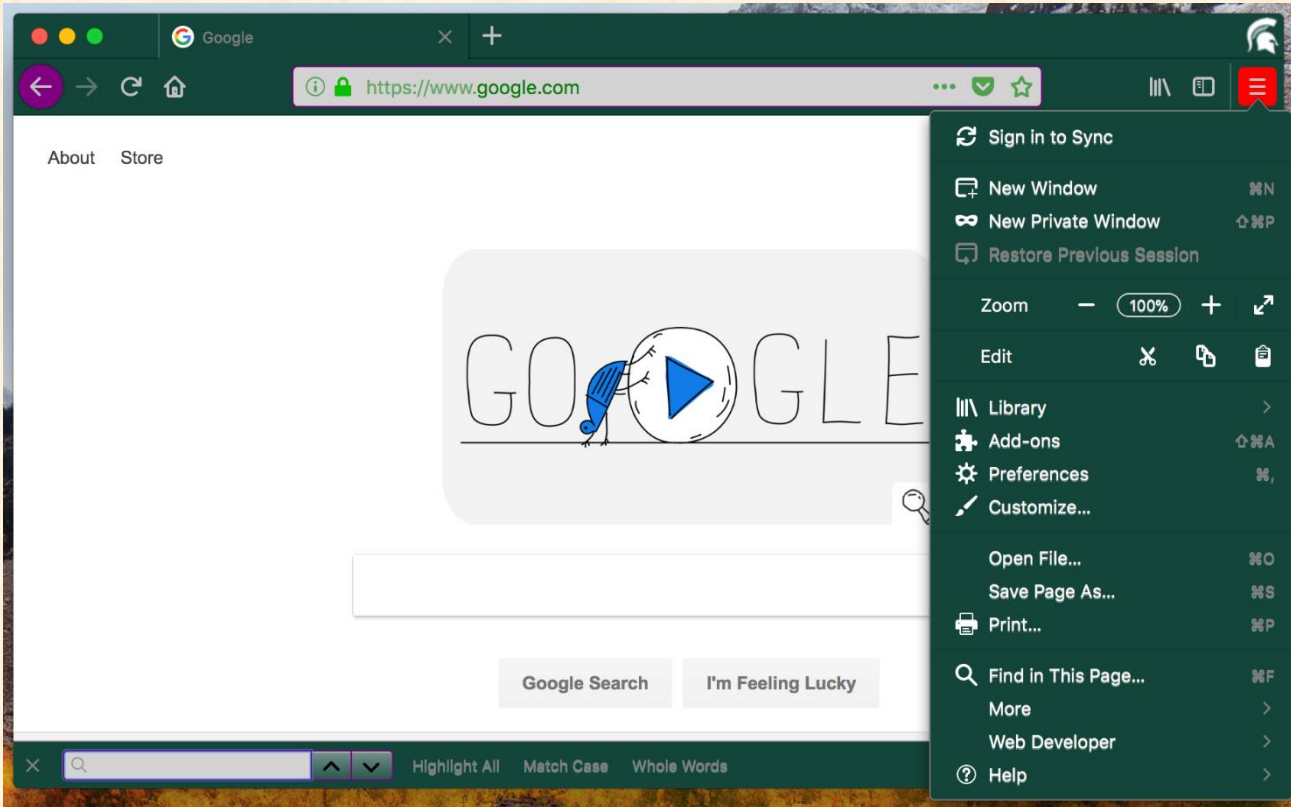




Team Mozilla Alpha Presentation

Team Mozilla Alpha Presentation

Find Bar and Menu Styling

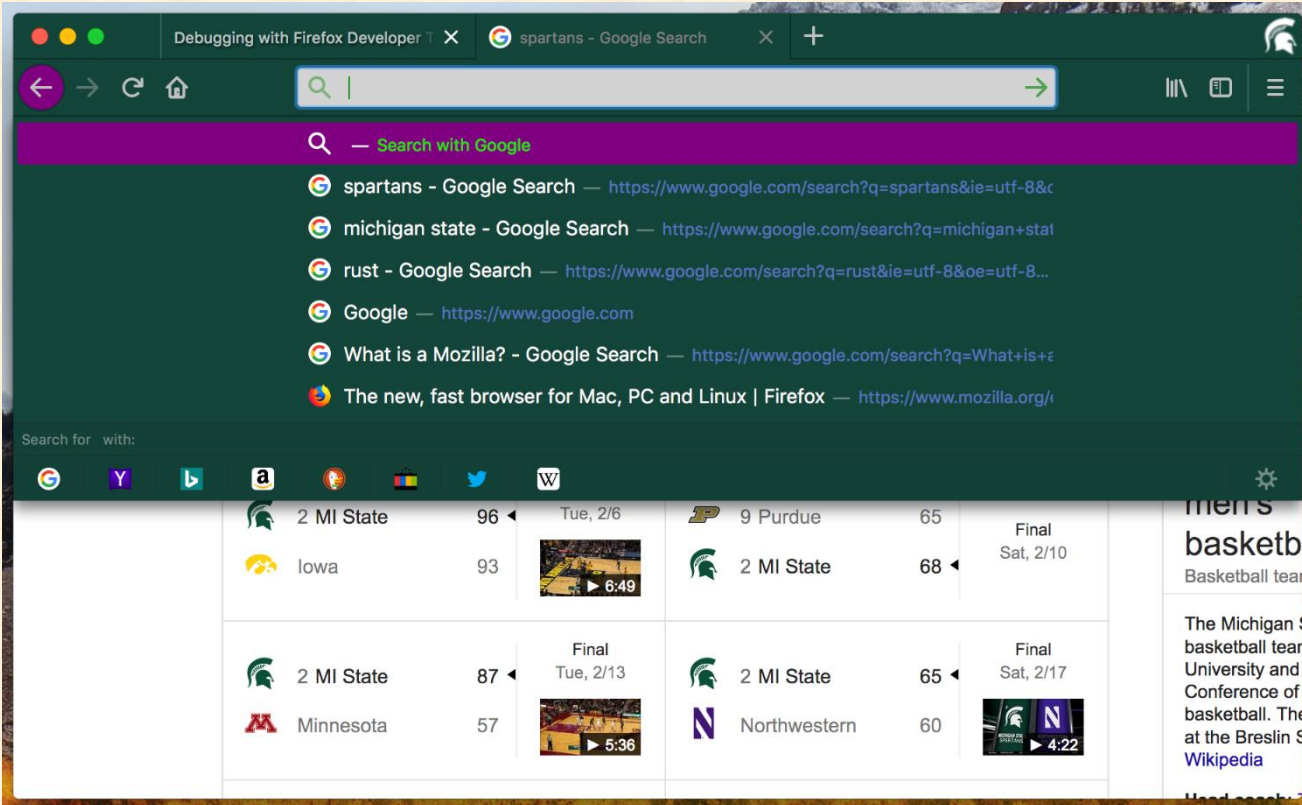




Team Mozilla Beta Presentation

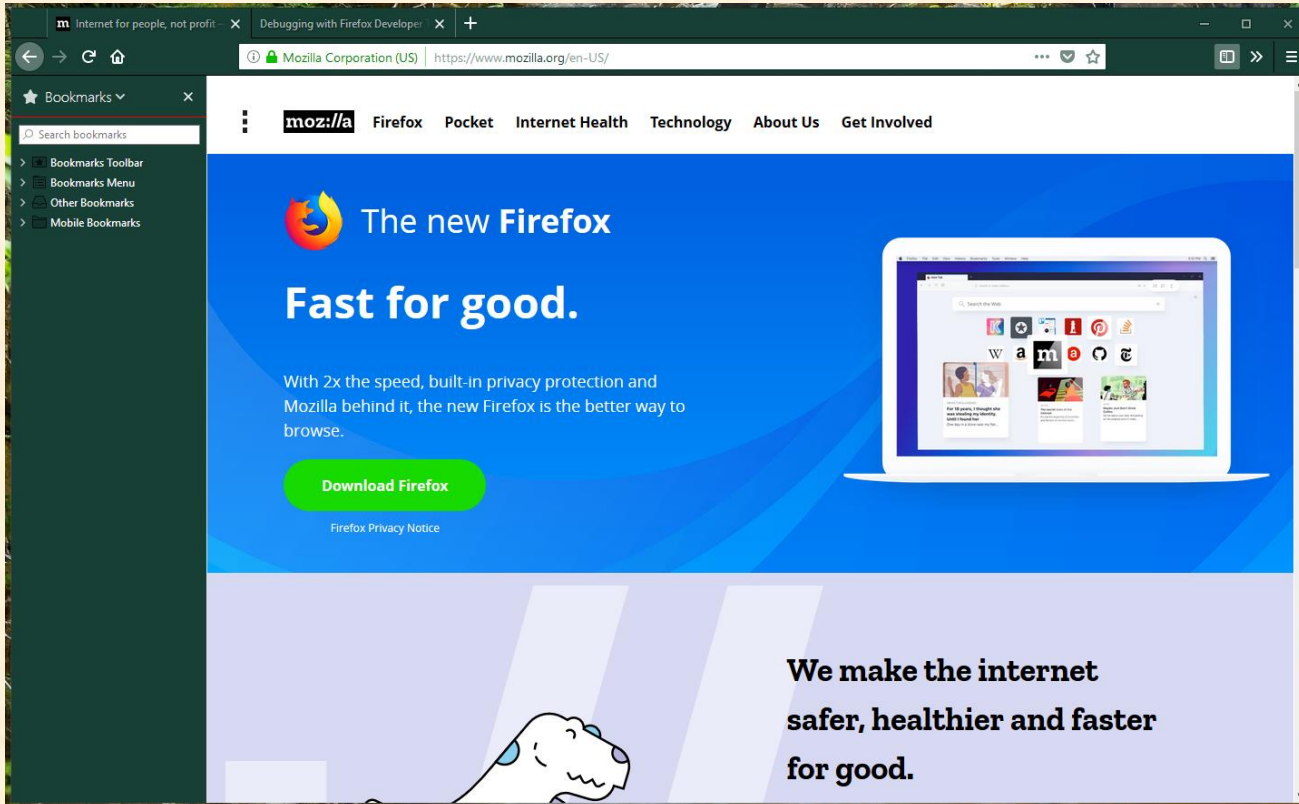
Team Mozilla Beta Presentation

Address Bar Auto-Complete Styling



Team Mozilla Beta Presentation

Sidebar Styling

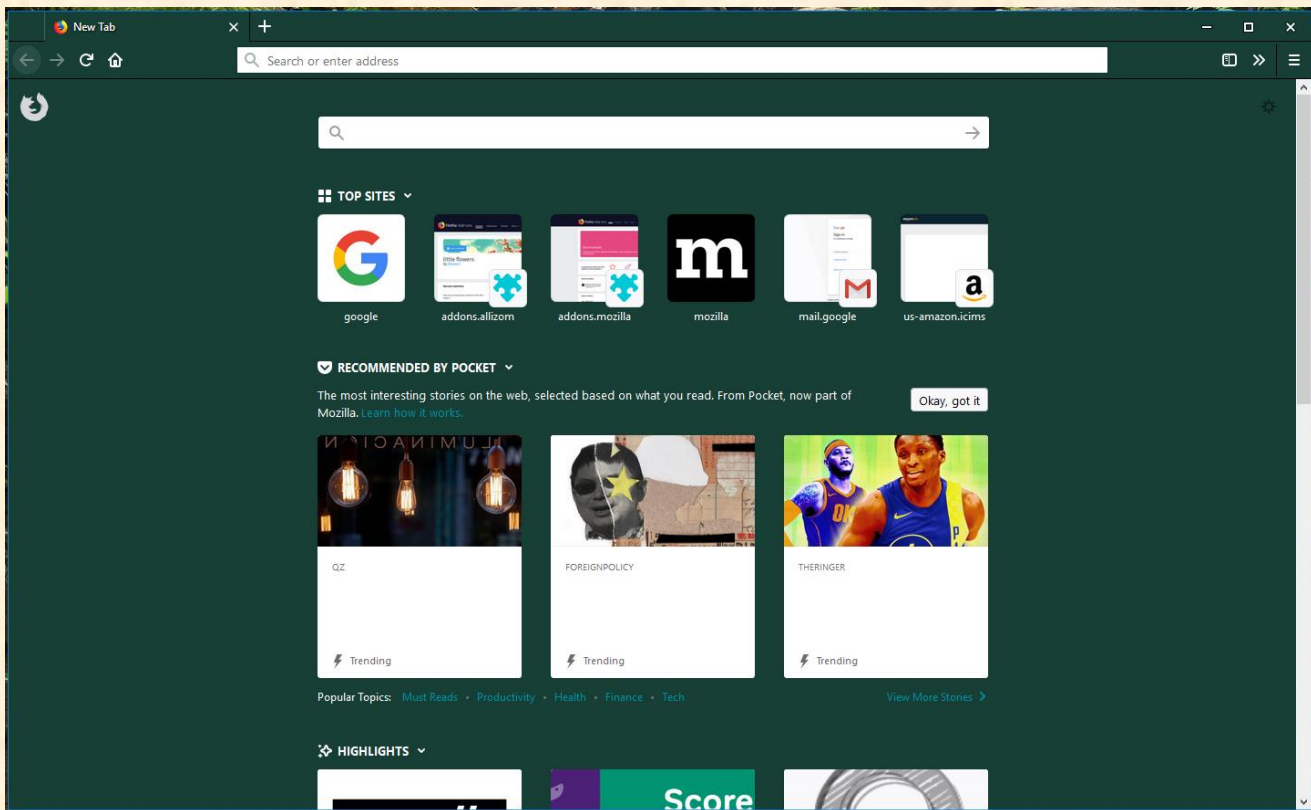




Team Mozilla Beta Presentation

Team Mozilla Beta Presentation

In-Product Page Styling



The Capstone Experience



Team Mozilla @ Design Day

Vivek Dhingra, Zhengyi Lian, Connor Masini, Dyl Stokes, Bogdan Pozderca

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team MSUFCU

Department of Computer Science and Engineering
Michigan State University
Spring 2018



From Students...
...to Professionals



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

Building Dreams *Together*

[Locations](#)[Careers](#)[Live Chat](#)[Open an Account](#)[Sign In](#)Routing Number: 272479663
Swift Code: MSUCUS44[LOANS](#)[ACCOUNTS](#)[SERVICES](#)[BUSINESS](#)[RESOURCES](#)

Your morning coffee
could win you \$800.

[Find Out More >](#)

SAVING MEMBERS MILLIONS

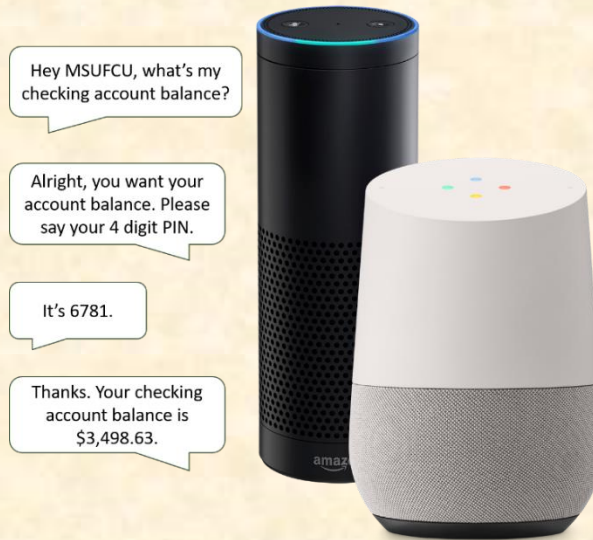
[Home Loans](#)[Auto Loan](#)

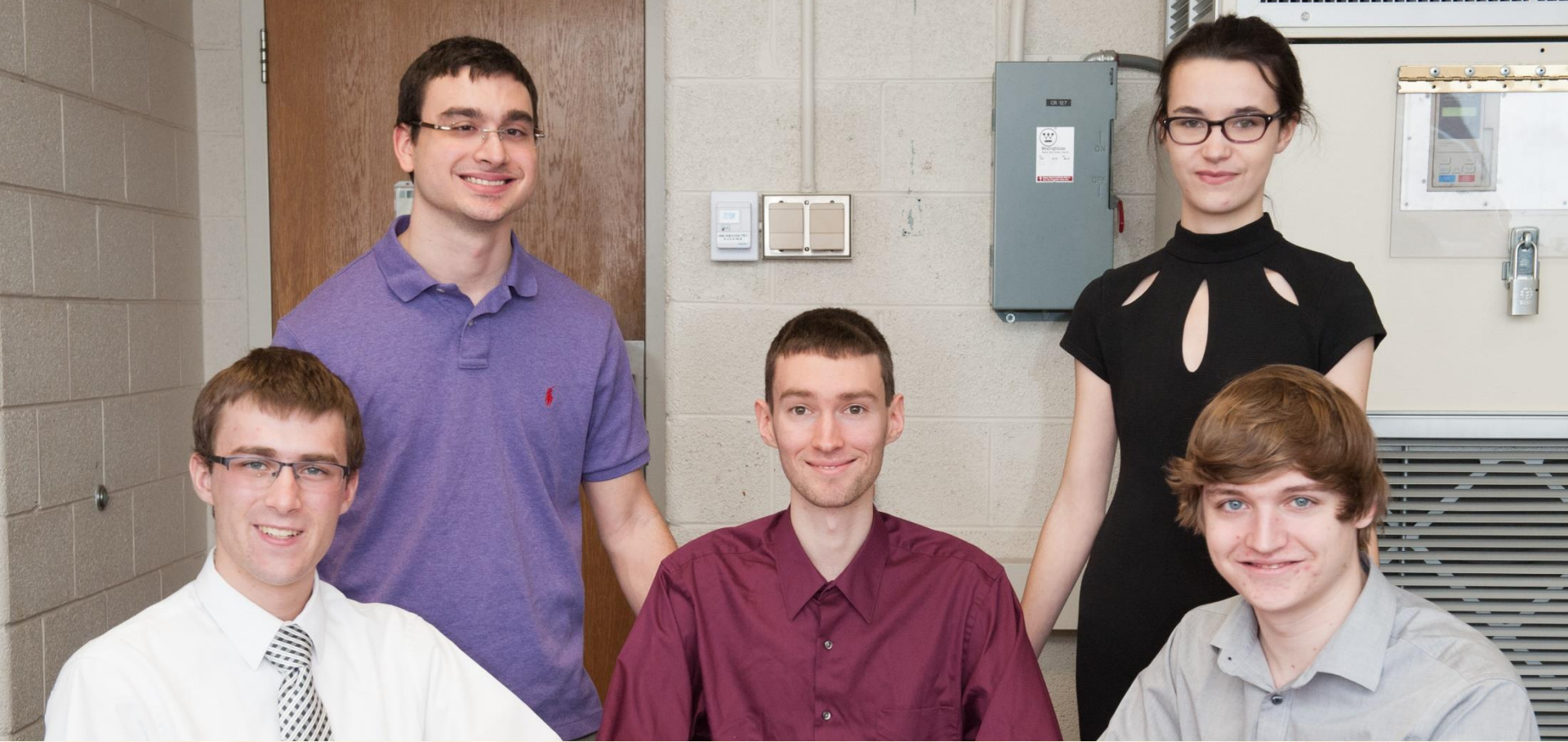
Team MSUFCU

Project Overview

Digital Assistant and Personal Financial Coach

- Functionalities
 - Offer Personalized Financial Coaching Services
 - Use Digital Assistant
- Features
 - Answer Questions and Provide Recommendations
 - Can I afford to buy that?
 - How much can I spend at the store today?
 - What do people like me spend on rent?
 - Take Actions and Provide Services
 - Handle Text and Voice Input
 - Create Middleware API to MSUFCU
 - Analyze Anonymized Account and Transaction Data
 - Support Apple iOS and Google Android Devices
 - Integrate with Various Services
 - Facebook Messenger
 - Apple iMessage
 - Amazon Alexa
 - Provide Administrative Web Portal
- Technologies
 - CSS / HTML / PHP / JavaScript
 - Apple iOS / Swift
 - Google Android / Java
 - Facebook Messenger API
 - Apple iMessage
 - Amazon Echo / Alexa Skills Kit
 - Machine Learning (ML)
 - Natural Language Processing (NLP)
 - MySQL / Encryption Based on SQL Standards






Team MSUFCU

Patrick Dame, Dallas Nowak, Michael Carter, Rachel Beard, Dane Holmberg

Team MSUFCU Project Plan Presentation

Screen Mockups: Android App



**Digital Assistant and Financial Coach
Login**

Email or account number

Password

LOG IN

Settings Account Info Log out

How may I assist you today?

What is my account balance?

Your current account balance is \$584.29.

Can I afford to buy a new TV right now?

Based on average new TV prices, and the fact that \$400 will be withdrawn on January 31st for your rent, you won't be able to afford a new TV.

How much do people my age spend on gas per month? Send

Settings Account Info Log out

View Chat Archives account

Change Theme to buy right

En Espanol

How may I assist you today?

Your current account balance is \$584.29.

Based on average new TV prices, and the fact that \$400 will be withdrawn on January 31st for your rent, you won't be able to afford a new TV.

How much do people my age spend on gas per month? Send

Settings Account Info Log out

Account Number: 8675309

What is my balance?

Can I afford to buy a new TV right now?

View account transactions

Change email or password

How may I assist you today?

Your current account balance is \$584.29.

Based on average new TV prices, and the fact that \$400 will be withdrawn on January 31st for your rent, you won't be able to afford a new TV.

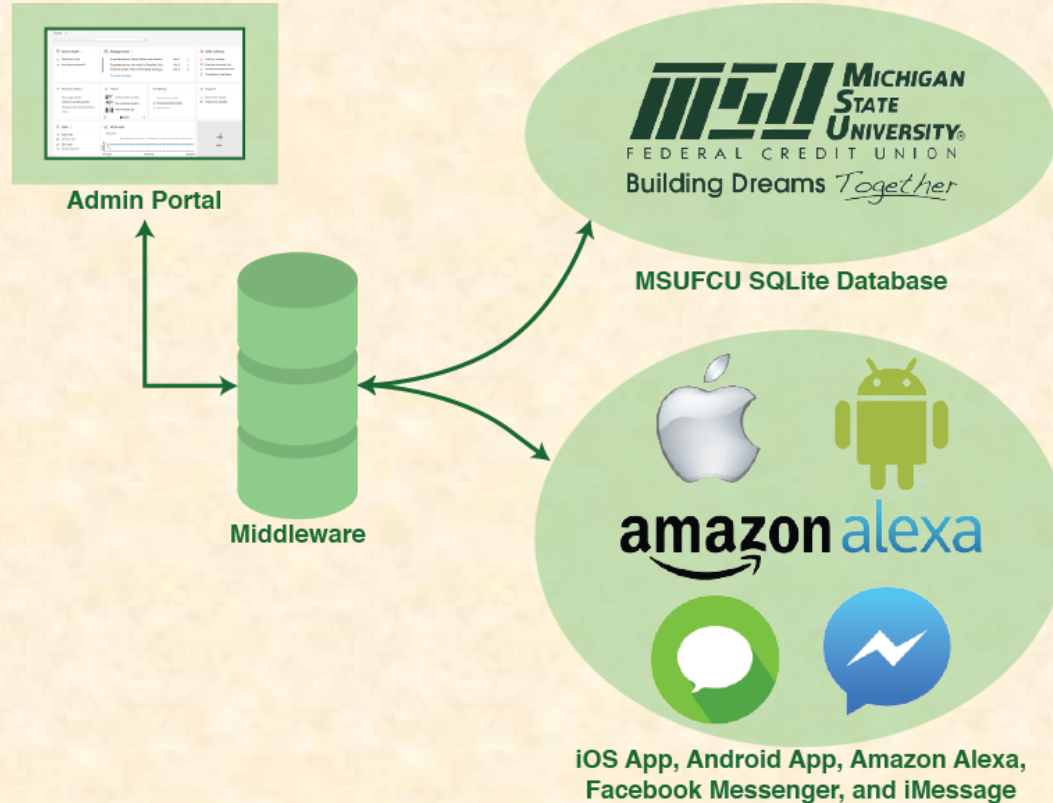
How much do people my age spend on gas per month? Send

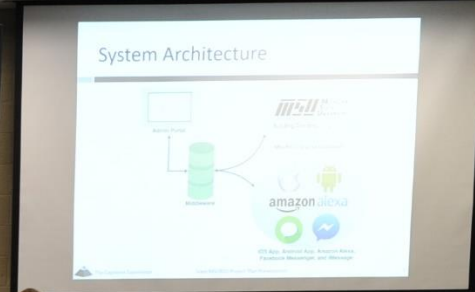
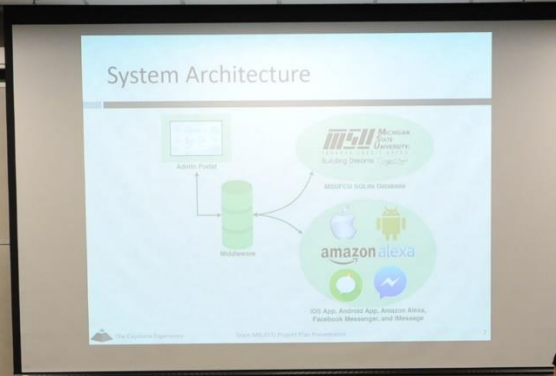
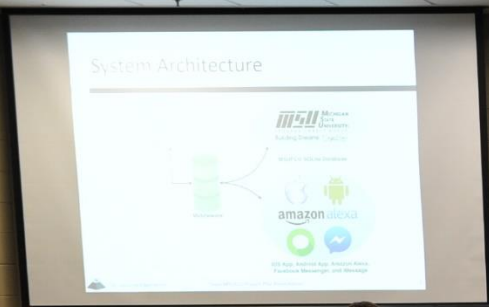


Team MSUFCU Project Plan Presentation

Team MSUFCU Project Plan Presentation

Architecture Diagram

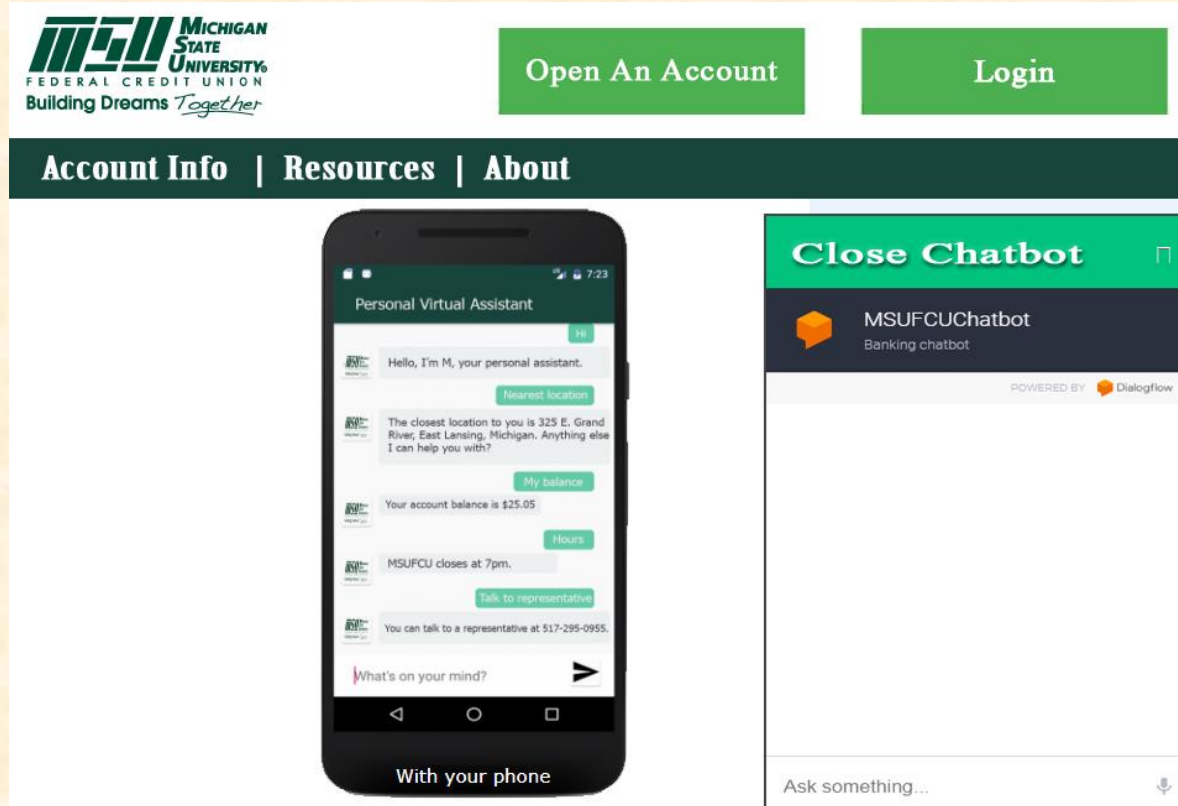




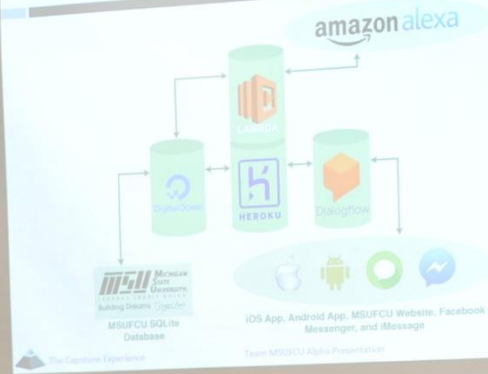
Team MSUFCU
Project Plan Presentation

Team MSUFCU Project Plan Presentation

Screen Mockup: Web Admin Portal



System Architecture



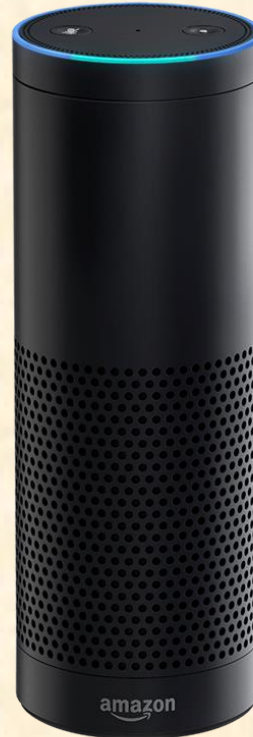
Team MSUFCU
Alpha Presentation

Team MSUFCU Alpha Presentation

Amazon Alexa

Alexa, transfer \$500
from my checking account.
to another checking
account.

6000.



Welcome, Kathryn.
How may I help you?

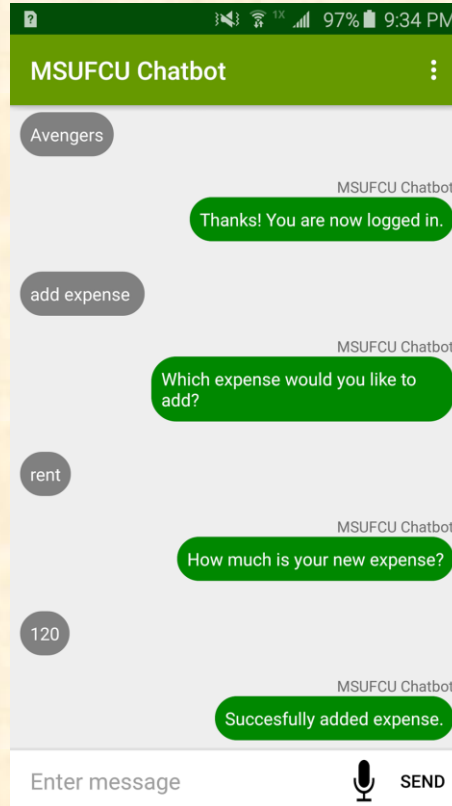
Please enter the
account number of the
account you would like
to transfer to.

Please confirm
transferring \$500 from
your checking
account.



Team MSUFCU Alpha Presentation

Android App

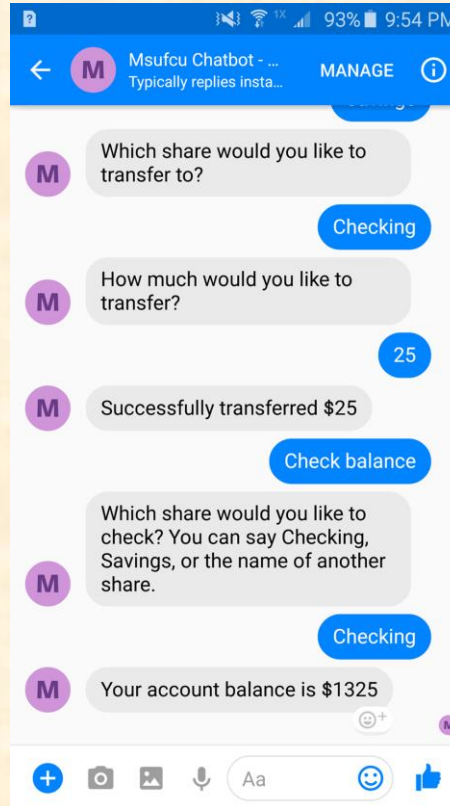




Team MSUFCU Alpha Presentation

Team MSUFCU Alpha Presentation

Facebook Messenger

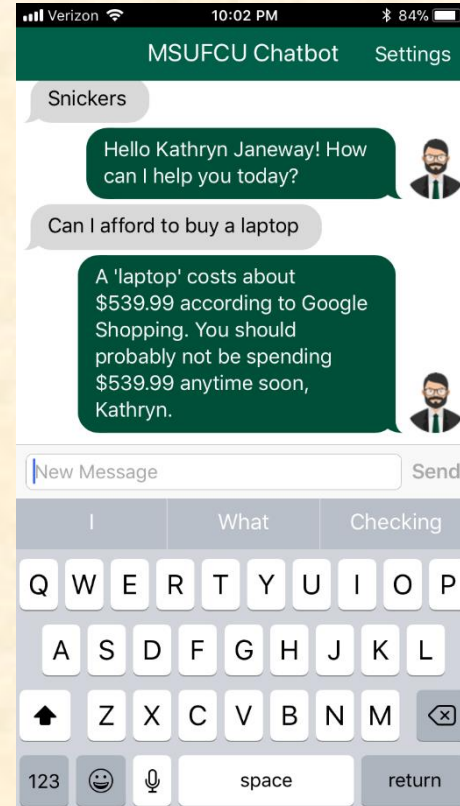
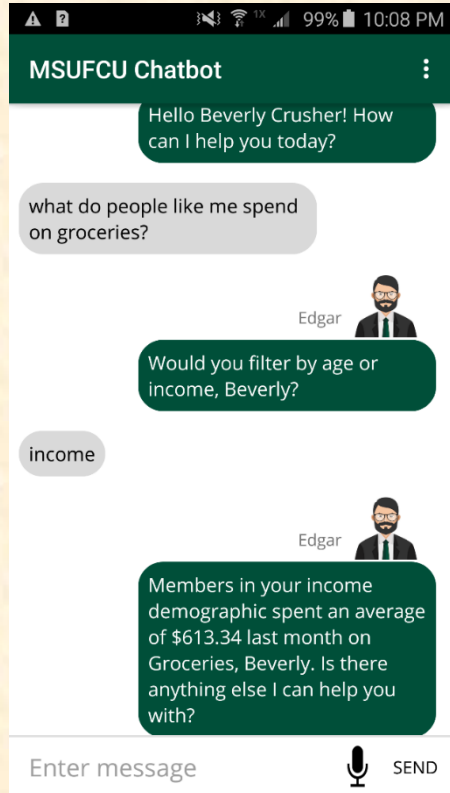




Team MSUFCU Beta Presentation

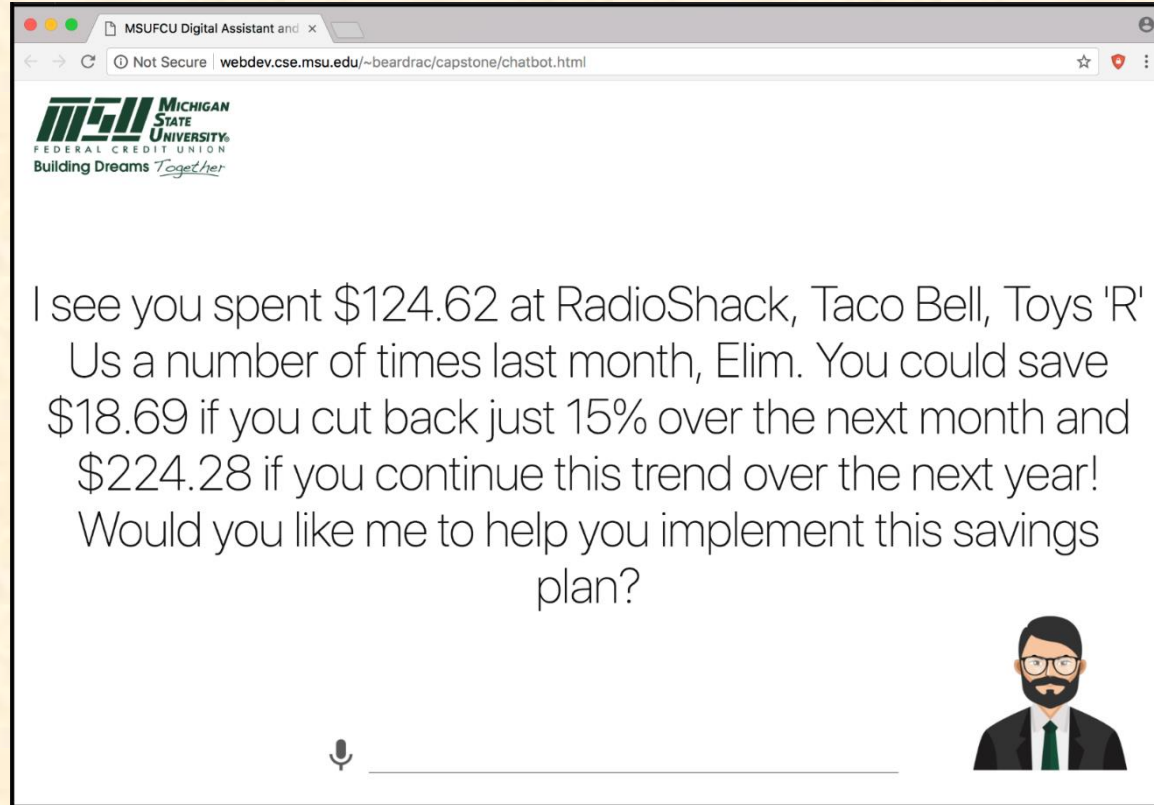
Team MSUFCU Beta Presentation

Android and iOS Chatbots

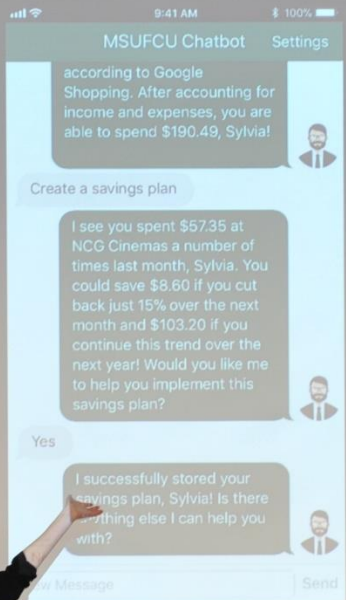


Team MSUFCU Beta Presentation

Web Application



Creditors
Non-Current
Creditors
Capital
Profit



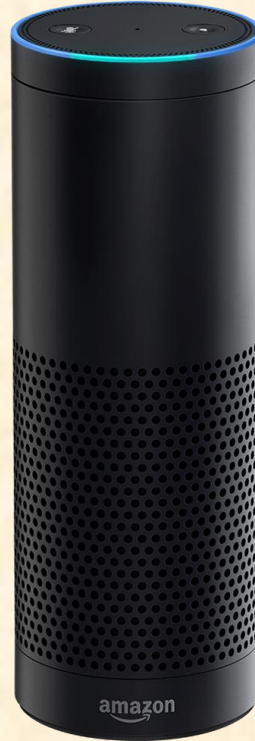
Team MSUFCU Beta Presentation

Team MSUFCU Beta Presentation

Amazon Alexa

Alexa, transfer \$500
from my checking account.
to another checking
account.

6000.



Welcome, Kathryn. How
may I help you?

Please say the account
number of the account
you would like to
transfer to.

Please say your Alexa
PIN to confirm this
transaction of \$500 to
account 6000





Team MSUFCU @ Design Day

Patrick Dame, Rachel Beard, Michael Carter, Dallas Nowak, Dane Holmberg

MICHIGAN STATE
UNIVERSITY

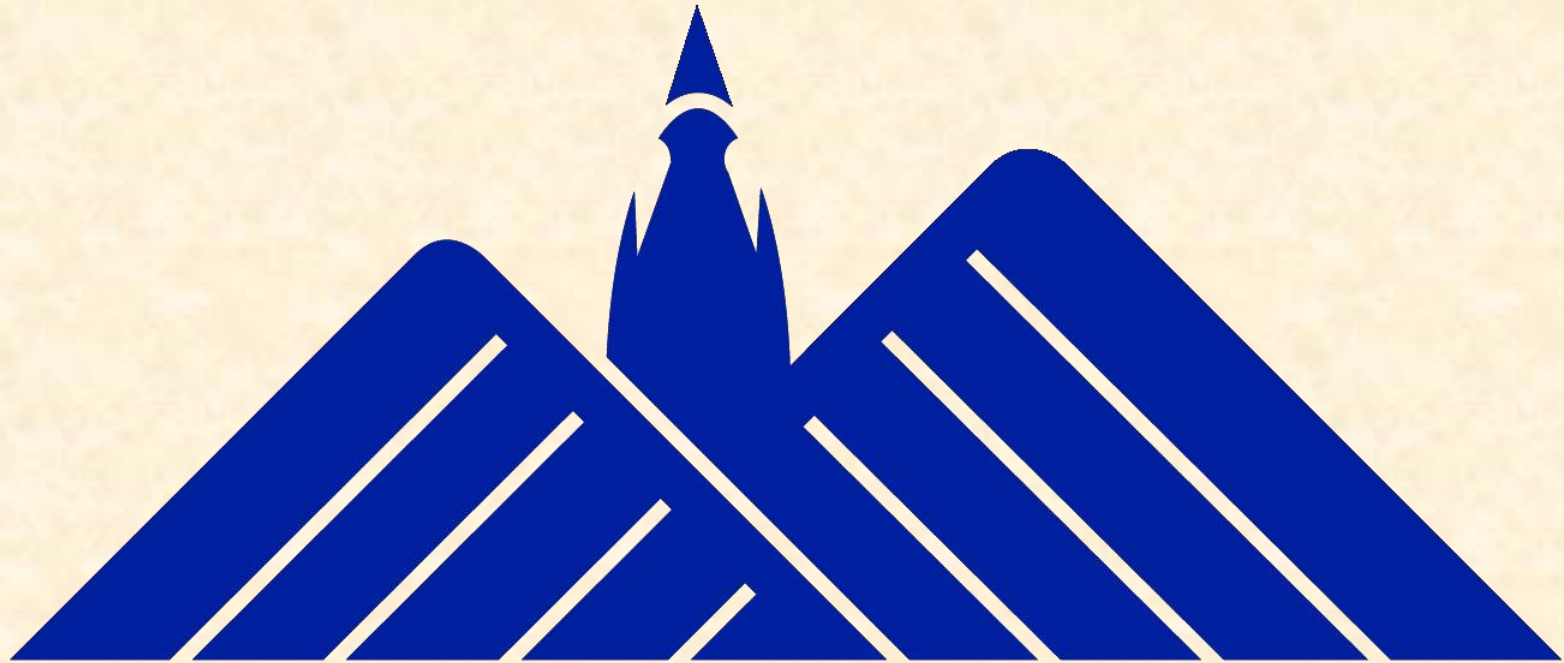
The Capstone Experience

Team Phoenix Group

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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



THE PHOENIX GROUP



[SEARCH PRODUCTS](#)

[BROWSE PRODUCTS](#)

[OUR SERVICES](#)

[ABOUT](#)

[LOGIN](#)

[TPG CANADA](#)

WELCOME TO THE PHOENIX GROUP

RIISING TO NEW LEVELS IN POS DEPLOYMENT

[BROWSE PRODUCTS](#)

[OUR SERVICES](#)

Team Phoenix Group Project Overview

Customer Service System with Chatbot

- Functionalities
 - Enhance Customer Service Experience
 - Ensure Easy Access to Product User Manuals
 - Answer Customer Questions via Chatbot
- Features
 - Create Web and Android Apps
 - Manage Quick Reference Guides (QRCs)
 - Ingest by Photo or PDF
 - Determine Keywords via OCR
 - Search via Text and Voice
 - Display Like E-Book
 - Provide Companion Administrative App
 - Implement Chatbot on Corporate Website
 - Product Inventory
 - Available QRCs
 - Various Frequently Asked Questions (FAQs)
 - Drive Customers to Contact Sales Reps
- Technologies
 - CSS / HTML / PHP / JavaScript
 - Google Android Tablets and Phones / Java
 - Microsoft Bot Framework
 - Microsoft Language Understanding Intelligent Service (LUIS)
 - Docker
 - Kubernetes
 - MongoDB
 - Optical Character Recognition (OCR)



O'Fallon, Missouri

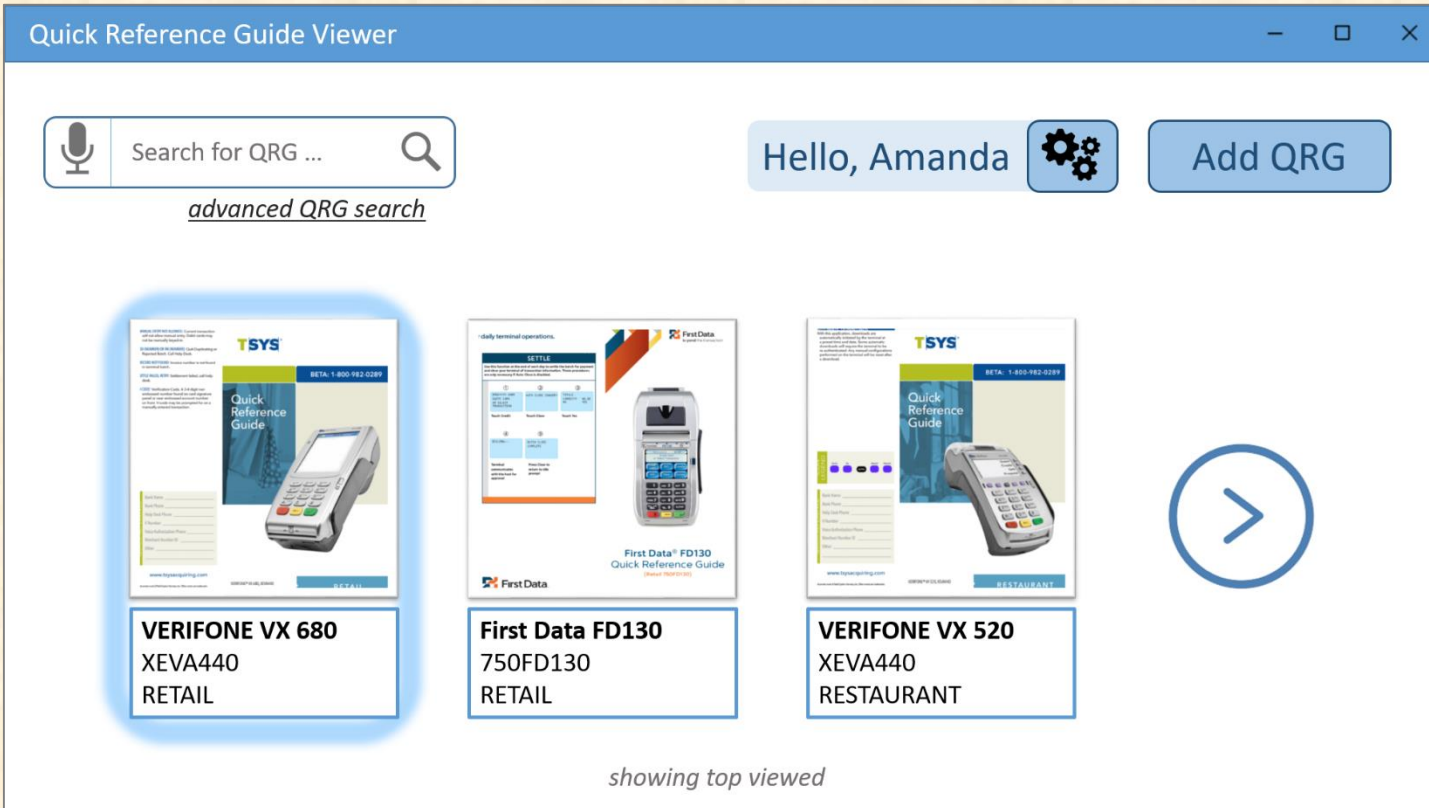


Team Phoenix Group

James Finch, Sarah Fillwock, Dan Shumaker, Fatema Alsaleh, Aman Goshu

Team Phoenix Group Project Plan Presentation

Screen Mockup: QRG Home Screen

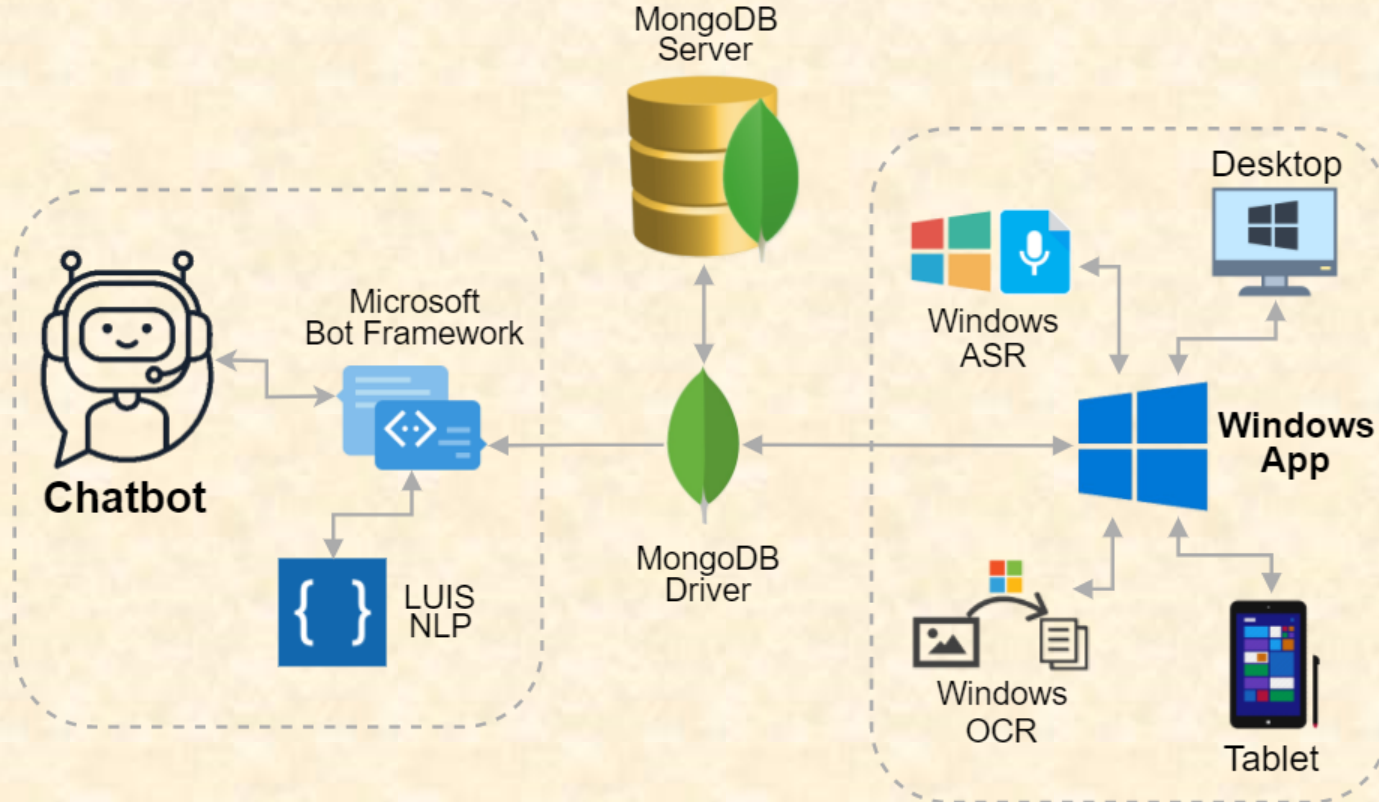


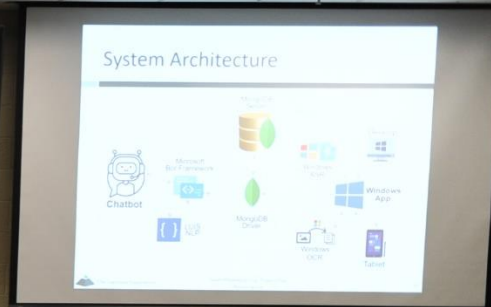
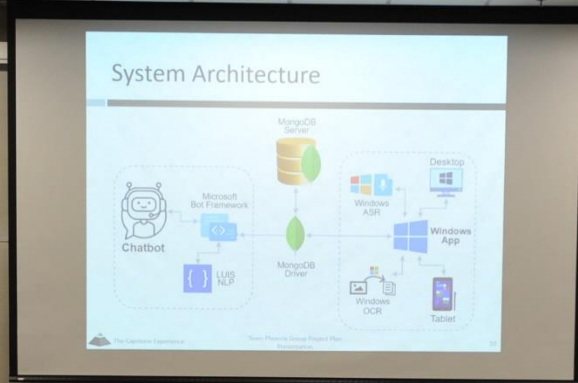


Team Phoenix Group Project Plan Presentation

Team Phoenix Group Project Plan Presentation

Architecture Diagram









Team Phoenix Group
Project Plan Presentation

Team Phoenix Group Project Plan Presentation

Screen Mockup: QRG Edit Screen

Quick Reference Guide Viewer

←



Save


MANUAL ENTRY NOT ALLOWED: Current transaction will not allow manual entry. Debit cards may not be manually keyed-in.

OD (NUMBER) OR RB (NUMBER): Quit Duplicating or Rejected Batch. Call Help Desk.

RECORD NOT FOUND: Invoice number is not found in terminal batch.


SETTLE FAILED, RETRY: Settlement failed, call help desk.

V CODE: Verification Code. A 3-4 digit non-embossed number found on card signature panel or near embossed account number on front. Vcode may be prompted for on a manually-entered transaction.



BETA: 1-800-982-0289

Quick Reference Guide



1 2 3 4

manufacturer

terminal type

application type

product number

version

Add comment ...

<

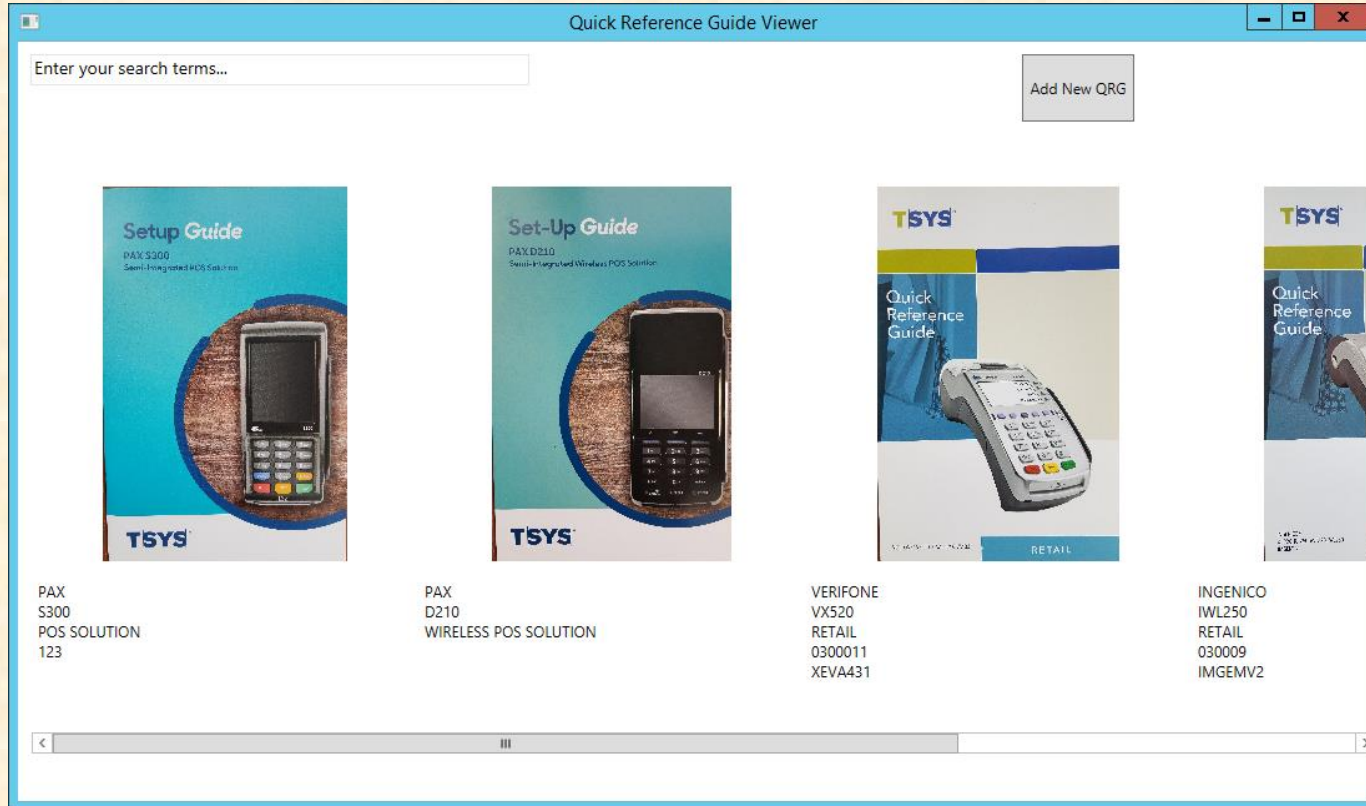
>



Team Phoenix Group Alpha Presentation

Team Phoenix Group Alpha Presentation

QRG Viewer Home Screen



Team Phoenix Group Alpha Presentation

QRG Viewer View Screen

Quick Reference Guide Viewer

Home Edit

REVERSAL (FULL/PARTIAL)
Reversals may only be processed on sales within the current batch.

- Press the purple **DOWN ARROW** key until Reversal displays
- Select **REVERSAL**
- Select **FULL** (full amount reversed) or **PARTIAL** (partial amount reversed)
- Select retrieval method: **INV#** (invoice #) or **AMT** (amount)
- Enter retrieval information, and press **ENTER**
- Transaction displays on screen; select **YES** (reverses trans), **NO** (returns to last screen), or **NEXT** (scrolls to next trans)
 - If No or Next, follow prompts.
 - If partial reversal, enter the dollar amount to be reversed and press **ENTER**
- Terminal dials out, receipt prints

DEBIT RE-ENTER

- Press the purple **DOWN ARROW** key until Offline displays
- Select **OFFLINE**
- Enter transaction amount and press **ENTER**
- Select **YES**
- Swipe customer card or manually enter account number and press **ENTER**
- Select **DEBIT**
- Select type: **SALE** or **REFUND**
- Enter network ID (three digits), and press **ENTER**
- Enter settlement date (MMDD), and press **ENTER**
- Enter original transaction date (MMDDYY), and press **ENTER**
- Enter original time (HHMMSS)

CREDIT OFFLINE ENTRY

- Press the purple **DOWN ARROW** key until Offline displays
- Select **OFFLINE**
- Enter sale amount and press **ENTER**
 - Enter tip amount and press **ENTER**, or press **ENTER** to bypass.
- Select **YES**
- Swipe customer card, insert customer card, or manually enter account number and press **ENTER**
- Select **CREDIT**
 - Enter expiration date (MMYY) and press **ENTER**
 - Imprint the card and press **ENTER**
- Enter transaction ID (15 characters), and press **ENTER**
- Enter approval code (six digits), and press **ENTER**
- Receipt prints

AUTHORIZATION ONLY

- Press the purple **DOWN ARROW** key
- Select **AUTH ONLY**
- Enter sale amount and press **ENTER**
- Select **YES**
- Swipe customer card, insert customer card, or manually enter account number and press **ENTER**
 - Select the desired language
 - Enter expiration date (MMYY) and press **ENTER**
 - Imprint the card and press **ENTER**
- Terminal dials out
- Remove the card
- Receipt prints

Manufacturer
VERIFONE

Terminal Type
VX520

Application Type
RETAIL

Product Number
0300011

Version
XEVA431

Comments

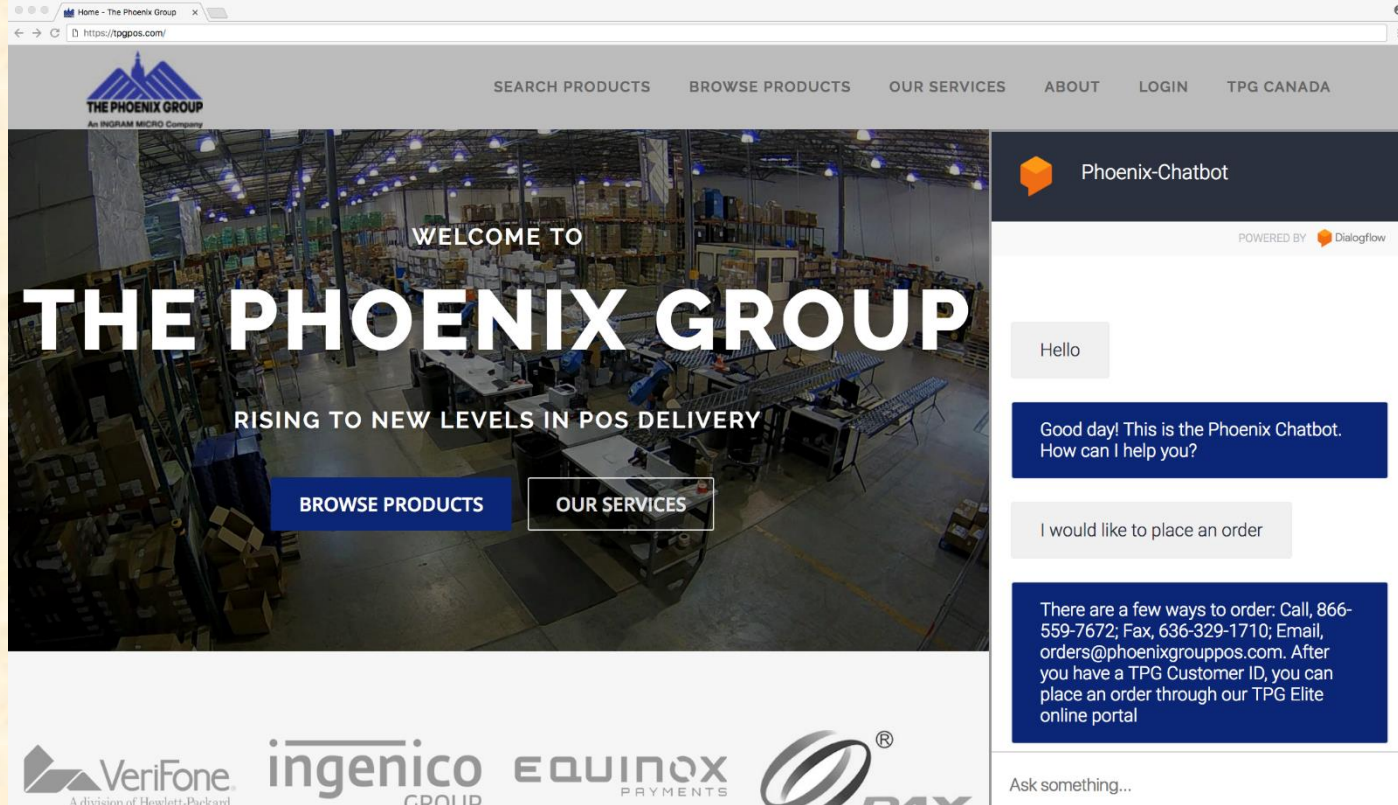
Previous Next



Team Phoenix Group Alpha Presentation

Team Phoenix Group Alpha Presentation

Customer Service Chatbot



The screenshot shows the Phoenix Group website (tpgpos.com) with a large banner image of a warehouse. The banner text reads: "WELCOME TO THE PHOENIX GROUP RISING TO NEW LEVELS IN POS DELIVERY". Navigation links include "SEARCH PRODUCTS", "BROWSE PRODUCTS", "OUR SERVICES", "ABOUT", "LOGIN", and "TPG CANADA". A chatbot overlay on the right is titled "Phoenix-Chatbot" and is powered by Dialogflow. The chatbot interface shows a user input "Hello", a bot response "Good day! This is the Phoenix Chatbot. How can I help you?", and a user input "I would like to place an order". The bot then provides ordering information: "There are a few ways to order: Call, 866-559-7672; Fax, 636-329-1710; Email, orders@phoenixgrouppos.com. After you have a TPG Customer ID, you can place an order through our TPG Elite online portal". The footer of the website features logos for VeriFone, ingenico GROUP, EQUINOX PAYMENTS, and a stylized logo.

Home - The Phoenix Group
https://tpgpos.com/

THE PHOENIX GROUP
An INGRAM MICRO Company

SEARCH PRODUCTS BROWSE PRODUCTS OUR SERVICES ABOUT LOGIN TPG CANADA

WELCOME TO
THE PHOENIX GROUP
RISING TO NEW LEVELS IN POS DELIVERY

BROWSE PRODUCTS OUR SERVICES

Phoenix-Chatbot
POWERED BY Dialogflow

Hello

Good day! This is the Phoenix Chatbot. How can I help you?

I would like to place an order

There are a few ways to order: Call, 866-559-7672; Fax, 636-329-1710; Email, orders@phoenixgrouppos.com. After you have a TPG Customer ID, you can place an order through our TPG Elite online portal

Ask something...

VeriFone
A division of Hewlett-Packard

ingenico GROUP

EQUINOX PAYMENTS

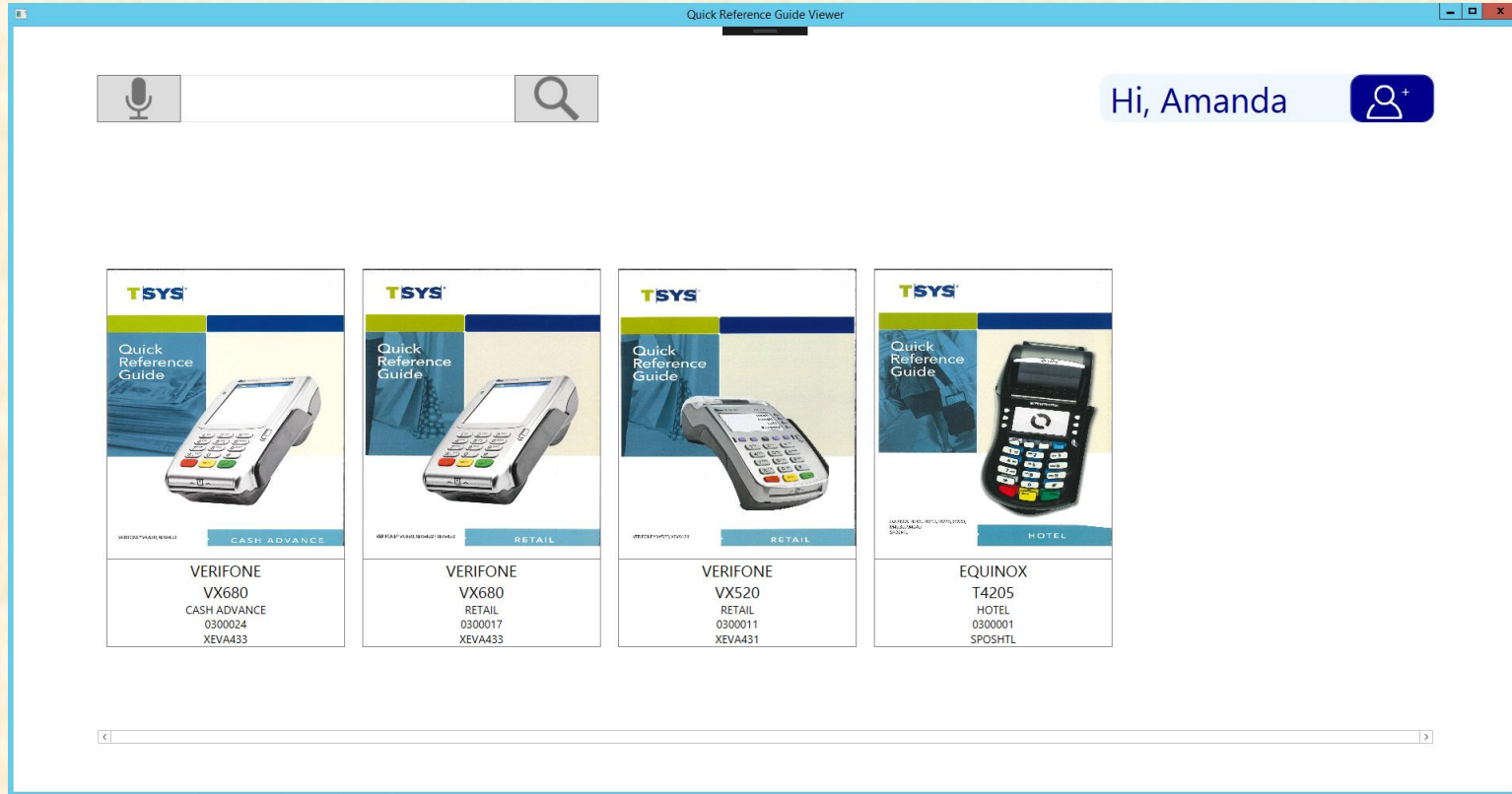
DAY



Team Phoenix Group Beta Presentation


Team Phoenix Group Beta Presentation

QRG Manager Application: Home Screen



Team Phoenix Group Beta Presentation

QRG Manager Application: Administration Screen



User

User	Add QRG	Edit QRG	Admin
James Abbot			
Fatema Alsaleh			
Lauren Anderson	+		
Jackson Avery	+		
Olivia Baker			
Dan Bell			
Mary Bunch			
Jonny Dowdall			
Bob Dyksen	+		
Wayne Dyksen	+		
Emily Enbody			
Charles Erickson			
Sarah Fillwock			
James Finch			
James Mariani	+		
Erin Owen			

Lauren Anderson

☐ Administrator

☒ + Add QRG

☐ Modify/Remove QRG

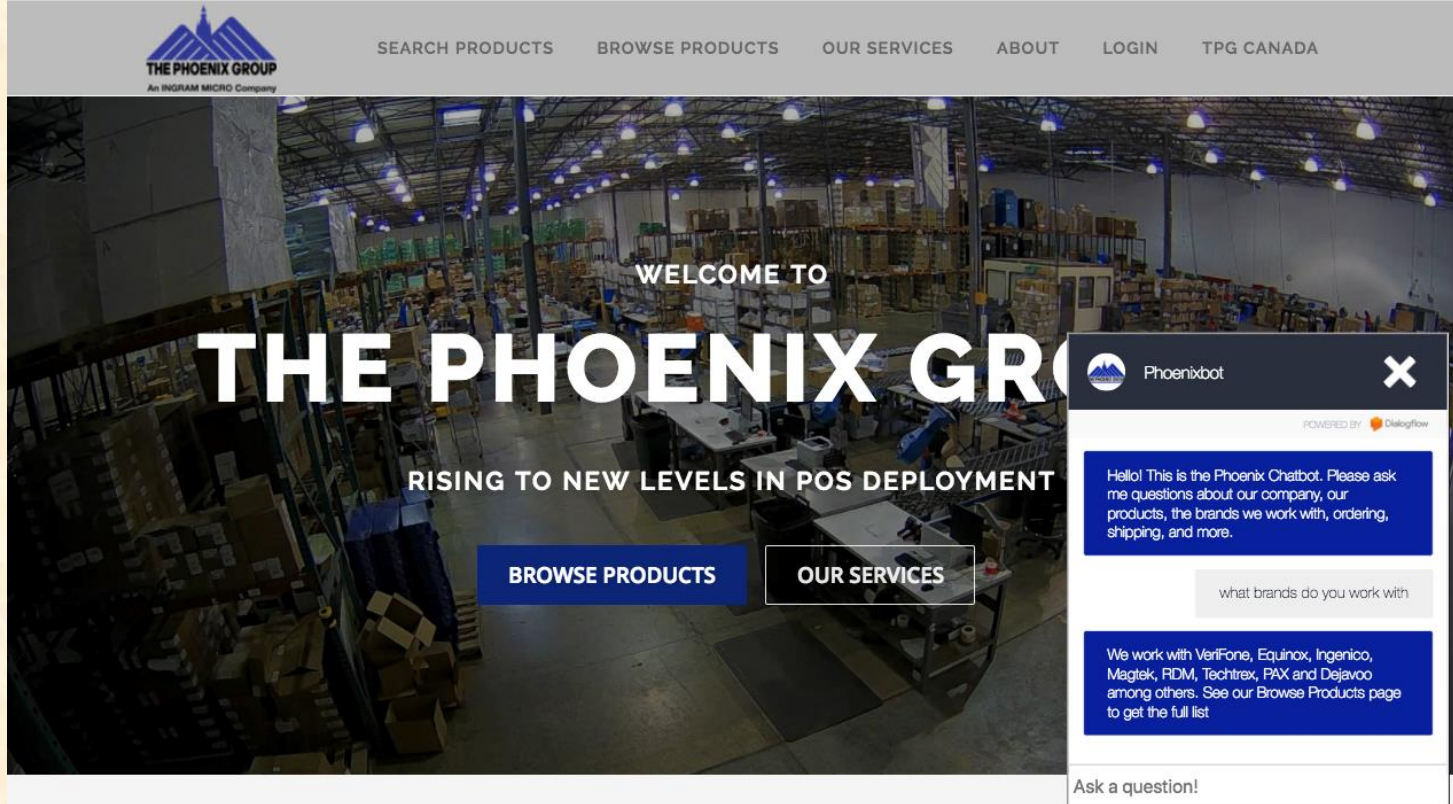
Delete User



Team Phoenix Group Beta Presentation

Team Phoenix Group Beta Presentation

Customer Service Chatbot



The screenshot shows the homepage of The Phoenix Group, an Ingram Micro Company. The background is a large warehouse filled with boxes and shelving units. The website's navigation bar at the top includes links for SEARCH PRODUCTS, BROWSE PRODUCTS, OUR SERVICES, ABOUT, LOGIN, and TPG CANADA. The main content area features the text "WELCOME TO THE PHOENIX GROUP" and "RISING TO NEW LEVELS IN POS DEPLOYMENT". Below this, there are two buttons: "BROWSE PRODUCTS" and "OUR SERVICES". A chatbot overlay is visible on the right side of the page. The chatbot is titled "Phoenixbot" and is powered by Dialogflow. It contains a greeting message, a user input field with the text "what brands do you work with", and a response message listing various brands. At the bottom of the chatbot, there is a prompt "Ask a question!".

THE PHOENIX GROUP
An INGRAM MICRO Company

SEARCH PRODUCTS BROWSE PRODUCTS OUR SERVICES ABOUT LOGIN TPG CANADA

WELCOME TO
THE PHOENIX GROUP

RISING TO NEW LEVELS IN POS DEPLOYMENT

BROWSE PRODUCTS OUR SERVICES

Phoenixbot
POWERED BY Dialogflow

Hello! This is the Phoenix Chatbot. Please ask me questions about our company, our products, the brands we work with, ordering, shipping, and more.

what brands do you work with

We work with VeriFone, Equinox, Ingenico, Magtek, RDM, Techtrex, PAX and Dejavo among others. See our Browse Products page to get the full list

Ask a question!

The Capstone Experience



Team Phoenix Group @ Design Day

Sarah Fillwock, James Finch, Aman Goshu, Fatema Alsaleh, Dan Shumaker

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Proofpoint

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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

proofpoint™

proofpoint.

PRODUCTS ▾

SOLUTIONS ▾

THREAT CENTER ▾

PARTNERS ▾

SUPPORT ▾

☰

LOGIN ▾

CONTACT



GARTNER MQ LEADER IN ENTERPRISE INFORMATION ARCHIVING FOR 6 YEARS RUNNING

GET THE GARTNER REPORT

TALK TO SALES

Team Proofpoint Project Overview

Next Generation Malware Analysis Platform

- Functionalities
 - Process Millions of Malware Samples Daily
 - Develop New and Innovative Techniques
- Features
 - Build Lifecycle Processing Dashboard
 - Leverage Many Malware Tools
 - Create Malware Signatures Automatically
 - Identify “Like” Samples and Clusters
 - Visualize Malware Clusters
 - Provide Drill Down Capability
 - Show Signatures Created
 - Prioritize Samples for Further Analysis
- Technologies
 - Malware Sandboxing
 - Network Intrusion Detection Systems (IDS)
 - Statistical Analysis



proofpoint[™]
Sunnyvale, California

The Capstone Experience



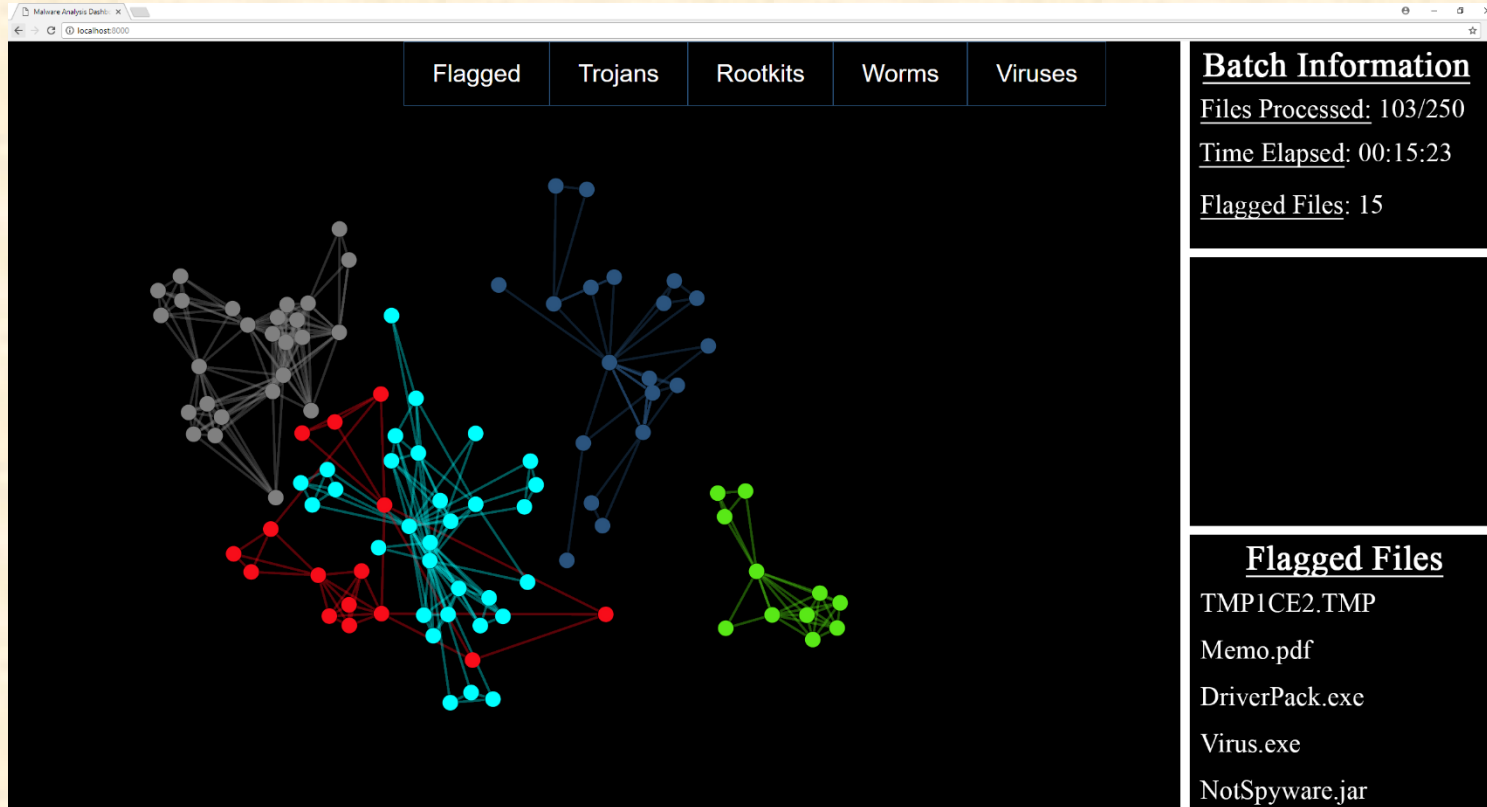


Team Proofpoint

Graham Thomas, Yash Patel, Crystal Lewis, Brad Doherty, George Zhao

Team Proofpoint Project Plan Presentation

Screen Mockup: Nodal Graph

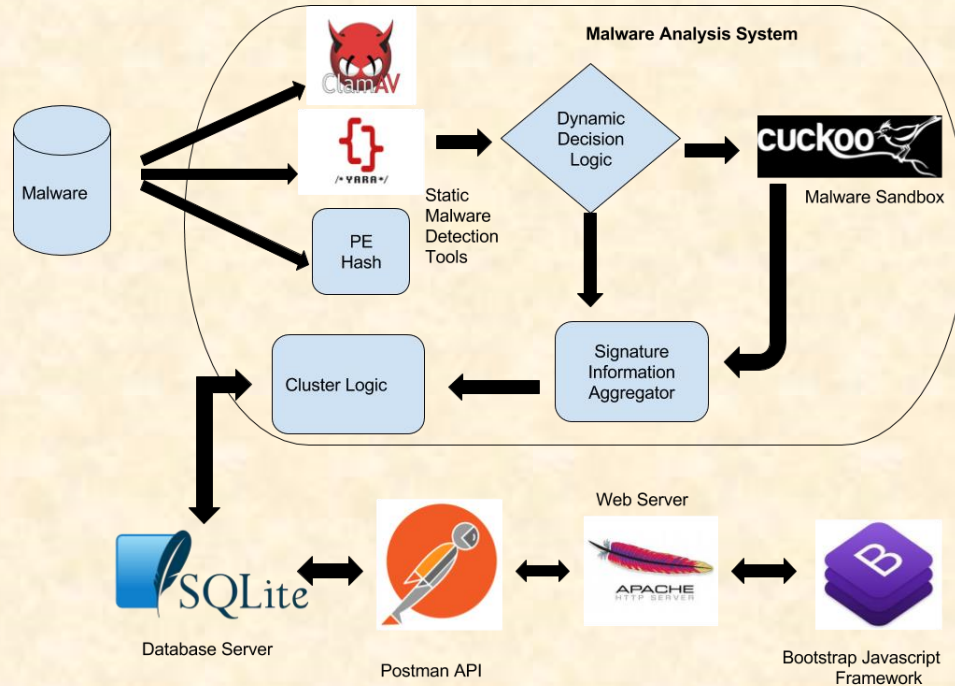


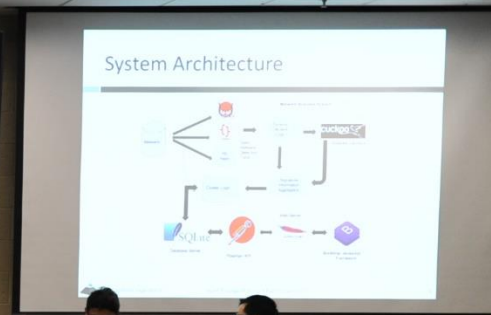
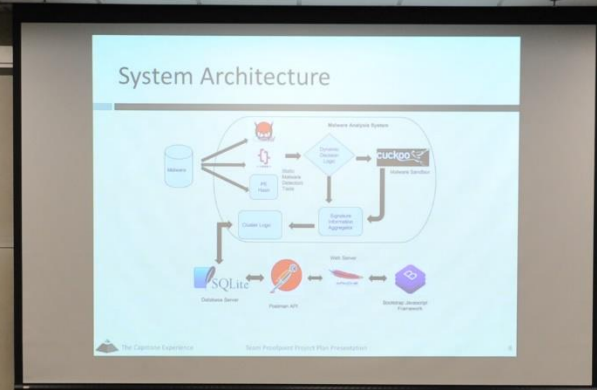
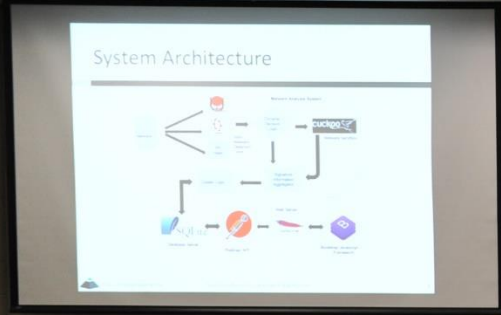


Team Proofpoint Project Plan Presentation

Team Proofpoint Project Plan Presentation

Architecture Diagram

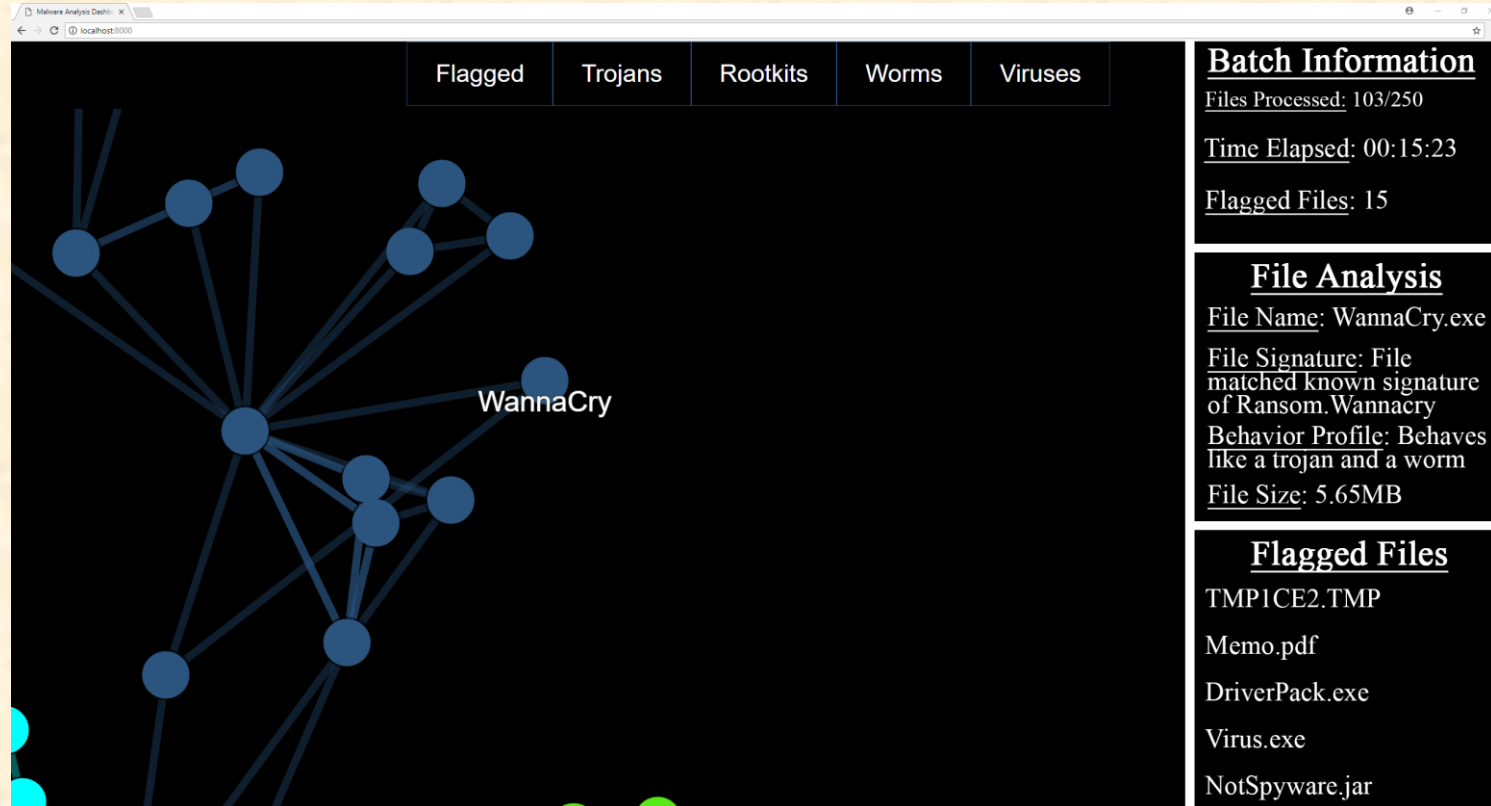


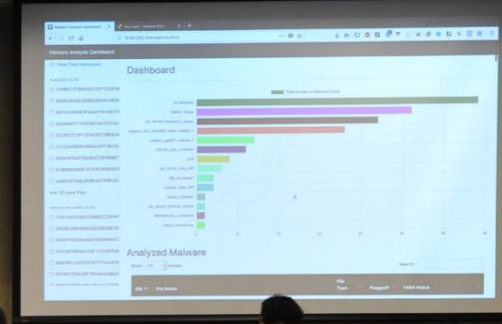
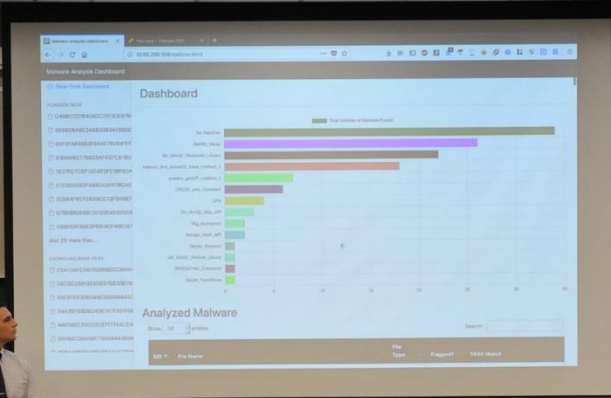


Team Proofpoint
Project Plan Presentation

Team Proofpoint Project Plan Presentation

Screen Mockup: File Analysis





Team Proofpoint Alpha Presentation

Team Proofpoint Alpha Presentation

Filtered Results for Table

Analyzed Malware

Show 50 entries

Search: XMRIG_Miner

SID ↑↓	File Name ↑↓	File Type ↑↓	Flagged? ↑↓	YARA Match ↑↓
1	C6A13AFC5831096B0CCB54FBB2B3D14E4BA06E9C7A363C884B1383C5EE81FAA	PE32 executable (DLL) (GUI) Intel 80386 (stripped to external PDB), for MS Windows	No	XMRIG_Miner
8	48678EC33D22C571774ACE303C4C771B46C8121FBE46AFA807E54787671DE13	PE32 executable (DLL) (GUI) Intel 80386 (stripped to external PDB), for MS Windows	No	XMRIG_Miner



Team Proofpoint Alpha Presentation

In Depth Analysis of a File

In-Depth Analysis of 6BDE693CE8EB45445C0B38E3DE3AF97E0D21C8D33E8408B52E711EA67ABFD27

File Statistics and Information

File Information	Statistic Information
File Extension	PE32+ executable (console) x86-64, for MS Windows
File Size	330.8 KB (330752 bytes)
Total Analysis Time	0:00:00.286
Static Analysis Time	0:00:00.286
Dynamic Analysis Time	00:00:00

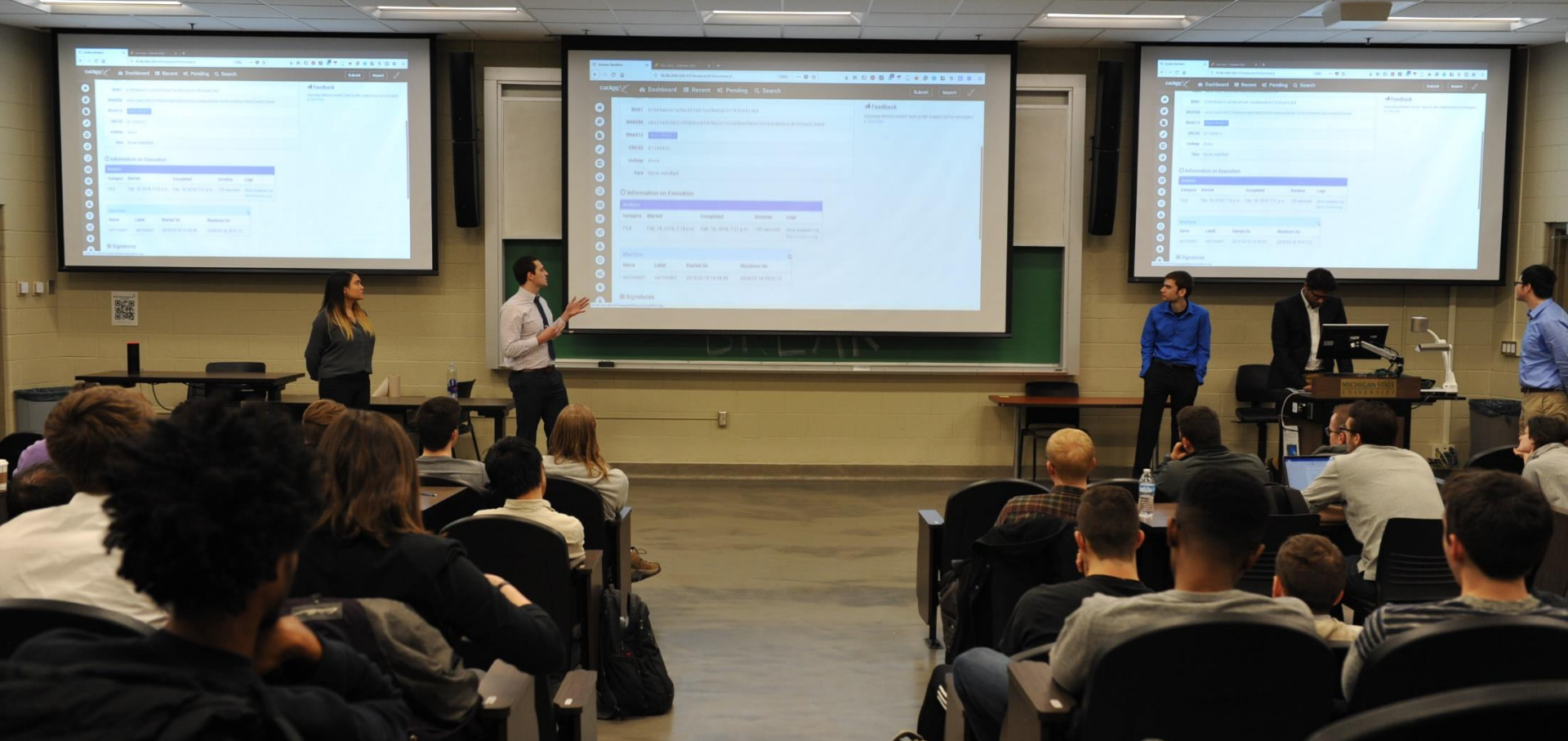
File Hashes

Hash Types	File Hash
PE Hash	3:N9K8gKRTeJ3HXKlNzQhgER4QmNWdtTqoEqhRYR+Ngk7n4R:N7TENXbQTR45ItqolhR8+yf
SHA256	6BDE693CE8EB45445C0B38E3DE3AF97E0D21C8D33E8408B52E711EA67ABFD274
SHA1	8200F58FC04B9731F20EB436E7D9C29ABB74D676
MD5	08C8682AB609AB30F189EC06EEE3CBD3

Similar Malware

File Name	PE Hash
517E899D1F9EB8656F3683E9216C904BD1061E0DFB26308C1A4E35A8B913167	3:N9K8gKRTeJ3HXKQLxchQndTGz6VXU55VD5dmUkRgWQkMKSr:N7TENXL1HRPXsOmm1JR
4E33D223ED5CC0ADEE5612589A3AB69720321CF9335F627430E2C73E9833E4	3:N9K8gKRTeJ3HXKRqHnhzQTUXhfkQnXUmjnwQvXSRWVg26cPUt:N7TENX7HhzGOHVPjTWQtK238n
695C7B02EB9F738B5E736C7088693D013CD84CE5F778CAF9F93537739427178	3:N9K8gKRTeJ3HXKThnVXgSSWn1ITHQWt/SIQWSS1XSUSVn:N7TENXvg1JyMGCUSVn





Team Proofpoint Alpha Presentation

Team Proofpoint Alpha Presentation

Cuckoo Webpage

The screenshot displays the Cuckoo Sandbox web interface. The top navigation bar includes the Cuckoo logo and links for Dashboard, Recent, Pending, and Search. A left sidebar lists various analysis categories: Summary, Static Analysis, Extracted Artifacts, Behavioral Analysis, Network Analysis (highlighted), Dropped Files (0), Dropped Buffers, Process Memory (1), Compare Analysis, Export Analysis, Reboot Analysis, Options, Feedback, and Unlock sidebar. The main content area is titled 'Network Analysis' and features a summary table with columns for Hosts (2), DNS (2), TCP (1), and UDP. Below this, a detailed view of a network request is shown. The request is a GET to http://www.msftncsi.com/ncsi.txt, returning a 200 status. The 'REQUEST' section shows the raw data: ': GET /ncsi.txt HTTP/1.1', 'Connection: Close', 'User-Agent: Microsoft NCSI', and 'Host: www.msftncsi.com'. The 'BODY' section at the bottom shows the request body in hexadecimal and plaintext, with a '16 bytes' tab selected, displaying the hex string '00000000: 4d69 6372 6f73 6f66 7420 4e43 5349' and the plaintext 'Microsoft.NCSI'.

cuckoo Dashboard Recent Pending Search

Summary
Static Analysis
Extracted Artifacts
Behavioral Analysis
Network Analysis
Dropped Files 0
Dropped Buffers
Process Memory 1
Compare Analysis
Export Analysis
Reboot Analysis
Options
Feedback
Unlock sidebar

Network Analysis

Hosts 2	DNS 2	TCP 1	UDP
---------	-------	-------	-----

GET → 200 http://www.msftncsi.com/ncsi.txt

→ REQUEST

```
: GET /ncsi.txt HTTP/1.1
Connection: Close
User-Agent: Microsoft NCSI
Host: www.msftncsi.com
```

BODY request response plaintext hex 16 bytes 32 bytes 48 bytes 64 bytes

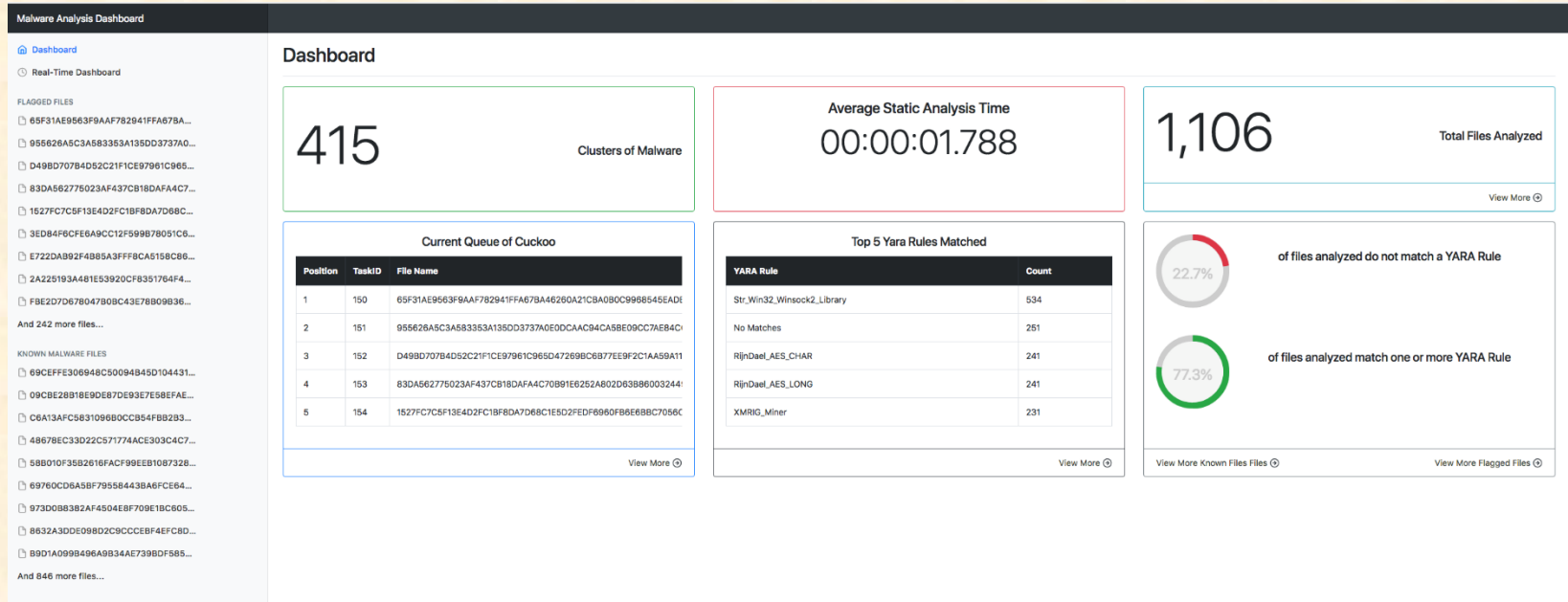
00000000: 4d69 6372 6f73 6f66 7420 4e43 5349 Microsoft.NCSI



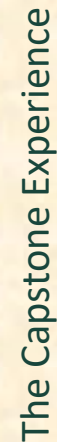
Team Proofpoint Beta Presentation

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Main Page On Dashboard



Top 25 Yara Rules Matched Graph

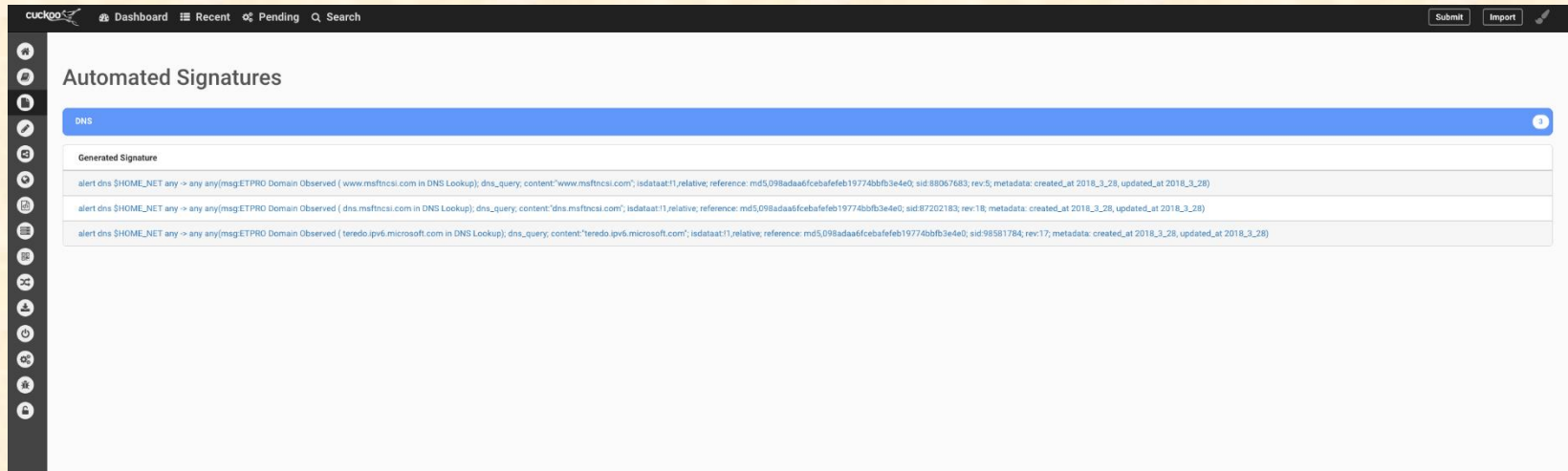




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Team Proofpoint Beta Presentation

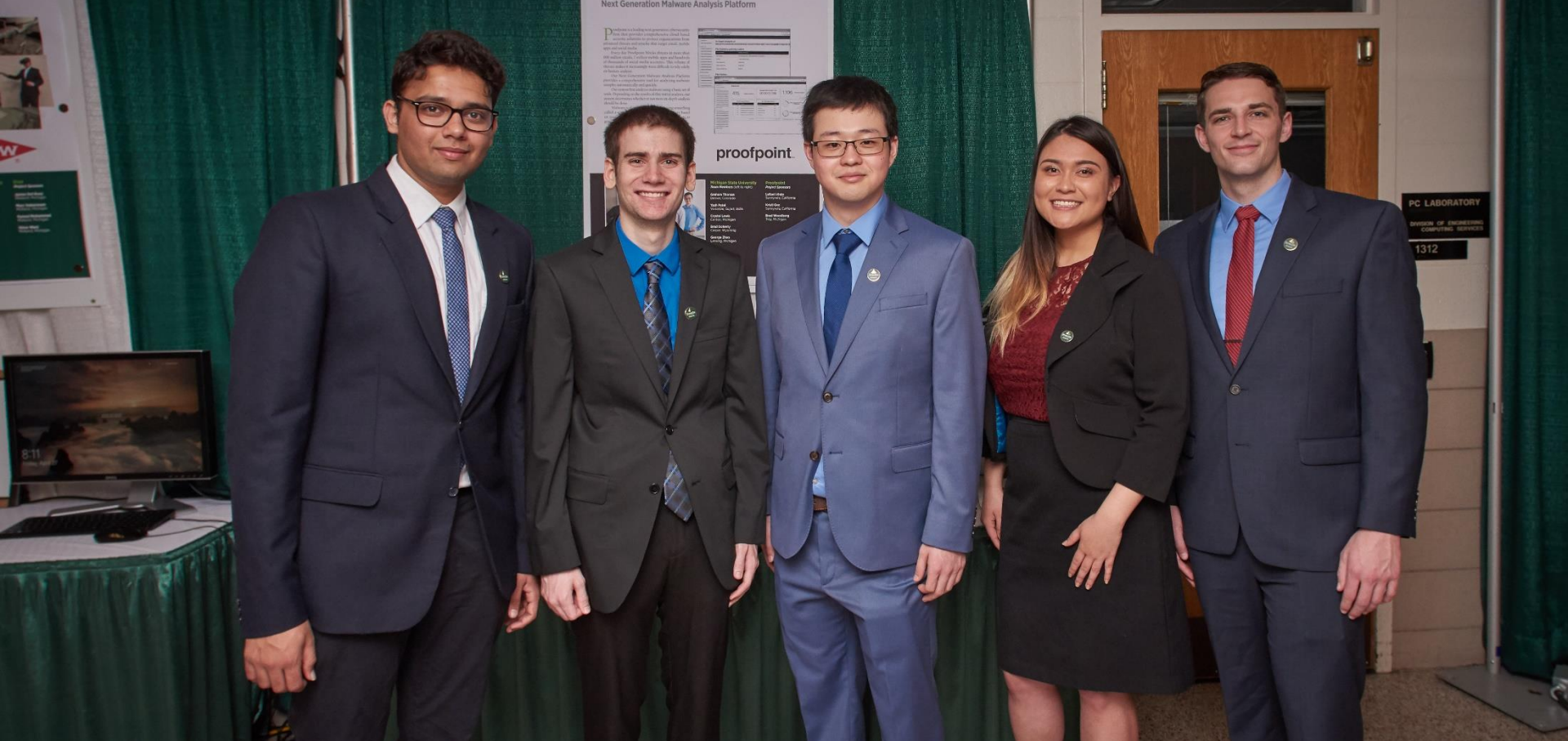
Signature Generation Page



The screenshot displays the Cuckoo Sandbox web interface. The top navigation bar includes links for Dashboard, Recent, Pending, and Search, along with Submit and Import buttons. The left sidebar contains a vertical menu of icons for various functions. The main content area is titled "Automated Signatures" and features a blue header bar labeled "DNS". Below this, a table titled "Generated Signature" lists three entries, each representing a DNS query and its corresponding signature.

Generated Signature
alert dns \$HOME_NET any -> any any(msgETPRO Domain Observed (www.msfnets.com in DNS Lookup); dns_query: content:"www.msfnets.com"; isdataat:f1,relative; reference: md5,098ada6fcebafefeb19774bbfb3e4e0; sid:88067683; rev:5; metadata: created_at 2018_3_28, updated_at 2018_3_28)
alert dns \$HOME_NET any -> any any(msgETPRO Domain Observed (dns.msfnets.com in DNS Lookup); dns_query: content:"dns.msfnets.com"; isdataat:f1,relative; reference: md5,098ada6fcebafefeb19774bbfb3e4e0; sid:87202183; rev:18; metadata: created_at 2018_3_28, updated_at 2018_3_28)
alert dns \$HOME_NET any -> any any(msgETPRO Domain Observed (teredo.ipv6.microsoft.com in DNS Lookup); dns_query: content:"teredo.ipv6.microsoft.com"; isdataat:f1,relative; reference: md5,098ada6fcebafefeb19774bbfb3e4e0; sid:98581784; rev:17; metadata: created_at 2018_3_28, updated_at 2018_3_28)





Team Proofpoint @ Design Day

Yash Patel, Graham Thomas, George Zhao, Crystal Lewis, Brad Doherty

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The Capstone Experience

Team Quicken Loans

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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Rocket Mortgage

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and Award-Winning
Client Service for More than 30
Years**

Start



Type of Loan

Select One



Team Quicken Loans Project Overview

Fundamenta: Trust in New Home Construction

- Functionalities
 - Enable Collaborative New Home Construction
 - Include All Players
- Features
 - Create Responsive Web App
 - Allow Choice of Home Model, Exterior and Interior
 - Support Various Roles
 - Home Buyer
 - Builder
 - Multiple Contractors
 - City Inspector
 - Use Dynamic Workflow
 - Alert Players When Action Assigned or Due
 - Provide Full Transparency
 - Deliverables
 - Milestones
 - Workflow
 - Complete Transaction History
 - Utilize Blockchain for Storage
 - Home Buyer's Build Requirements
 - Workflow Tasks
- Technologies
 - CSS / HTML / JavaScript / AngularJS
 - Microsoft .NET
 - Blockchain
 - Hyperledger
 - Microsoft Azure or Amazon Web Services (AWS)

PROJECT PUNCH LIST

Project:

Project Number:

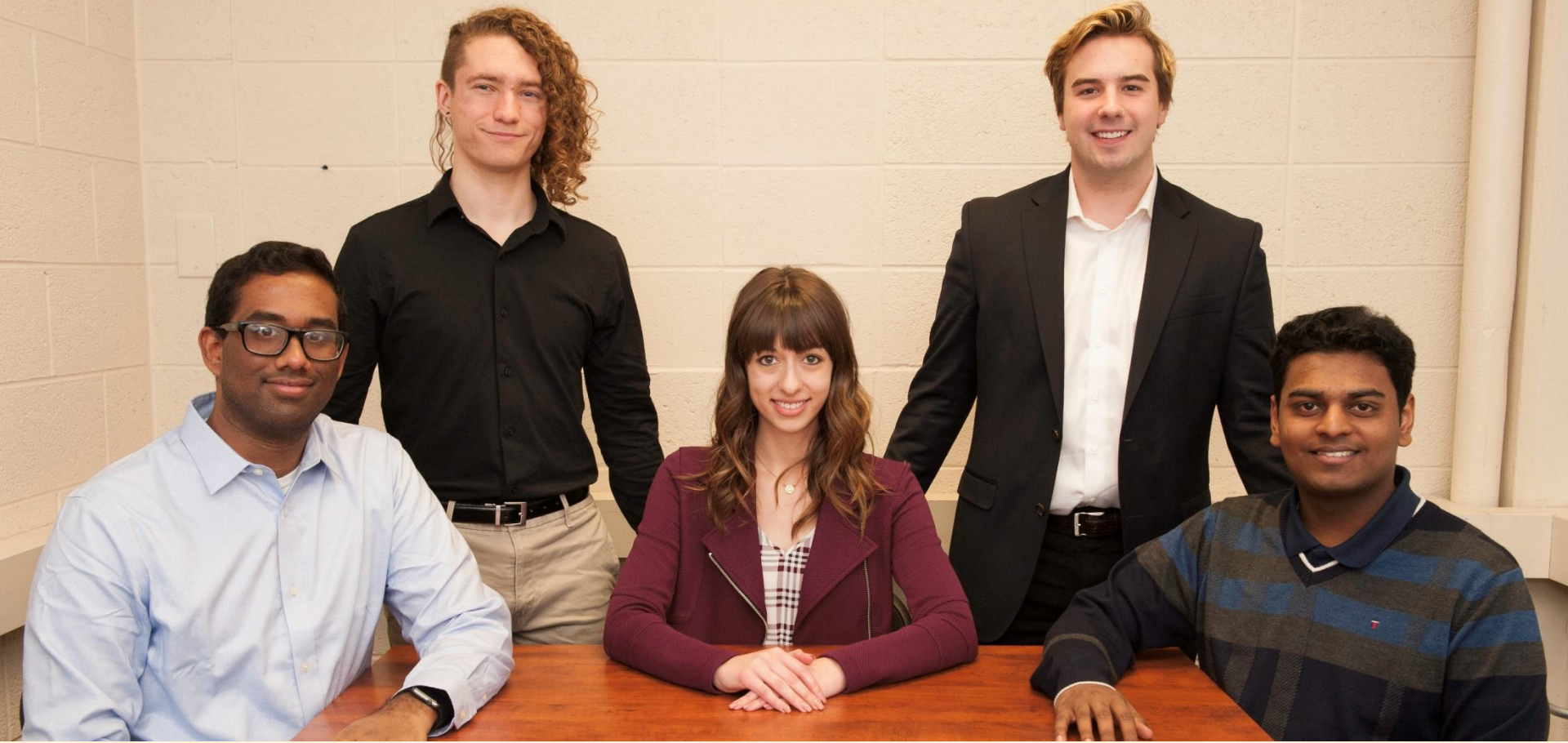
Address:

Notes:

Item ID	Description	Category	Status	Assigned To	Priority	Date	Assigned To Email	Assigned To Phone	Assigned To Address
100001	General Contracting								
100002	Foundation								
100003	Framing								
100004	Roofing								
100005	Exterior Siding								
100006	Interior Siding								
100007	Windows and Doors								
100008	Roof and Gables								
100009	Roof and Gables								
100010	Roof and Gables								
100011	Roof and Gables								
100012	Roof and Gables								
100013	Roof and Gables								
100014	Roof and Gables								
100015	Roof and Gables								
100016	Roof and Gables								
100017	Roof and Gables								
100018	Roof and Gables								
100019	Roof and Gables								
100020	Roof and Gables								



Quicken®Loans®
Engineered to **Amaze™**
Detroit, Michigan



Team Quicken Loans

Vishal Adusumilli, Riley Annis, Erin O'Hara, Turner Anderson, Jaiwant Bhushan

Team Quicken Loans Project Plan Presentation

Screen Mockup: User Login

Fundamenta by Quicken Loans

Username

Enter a username...

Password

Enter a password...

Role

☒ Home Buyer

☐ Builder

☐ Contractor

Log In or Sign Up

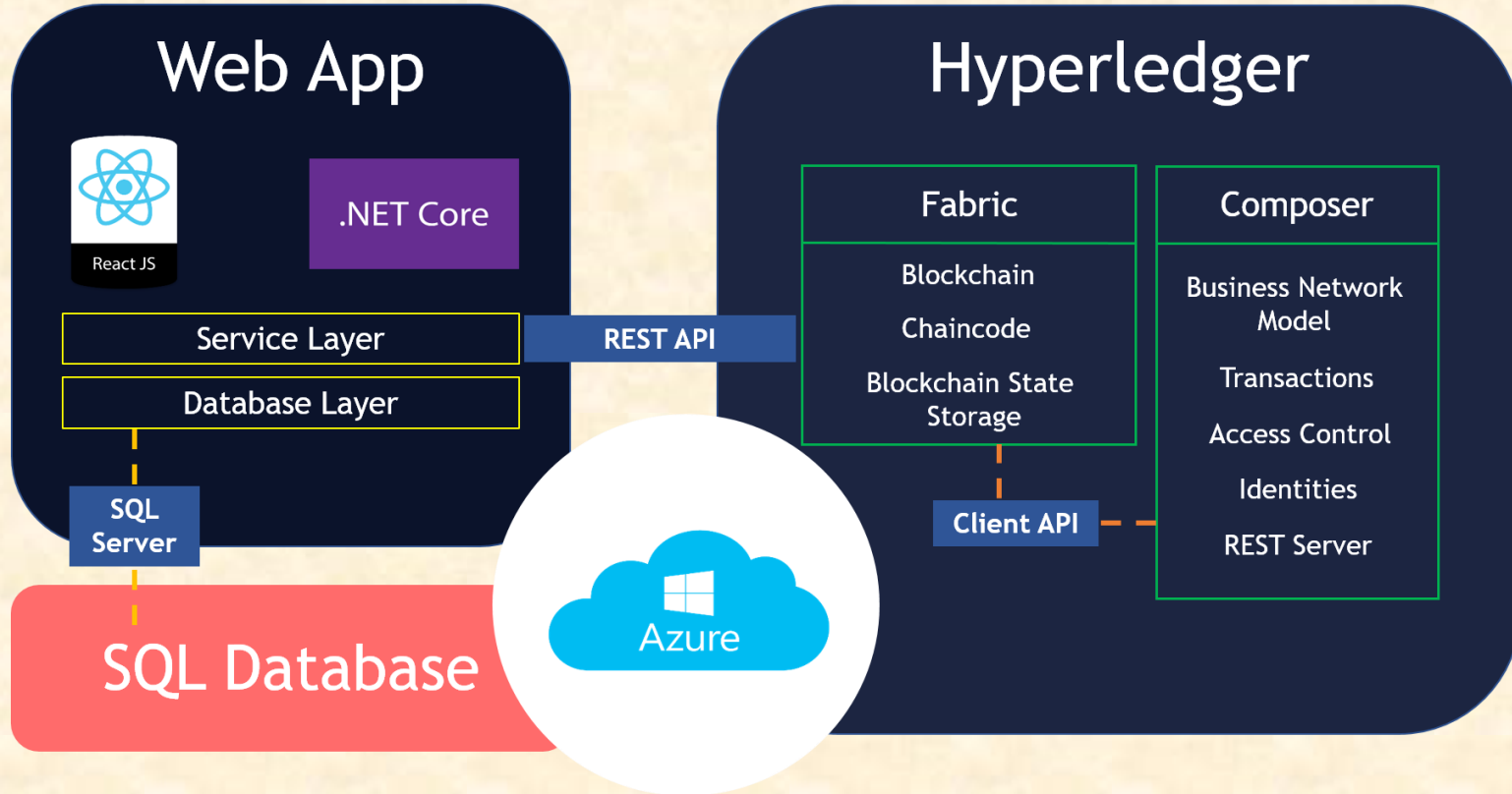
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A small, stylized green pyramid logo with a dark green base and a lighter green top, located in the bottom left corner of the slide.



Team Quicken Loans Project Plan Presentation

Architecture Diagram





Team Quicken Loans
Project Plan Presentation

Team Quicken Loans Project Plan Presentation

Screen Mockup: Build Workflow

Fundamenta by Quicken Loans

House Options

Model +

Exterior +

Interior +

Cancel

Save

Task 22

Task 21

Task 20

Task 19

Task 18

Task 17

Task 16

Task 15

Task 14

Task 13

Task 12

Task 11

Task 10

Task 9

Task 8

Task 7

Task 6

Task 5

Task 4

Task 3

Task 2

Task 1

Conversation

H

Home Buyer

How much longer?

B

Builder

I'll let the contractor answer.

C

Contractor

About 1 month left.

H

Home Buyer

Great, thank you!

Leave a comment...

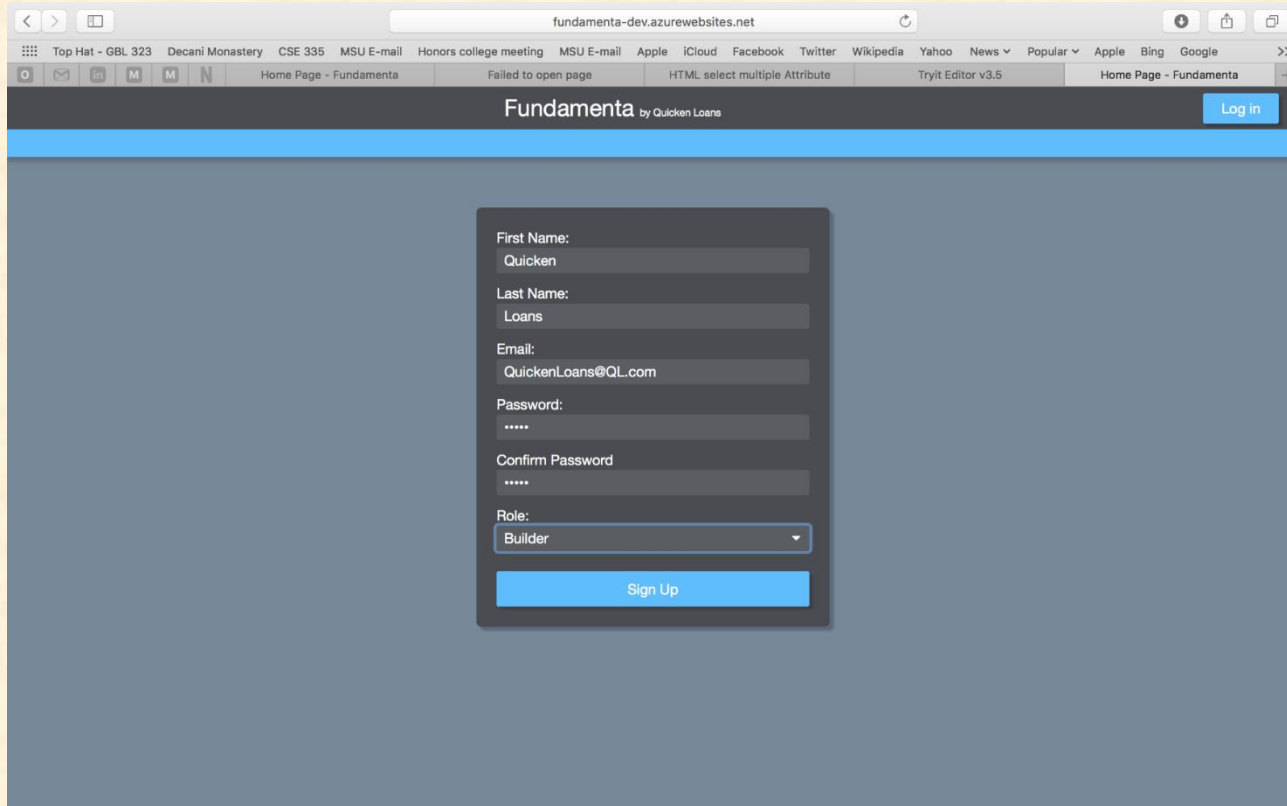
Submit



Team Quicken Loans Alpha Presentation

Team Quicken Loans Alpha Presentation

Sign Up



The screenshot shows a web browser window with the address bar displaying "fundamenta-dev.azurewebsites.net". The browser's tab bar includes several tabs: "Top Hat - GBL 323", "Decani Monastery", "CSE 335", "MSU E-mail", "Honors college meeting", "MSU E-mail", "Apple", "iCloud", "Facebook", "Twitter", "Wikipedia", "Yahoo", "News", "Popular", "Apple", "Bing", and "Google". The browser's address bar shows "fundamenta-dev.azurewebsites.net". The browser's tab bar includes several tabs: "Top Hat - GBL 323", "Decani Monastery", "CSE 335", "MSU E-mail", "Honors college meeting", "MSU E-mail", "Apple", "iCloud", "Facebook", "Twitter", "Wikipedia", "Yahoo", "News", "Popular", "Apple", "Bing", and "Google". The browser's address bar shows "fundamenta-dev.azurewebsites.net".

The main content area of the browser displays a sign-up form for "Fundamenta by Quicken Loans". The form is centered on a dark blue background. It contains the following fields:

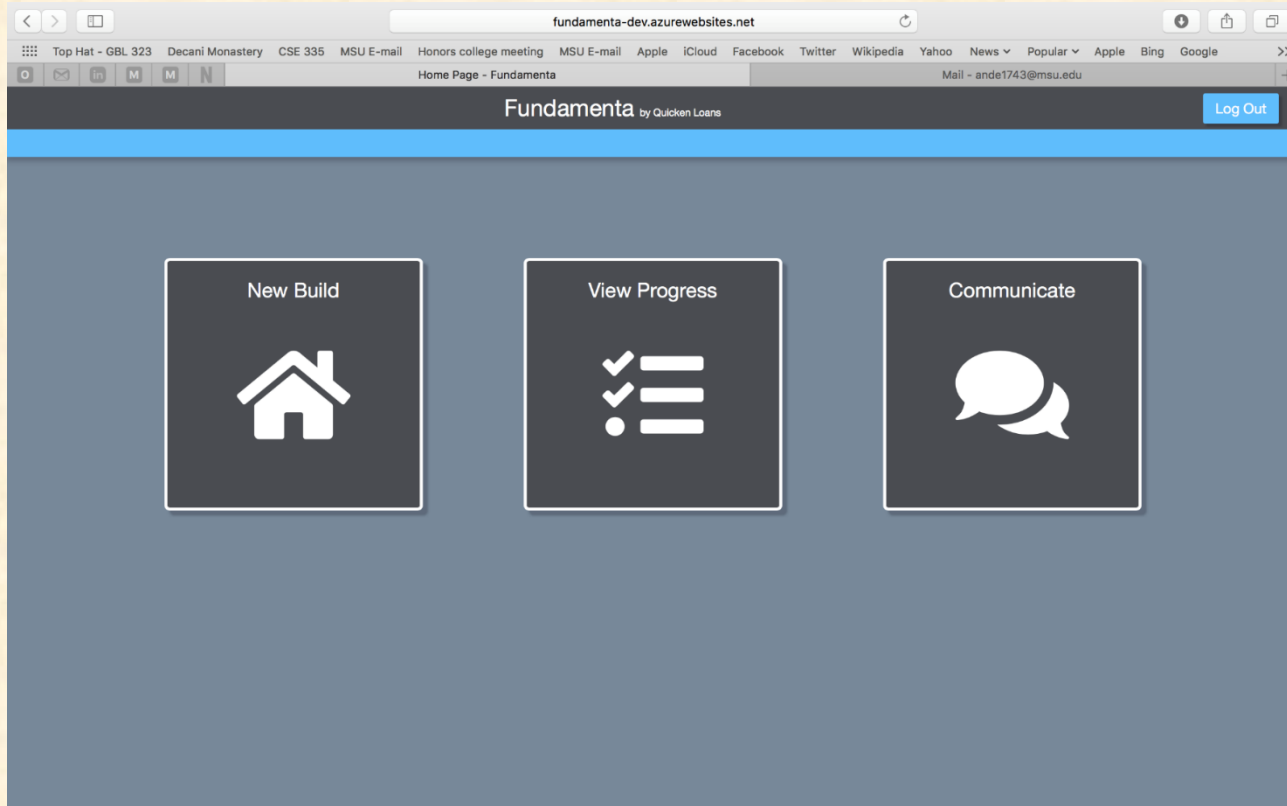
- First Name:
- Last Name:
- Email:
- Password:
- Confirm Password:
- Role:

At the bottom of the form is a blue button labeled "Sign Up".



Team Quicken Loans Alpha Presentation

Dashboard



The Capstone Experience





Team Quicken Loans Alpha Presentation

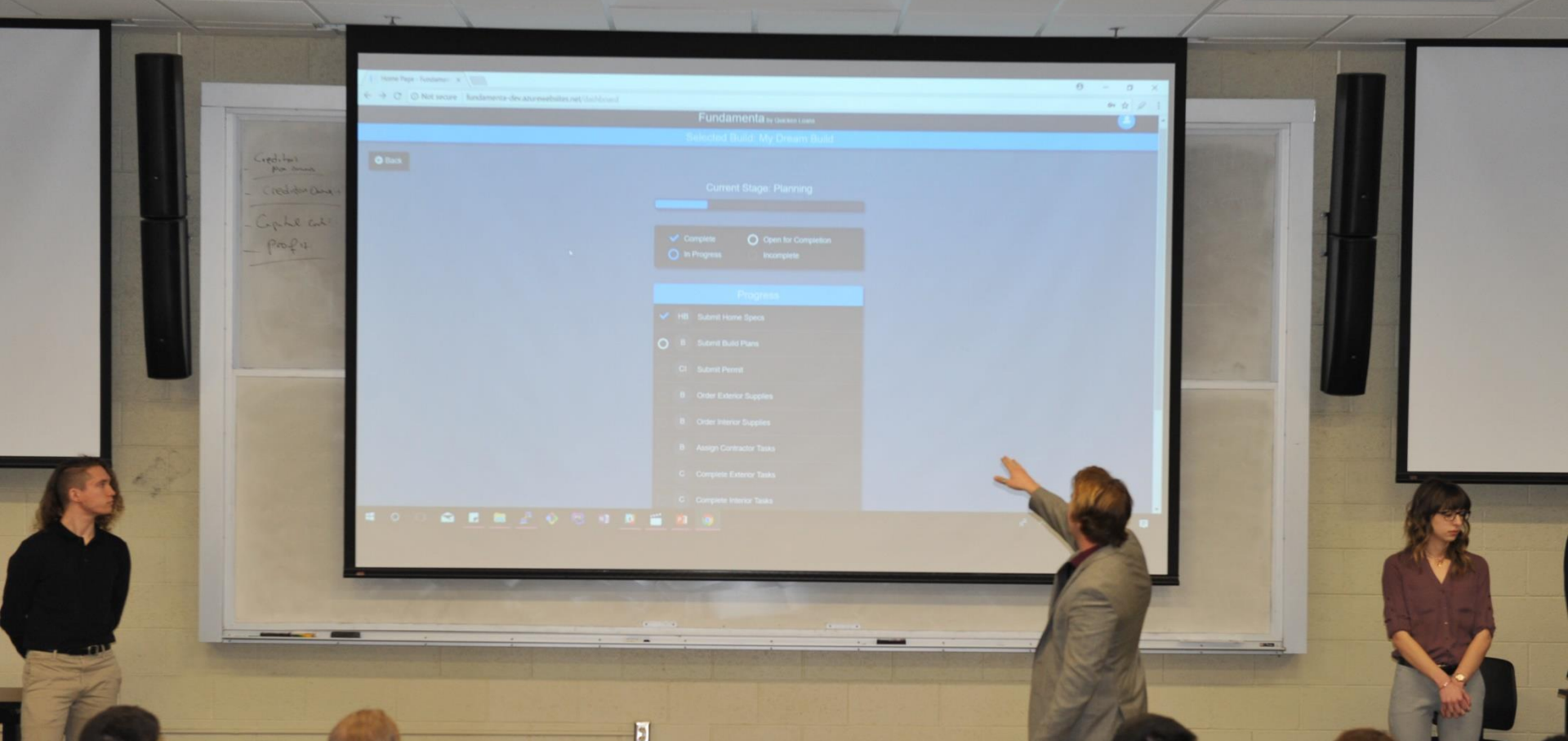
Team Quicken Loans Alpha Presentation

Build Status

The screenshot shows a web browser window displaying the 'Fundamenta' application. The browser's address bar shows 'fundamenta-dev.azurewebsites.net'. The application's header includes the 'Fundamenta' logo and a 'Log Out' button. A 'Back' button is visible in the top left of the main content area. The central feature is a 'Progress' list with ten items, each with a status indicator, a letter, a task name, and a date.

Progress			
<input checked="" type="radio"/>	H	Submit Home Specs	Feb 22
<input type="radio"/>	CI	Final Inspection Certifi...	Feb 22
<input checked="" type="radio"/>	B	Submit Work Plans	Feb 22
<input type="radio"/>	C	Submit Permit	Feb 22
<input type="radio"/>	B	Order Exterior Supplies	Feb 22
<input type="radio"/>	B	Order Interior Supplies	Feb 22
<input type="radio"/>	B	Assign Contractor Tasks	Feb 22
<input type="radio"/>	C	Complete Exterior Tasks	Feb 22
<input type="radio"/>	C	Complete Interior Tasks	Feb 22
<input type="radio"/>	B	Order Final Inspection	Feb 22

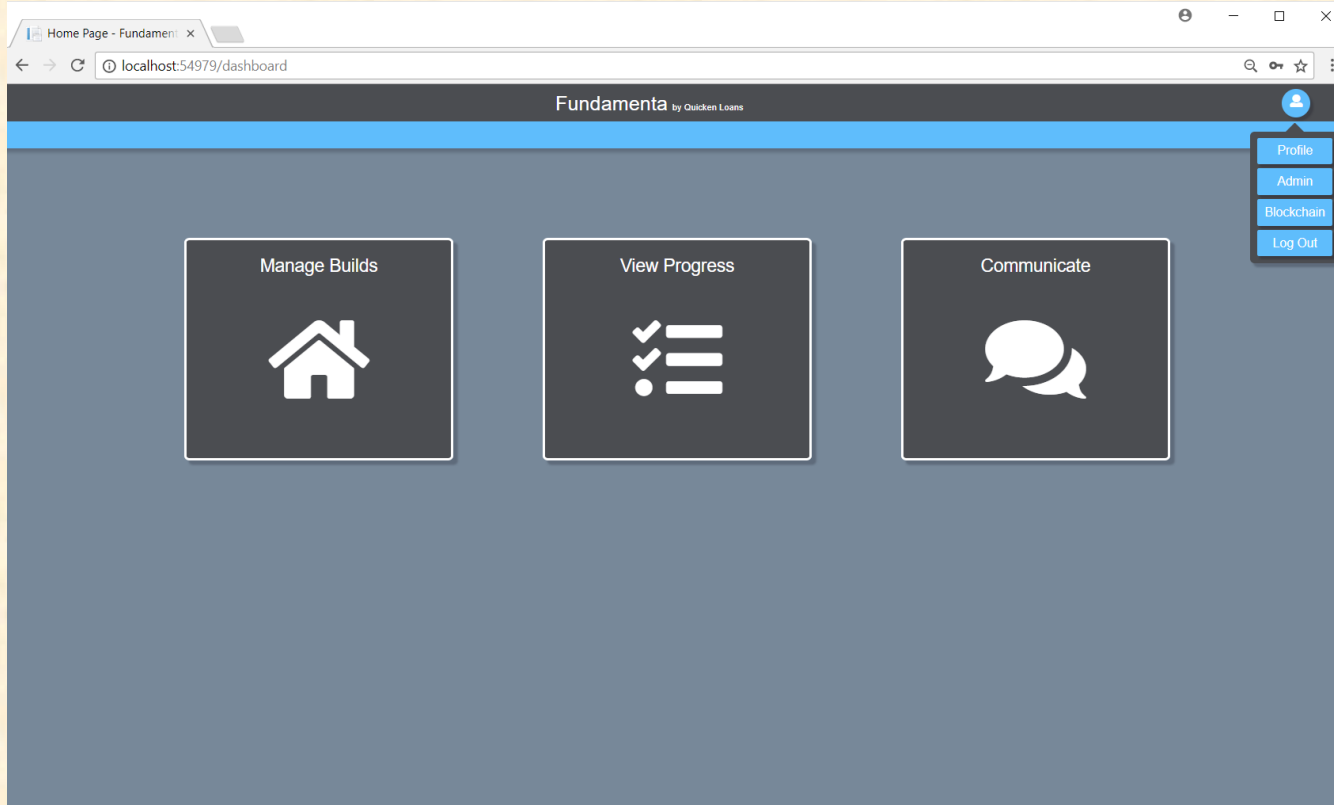




Team Quicken Loans Beta Presentation

Team Quicken Loans Beta Presentation

Dashboard



The Capstone Experience



Team Quicken Loans Beta Presentation

Progress

The screenshot displays a web browser window with the URL `localhost:54979/dashboard`. The dashboard is titled "Fundamenta by Quicken Loans" and shows the "Selected Build: Madison's Build". A "Back" button is located in the top left. The main content area indicates the "Current Stage: Execution" with a progress bar. Below this, there are four status indicators: "Complete" (checked), "Open for Completion" (unchecked), "In Progress" (unchecked), and "Incomplete" (unchecked). A "Progress" section lists tasks with checkboxes and initials:

- ✓ HB Submit Home Specs
- ✓ B Submit Build Plans
- ✓ CI Submit Permit
- ✓ B Order Exterior Supplies
- B Order Interior Supplies
- ✓ B Assign Contractor Tasks
- C Complete Exterior Tasks
- C Complete Interior Tasks
- B Approve Exterior Tasks
- B Approve Interior Tasks

The Capstone Experience

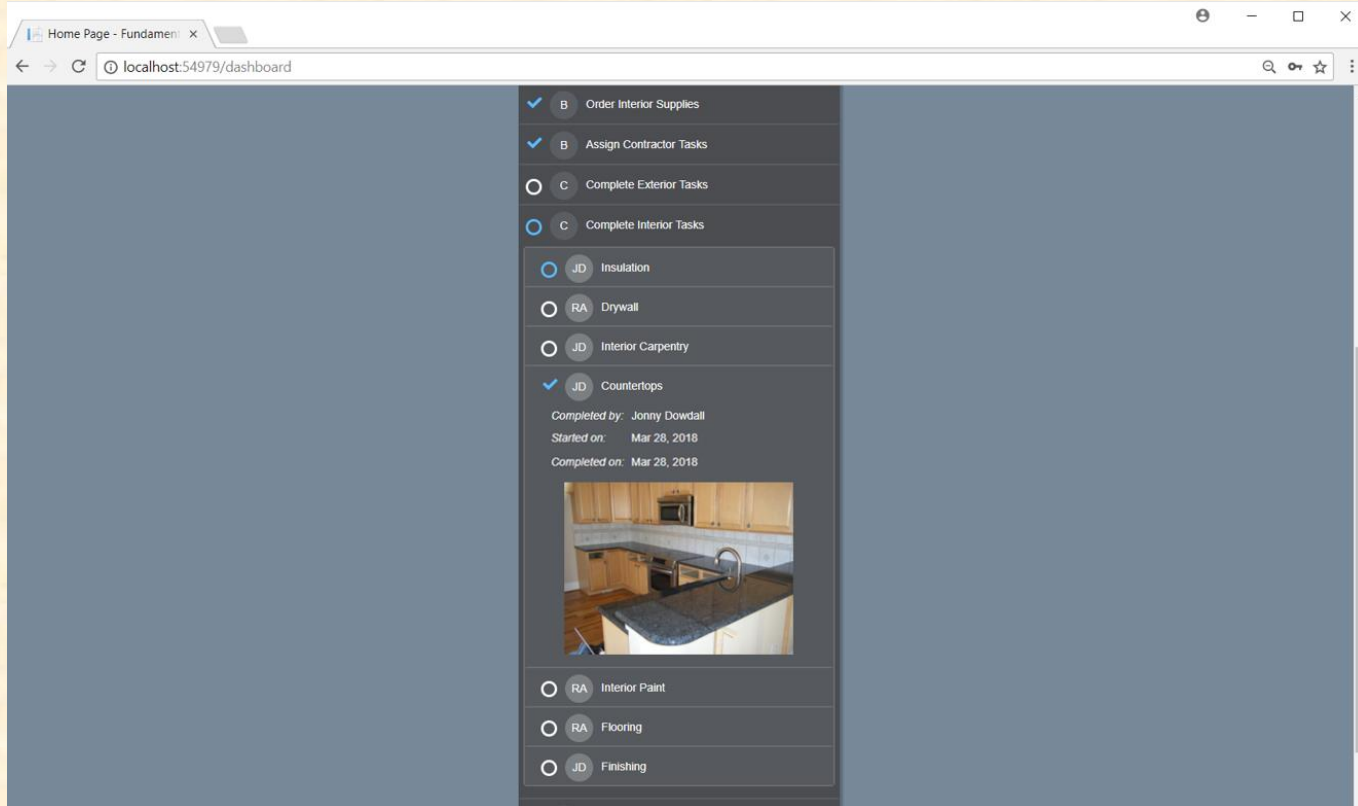




Team Quicken Loans Beta Presentation

Team Quicken Loans Beta Presentation

Image Upload



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Team Quicken Loans @ Design Day

Jaiwant Bhushan, Vishal Adusumilli, Erin O'Hara, Turner Anderson, Riley Annis

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Team Rook

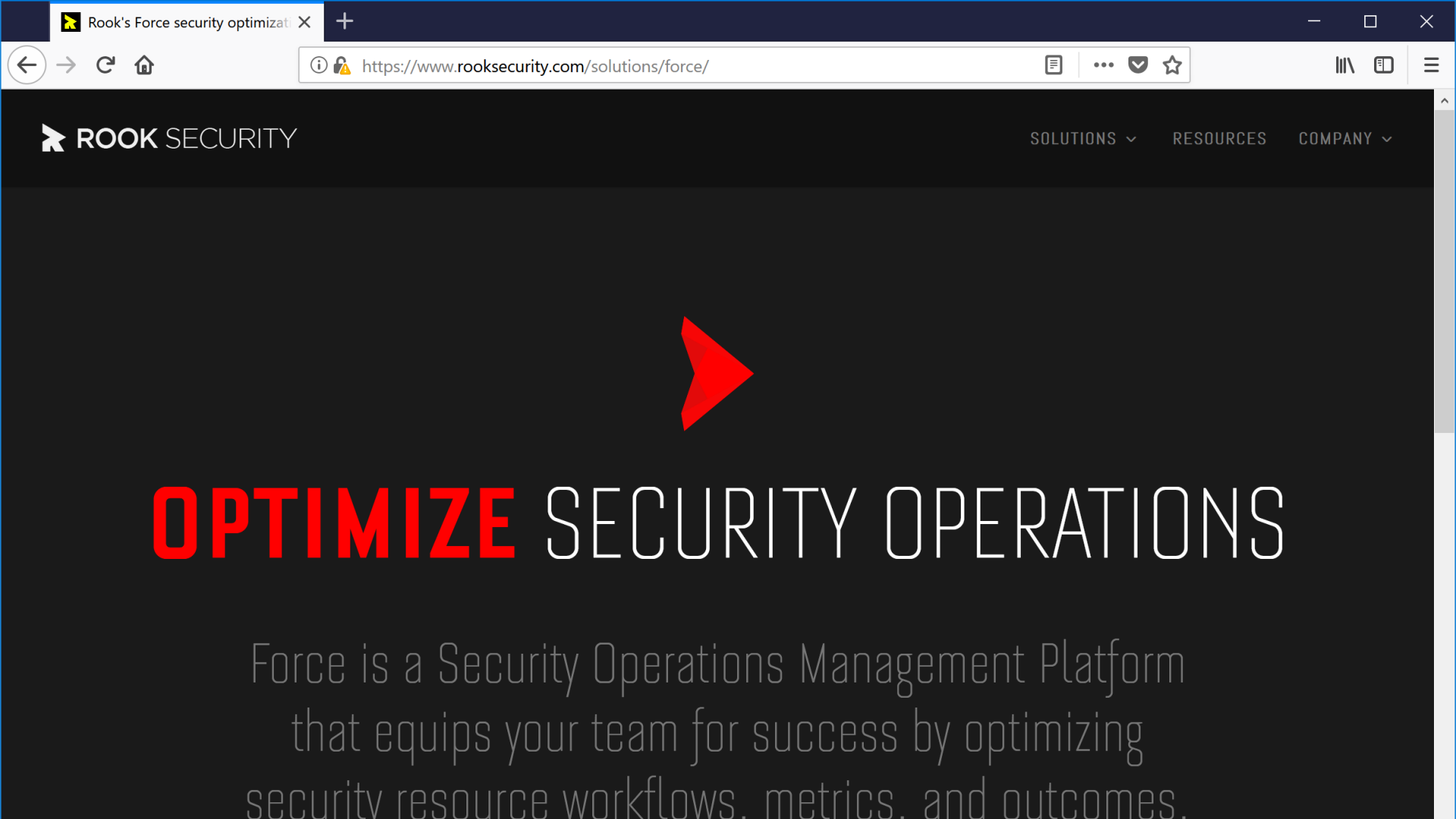
Department of Computer Science and Engineering
Michigan State University
Spring 2018



From Students...
...to Professionals



ROOK SECURITY



OPTIMIZE SECURITY OPERATIONS

Force is a Security Operations Management Platform
that equips your team for success by optimizing
security resource workflows, metrics, and outcomes.

Team Rook Project Overview

Endpoint Data Monitoring and Analysis Agent

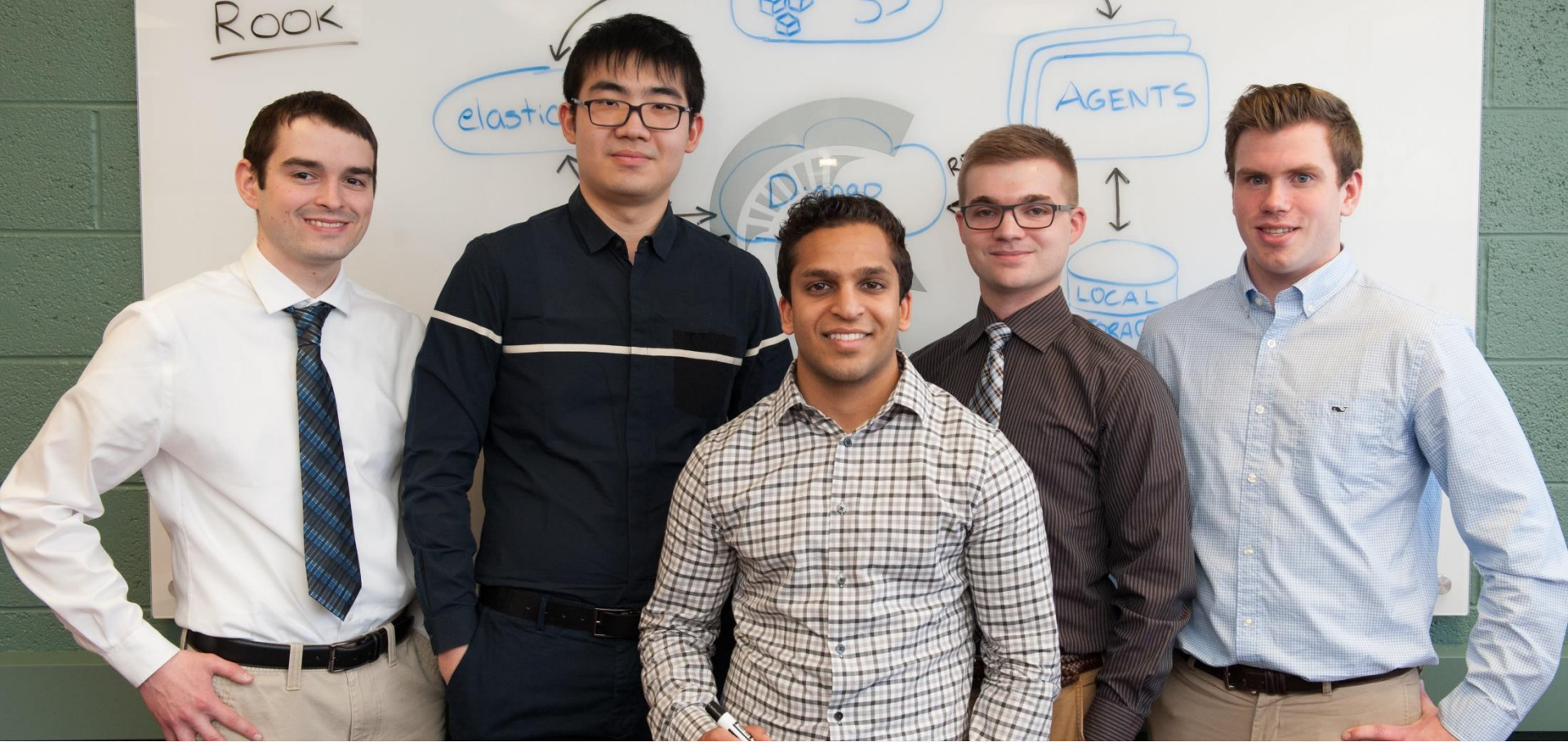
- Functionalities
 - Detect and React to Security Threats
 - Capture and Analyze Agent Health Metrics and Log Files
- Features
 - Create Endpoint Dashboard
 - Enable Remote Agent Configuration
 - Do Health Checks and Data Analysis
 - Display Health Check Information
 - Create Alert Thresholds
 - Store Metrics and Log Files
 - RESTful Endpoint
 - Amazon Simple Storage Service (S3)
 - Locally
 - Implement State Awareness
 - Support Cross Platform Compatibility
 - Integrate with Rook's Force Platform
- Technologies
 - Force Platform
 - Go
 - JavaScript / JSON
 - Python / Django
 - React / Redux
 - Ubuntu 16.04
 - Amazon Simple Storage Service (S3)
 - RESTful Web Services



ROOK
SECURITY
Indianapolis, Indiana

The Capstone Experience





Team Rook

Jeremy Specht, Bohao Gao, Vikram Thakur, Jared Clark, Drew Gilbertson

Team Rook Project Plan Presentation

Screen Mockup: System Health

Force Platform

ROOK SECURITY

Agent Dashboard

Select Client

Client 1
Client 2
Client 3
Client 4

Select Agent

Agent 1
Agent 2
Agent 3
Agent 4
Agent 5
Agent 6

Change Default Data Storage Location

Configure Agent

System Health

LOG HISTORY

STATUS

From: 1/29/2018 8:45 am

To: 1/29/2018 5:16 pm

Log 1
Log 2
Log 3
Log 4
Log 5
Log 6
Log 7
Log 8
Log 9
Log 10
Log 11
Log 12
Log 13

Messages

1-23-2018-1:24:
Warning, irregular
behavior detected.
log: Log2
src: /var/log/syslog

Overall health: **Good**

Log Source: [/var/log/syslog](#)
Source health: **Warning**

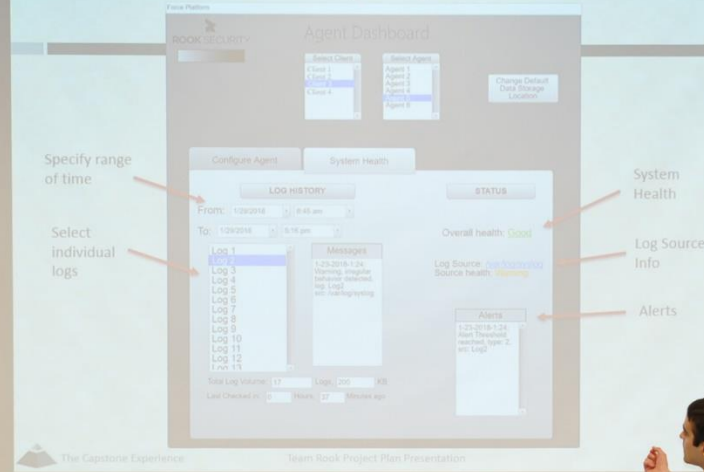
Alerts

1-23-2018-1:24:
Alert Threshold
reached, type: 2,
src: Log2

Total Log Volume: 17 Logs, 200 KB

Last Checked in: 0 Hours, 37 Minutes ago

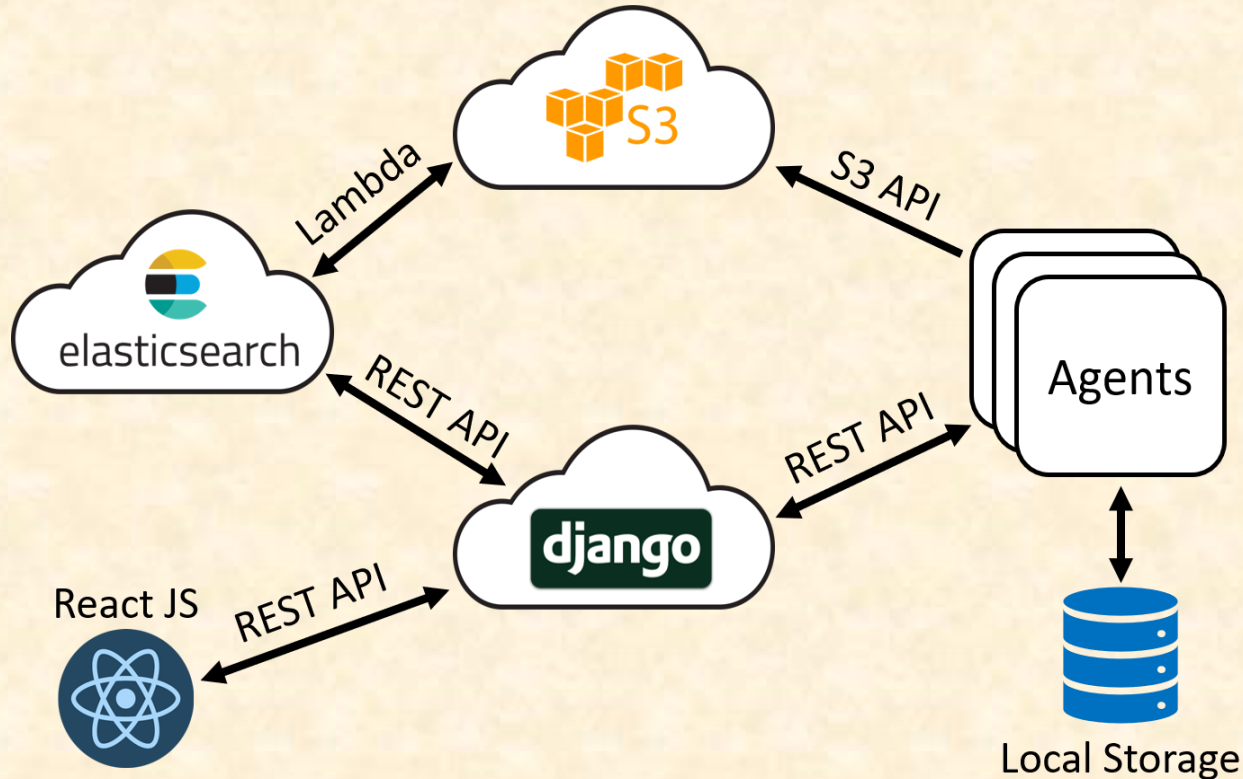
Screen Mockup: System Health



Team Rook
Project Plan Presentation

Team Rook Project Plan Presentation

Architecture Diagram





Team Rook Project Plan Presentation

Team Rook Project Plan Presentation

Screen Mockup: Configuration

Force Platform

ROOK SECURITY

Agent Dashboard

Select Client

- Client 1
- Client 2
- Client 3
- Client 4

Select Agent

- Agent 1
- Agent 2
- Agent 3
- Agent 4
- Agent 5
- Agent 6

Change Default Data Storage Location

Configure Agent

System Health

Agent Version: [1.02.07](#)

Add Path:
Path 9

Add

Current Paths

- Path 1
- Path 2
- Path 3
- Path 4
- Path 5
- Path 6
- Path 7
- Path 8

Remove Path

☒ Custom Data Storage Location

Amazon S3 Bucket

Current Storage Location: [Amazon S3 Bucket](#)

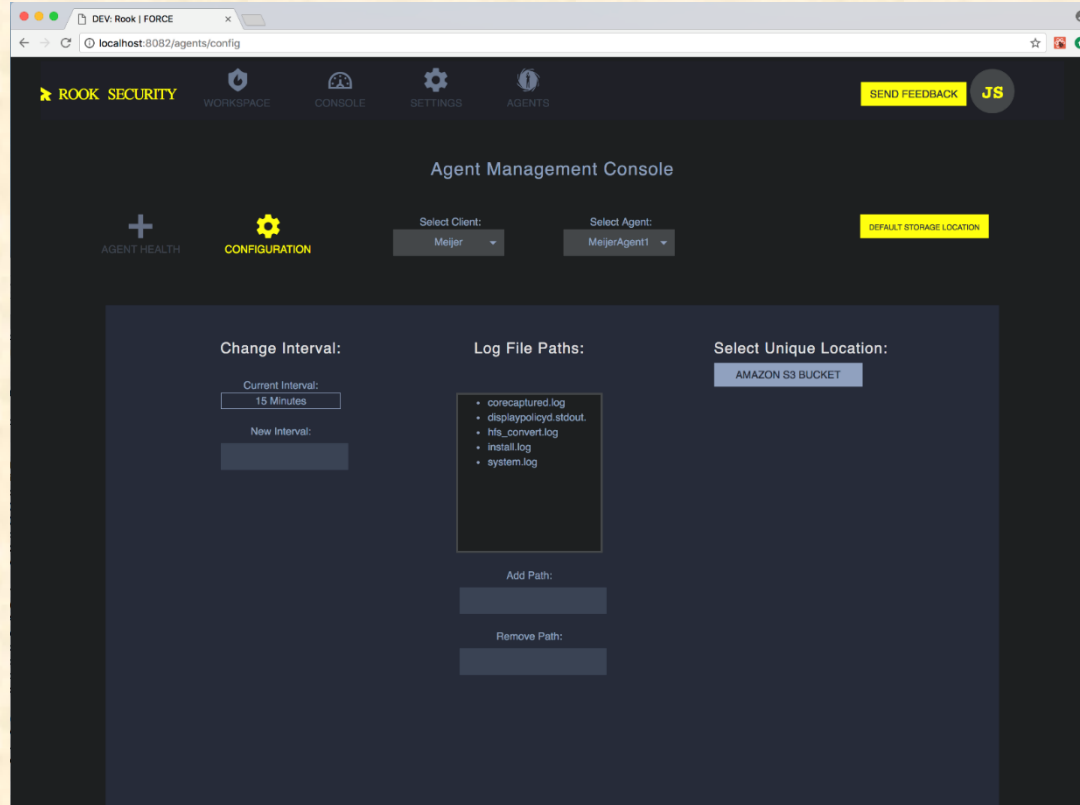




Team Rook Alpha Presentation

Team Rook Alpha Presentation

Force Platform



Team Rook Alpha Presentation

Force Platform

The screenshot displays the Rook Security Agent Management Console in a web browser. The browser's address bar shows the URL `localhost:8082/agents/health`. The interface has a dark theme with a top navigation bar containing icons for Workspace, Console, Settings, and Agents, along with a 'SEND FEEDBACK' button and a user profile 'JS'. Below the navigation bar, the main heading is 'Agent Management Console'. A secondary bar includes an 'AGENT HEALTH' button with a plus icon, a 'CONFIGURATION' button with a gear icon, and two dropdown menus for 'Select Client' (set to 'Meijer') and 'Select Agent' (set to 'MeijerAgent1'). A 'DEFAULT STORAGE LOCATION' button is also present. The main content area is divided into five panels: 'Log Volume (Last Hour)' showing log counts for various files; 'Agent Info' providing details about the selected client and agent; 'Health Status' showing the agent's health as 'Good'; 'Agent Config Info' showing configuration changes and user information; and 'Agent Alerts' displaying a list of 10 alerts.

DEV: Rook | FORCE
localhost:8082/agents/health

ROOK SECURITY WORKSPACE CONSOLE SETTINGS AGENTS SEND FEEDBACK JS

Agent Management Console

AGENT HEALTH CONFIGURATION Select Client: Meijer Select Agent: MeijerAgent1 DEFAULT STORAGE LOCATION

Log Volume (Last Hour)
var/syslog: 85
var/wild.log: 3
var/security.log: 8
var/log/xlog: 3

Agent Info
Client: Meijer
Agent ID: MeijerAgent001
Operating System: Mac OS
Storage Location: Amazon S3 Bucket
Time Zone: EST

Health Status
Agent Health Status: Good
System Health Status: Good

Agent Config Info
Last Config Change: 2/18/18
Paths Changed: added var/log/xlog
Interval Change: 15 mins
Storage Change: Amazon S3 Bucket
User: Jeremy Specht

Agent Alerts
• Alert 1
• Alert 2
• Alert 3
• Alert 4
• Alert 5
• Alert 6
• Alert 7
• Alert 8
• Alert 9
• Alert 10

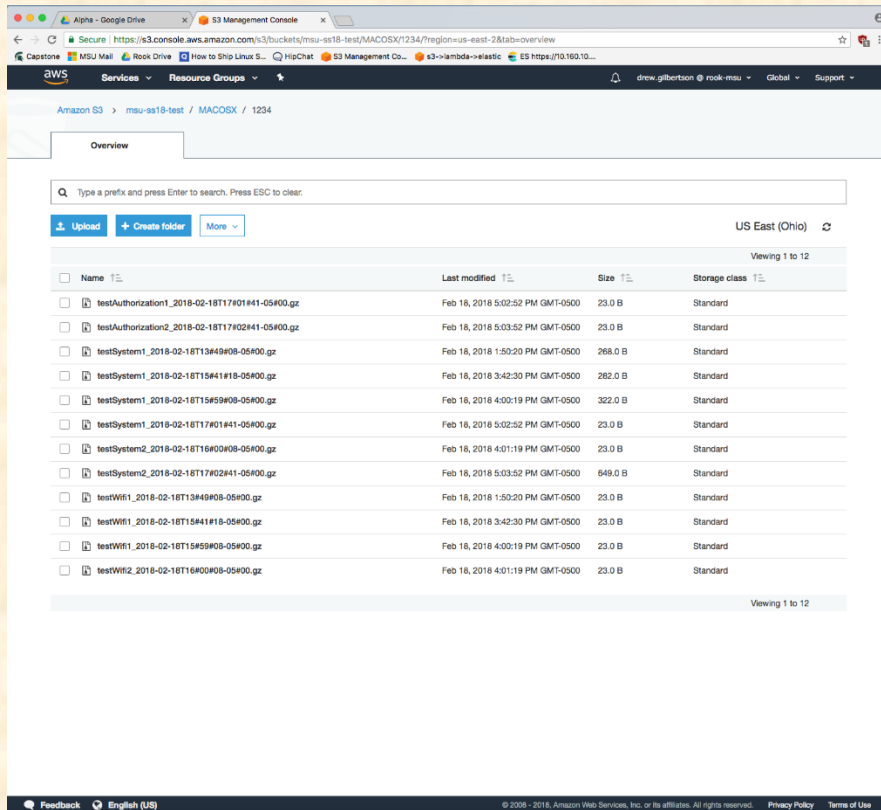




Team Rook Alpha Presentation

Team Rook Alpha Presentation

Storage System



The screenshot displays the Amazon S3 Management Console interface. The breadcrumb navigation shows 'Amazon S3 > msu-sstest / MACOSX / 1234'. The 'Overview' tab is selected, showing a search bar and buttons for 'Upload', 'Create folder', and 'More'. The region is set to 'US East (Ohio)'. A table lists 12 objects, each with a checkbox, name, last modified date, size, and storage class. The objects are named with a prefix 'test' followed by a system or user identifier and a '.gz' extension. The storage class for all objects is 'Standard'.

Name	Last modified	Size	Storage class
<input type="checkbox"/> testAuthorization1_2018-02-18T17#01#41-05#00.gz	Feb 18, 2018 5:02:52 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testAuthorization2_2018-02-18T17#02#41-05#00.gz	Feb 18, 2018 5:03:52 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testSystem1_2018-02-18T13#49#08-05#00.gz	Feb 18, 2018 1:50:20 PM GMT-0500	268.0 B	Standard
<input type="checkbox"/> testSystem1_2018-02-18T15#41#18-05#00.gz	Feb 18, 2018 3:42:30 PM GMT-0500	282.0 B	Standard
<input type="checkbox"/> testSystem1_2018-02-18T15#59#08-05#00.gz	Feb 18, 2018 4:00:19 PM GMT-0500	322.0 B	Standard
<input type="checkbox"/> testSystem1_2018-02-18T17#01#41-05#00.gz	Feb 18, 2018 5:02:52 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testSystem2_2018-02-18T16#00#08-05#00.gz	Feb 18, 2018 4:01:19 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testSystem2_2018-02-18T17#02#41-05#00.gz	Feb 18, 2018 5:03:52 PM GMT-0500	649.0 B	Standard
<input type="checkbox"/> testWifi1_2018-02-18T13#49#08-05#00.gz	Feb 18, 2018 1:50:20 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testWifi1_2018-02-18T15#41#18-05#00.gz	Feb 18, 2018 3:42:30 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testWifi1_2018-02-18T15#59#08-05#00.gz	Feb 18, 2018 4:00:19 PM GMT-0500	23.0 B	Standard
<input type="checkbox"/> testWifi2_2018-02-18T16#00#08-05#00.gz	Feb 18, 2018 4:01:19 PM GMT-0500	23.0 B	Standard



Team Rook Beta Presentation

Team Rook Beta Presentation

Agent Management Console

The screenshot displays the Team Rook Agent Management Console in a web browser. The browser's address bar shows 'localhost:8082/agents/health'. The interface has a dark theme with a top navigation bar containing 'ROOK SECURITY', 'WORKSPACE', 'CONSOLE', 'SETTINGS', and 'AGENTS'. A 'SEND FEEDBACK' button and a user profile 'JS' are on the right. Below the navigation bar, the title 'AGENT MANAGEMENT CONSOLE' is centered. A secondary bar includes 'AGENT HEALTH' (with a plus icon), 'CONFIGURATION' (with a gear icon), 'Select Client' (showing 'Dow'), 'Select Agent' (showing '33'), and a 'MANAGE CLIENT KEYS' button. The main content area is divided into several panels: 'Agent Info' (Client: Dow, Agent ID: 33, OS Version: Microsoft Windows 10 Home, IP Address: 35.20.196.156, Hostname: DESKTOP-2013QQB), 'Log Volume (Last Hour)' (Security: 0, System: 0), 'Health Status' (Agent Health Status: Unresponsive, Last Check-in: 2018-03-31 22:37:50.574851), 'Agent 33 Alerts' (Agent 33 for Dow has not made contact in 2741 minutes. Last checkin time: 2018-03-31 22:37:50.574851), and 'Global Alerts' (a list of 6 alerts for various agents, all stating they have not made contact in 20202 minutes).

DEV: Rook | FORCE
localhost:8082/agents/health

ROOK SECURITY WORKSPACE CONSOLE SETTINGS AGENTS

SEND FEEDBACK JS

AGENT MANAGEMENT CONSOLE

AGENT HEALTH CONFIGURATION Select Client Select Agent

Dow 33 MANAGE CLIENT KEYS

Agent Info

Client: Dow
Agent ID: 33
Operating System: Windows
OS Version: Microsoft Windows 10 Home
IP Address: 35.20.196.156
Hostname: DESKTOP-2013QQB

Log Volume (Last Hour)

- Security: 0
- System: 0

Health Status

Agent Health Status:
Unresponsive

Last Check-in:
2018-03-31 22:37:50.574851

Agent 33 Alerts

- Agent 33 for Dow has not made contact in 2741 minutes. Last checkin time: 2018-03-31 22:37:50.574851

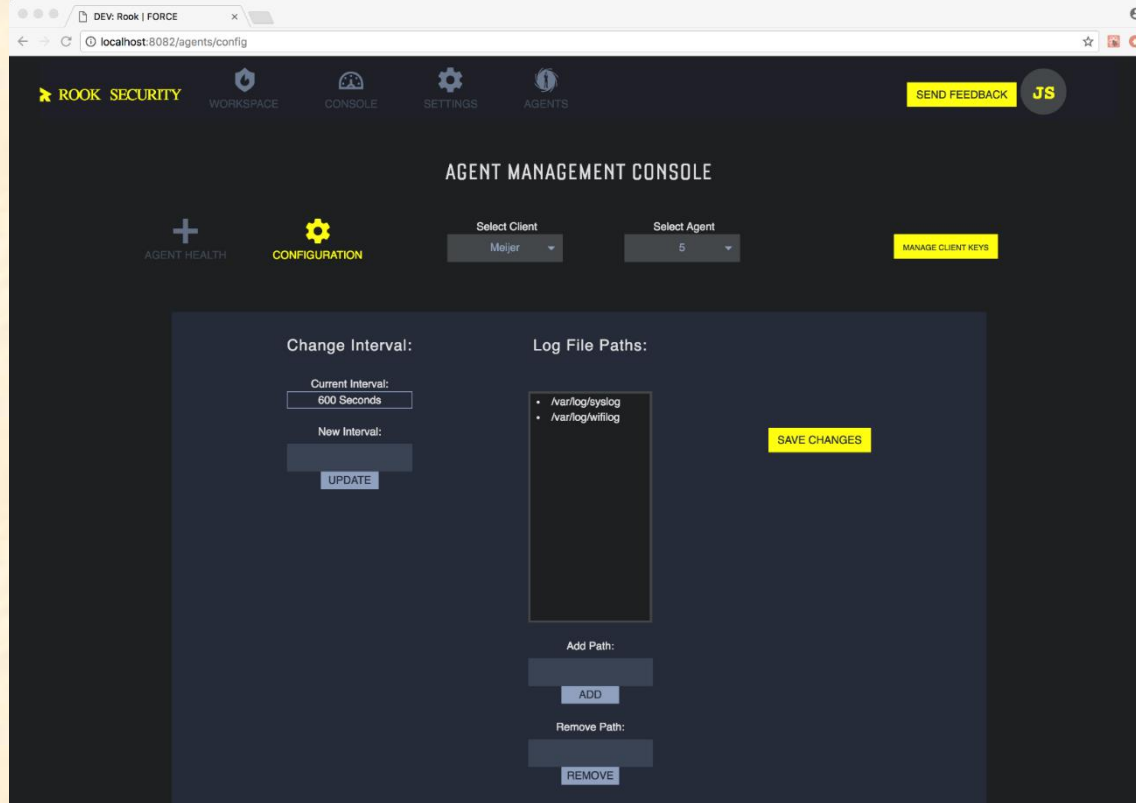
Global Alerts

- Agent 1 for Meijer has not made contact in 20202 minutes. Last checkin time: 2018-03-19 19:37:17.986950
- Agent 2 for Meijer has not made contact in 20202 minutes. Last checkin time: 2018-03-19 19:37:23.317527
- Agent 3 for Meijer has not made contact in 20202 minutes. Last checkin time: 2018-03-19 19:37:25.413817
- Agent 4 for Meijer has not made contact in 20202 minutes. Last checkin time: 2018-03-19 19:37:27.942195
- Agent 5 for Meijer has not made contact in 20202 minutes. Last checkin time: 2018-03-19 19:37:29.662714
- Agent 6 for Meijer has not made contact in 20202 minutes. Last checkin time: 2018-03-19 19:37:29.662714



Team Rook Beta Presentation

Agent Configuration Tab

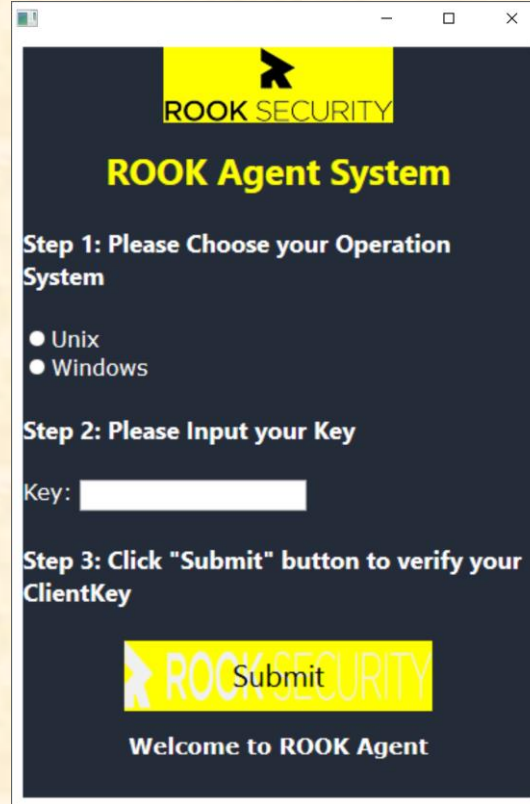




Team Rook Beta Presentation

Team Rook Beta Presentation

Windows Agent Product Validator



The screenshot shows a Windows application window titled "ROOK SECURITY" with a yellow header bar. The main content area has a dark blue background with yellow text. It displays the "ROOK Agent System" title and three steps for installation. Step 1 is "Please Choose your Operation System" with radio buttons for "Unix" and "Windows". Step 2 is "Please Input your Key" with a text input field. Step 3 is "Click 'Submit' button to verify your ClientKey" with a yellow "Submit" button. At the bottom, it says "Welcome to ROOK Agent".

ROOK SECURITY

ROOK Agent System

Step 1: Please Choose your Operation System

- ☐ Unix
- ☐ Windows

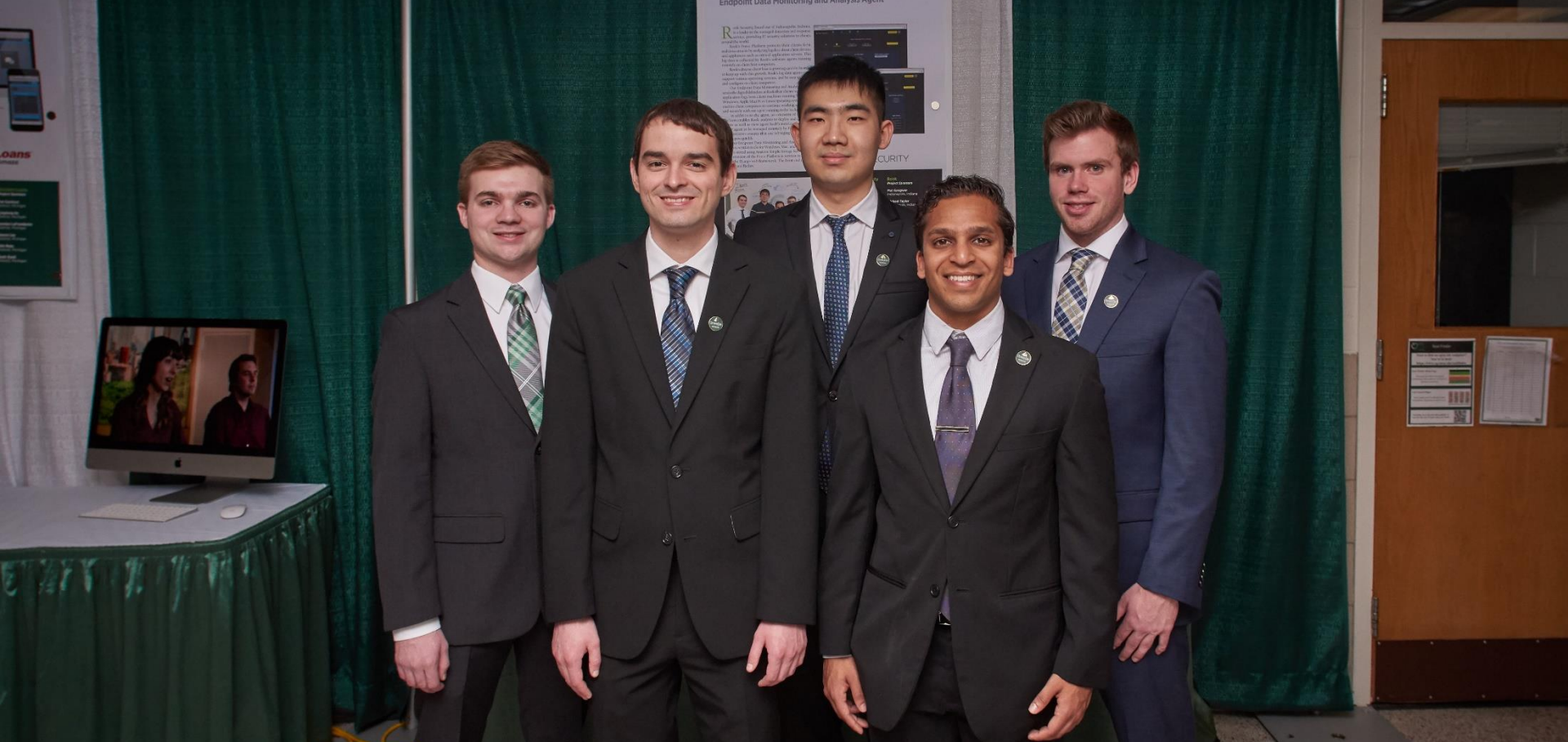
Step 2: Please Input your Key

Key:

Step 3: Click "Submit" button to verify your ClientKey

Submit

Welcome to ROOK Agent



Team Rook @ Design Day

Jared Clark, Jeremy Specht, Bohao Gao, Vikram Thakur, Drew Gilbertson

MICHIGAN STATE
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The Capstone Experience

Team SpartanNash

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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



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Multi-Regional Grocery
Distributor & Retailer
Largest distributor of grocery products.

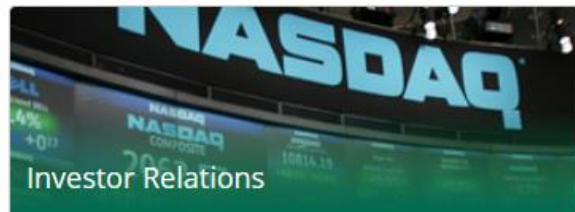
STOCK PRICE (SPTN):



Wholesale Food Distribution



Grocery Retail Stores



Investor Relations

Volunteer Tracking System

-



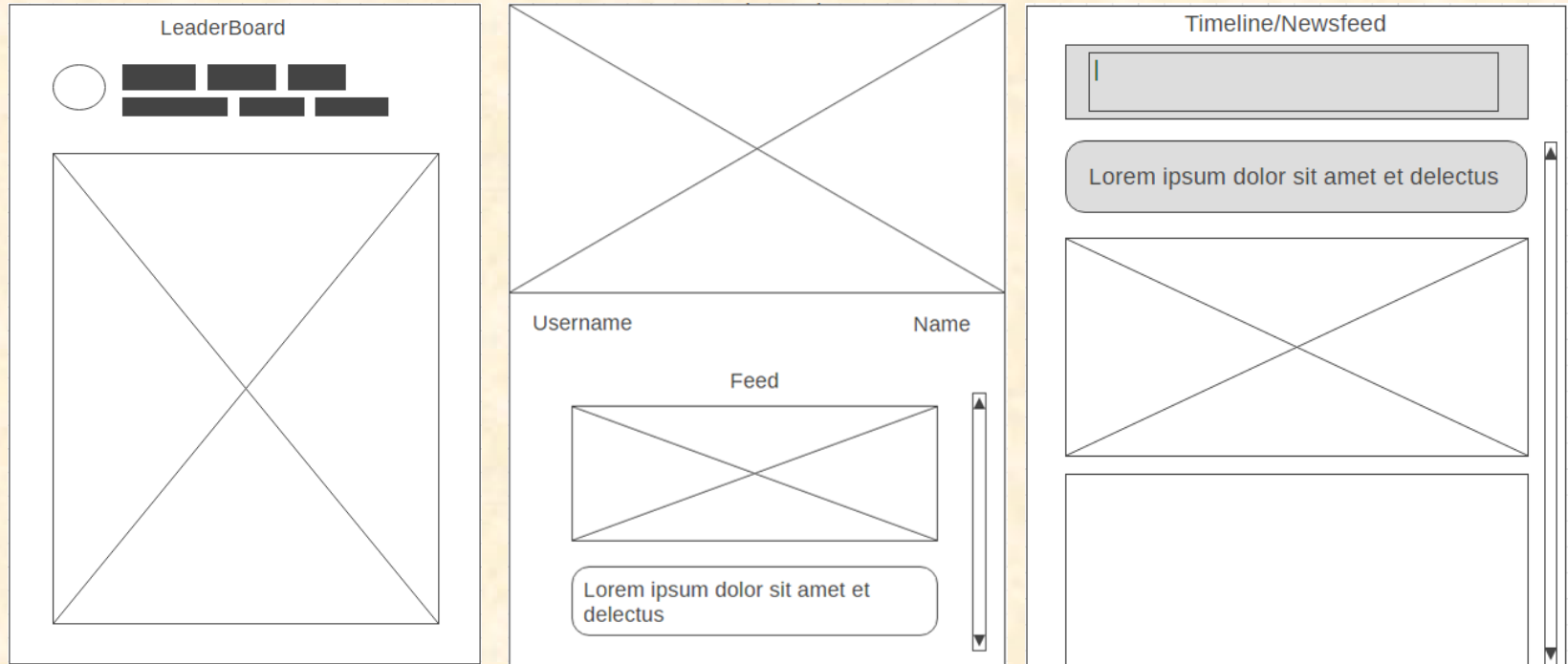


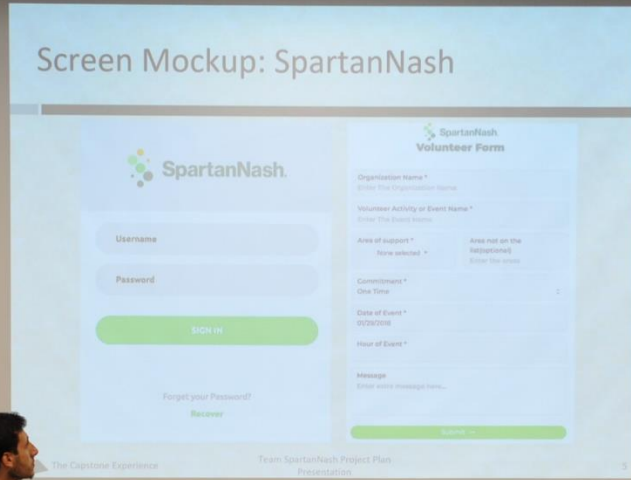
Team SpartanNash

Tianyi Li, Aleks Bonev, Abbott Wang, Denis Andreev, Nino Candela

Team SpartanNash Project Plan Presentation

Screen Mockup

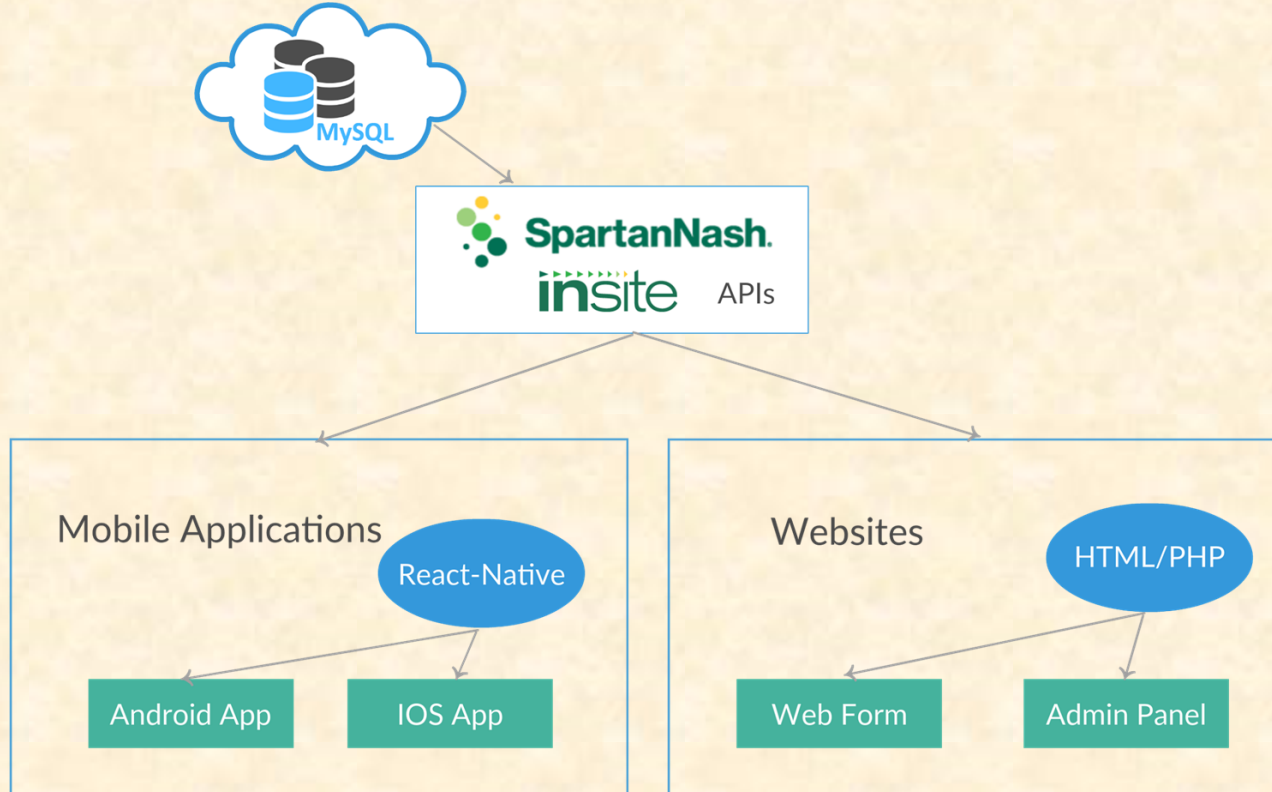




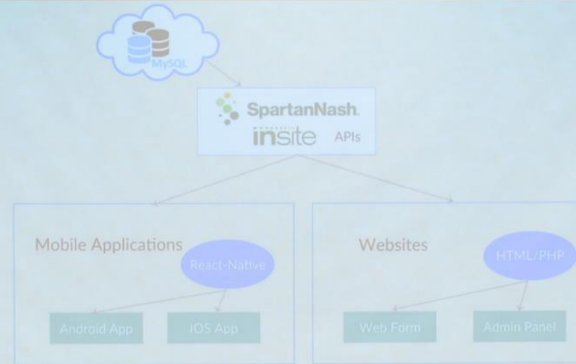
Team SpartanNash Project Plan Presentation

Team SpartanNash Project Plan Presentation

Architecture Diagram



System Architecture




The Capstone Experience

Team SpartanNash Project Plan Presentation

Team SpartanNash
Project Plan Presentation

Team SpartanNash Project Plan Presentation

Screen Mockup




SpartanNash.

Username

Password

SIGN IN

Forget your Password?
Recover



SpartanNash.
Volunteer Form

Organization Name *
Enter The Organization Name

Volunteer Activity or Event Name *
Enter The Event Name

Area of support *
None selected ▾

Area not on the list(optional)
Enter the areas

Commitment *
One Time ↕

Date of Event *
01/29/2018

Hour of Event *

Message
Enter extra message here...

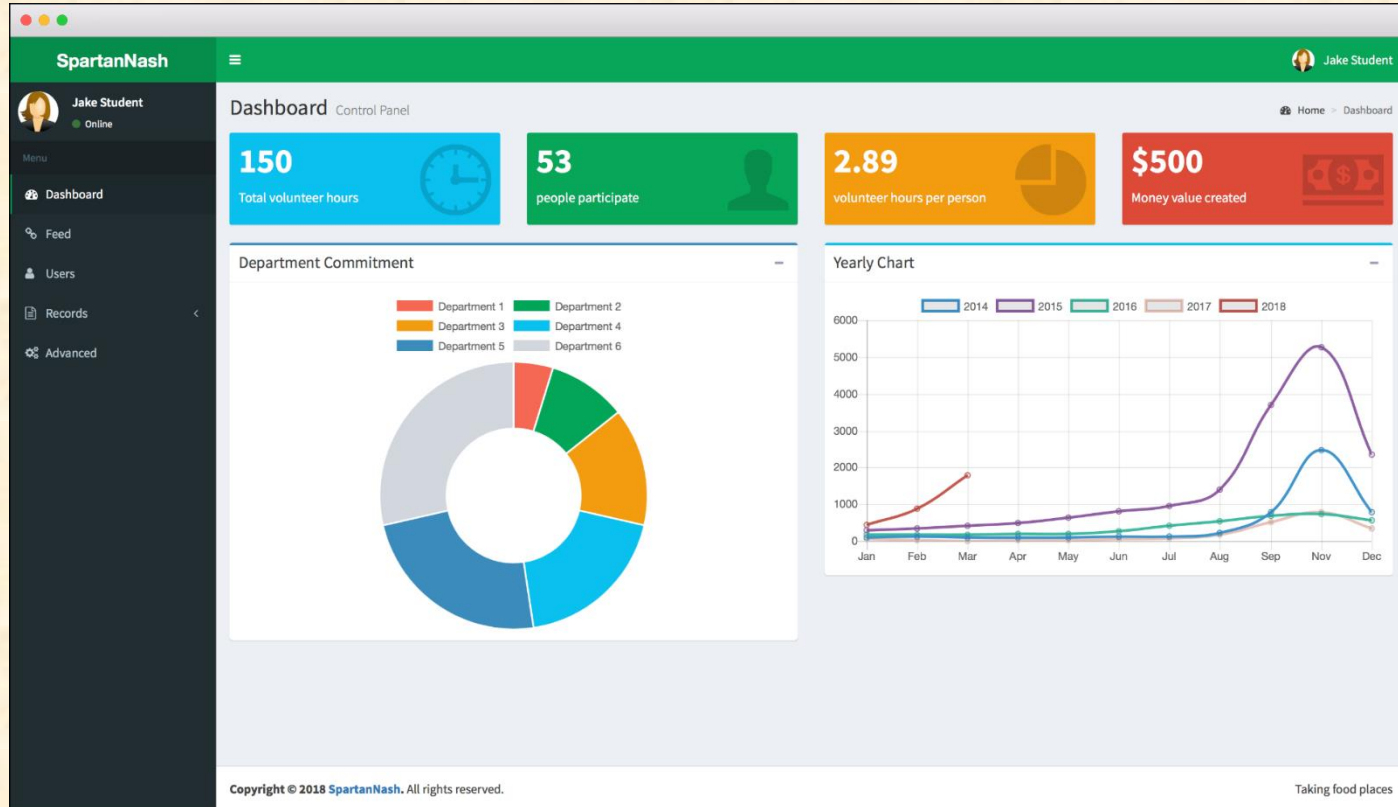
Submit →



Team SpartanNash Alpha Presentation

Team SpartanNash Alpha Presentation

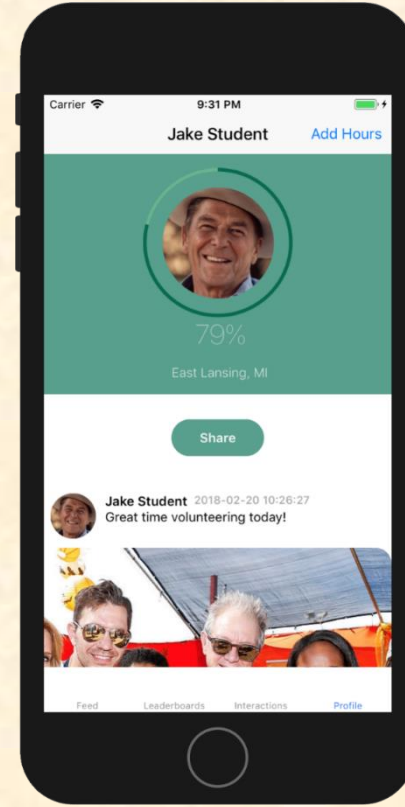
Website Admin Panel



The Capstone Experience

Team SpartanNash Alpha Presentation

Newsfeed and Profile

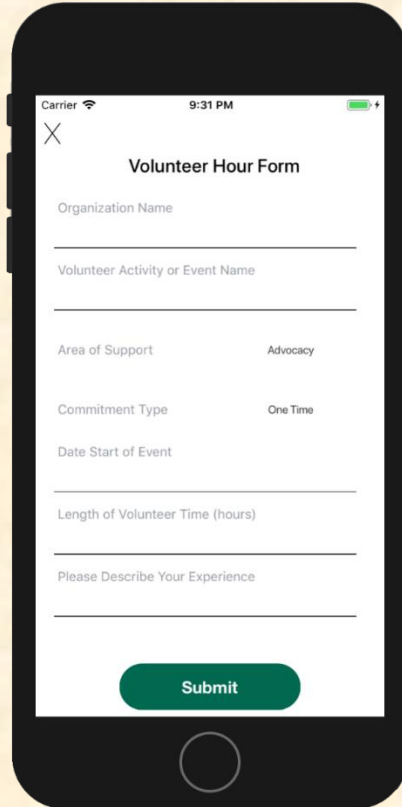




Team SpartanNash Alpha Presentation

Team SpartanNash Alpha Presentation

Volunteer Tracking Form



Carrier 9:31 PM

X

Volunteer Hour Form

Organization Name

Volunteer Activity or Event Name

Area of Support *Advocacy*

Commitment Type *One Time*

Date Start of Event

Length of Volunteer Time (hours)

Please Describe Your Experience

Submit

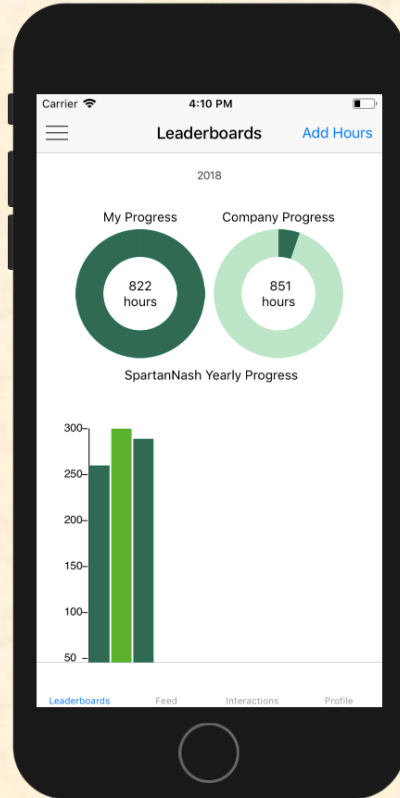




Team SpartanNash Beta Presentation

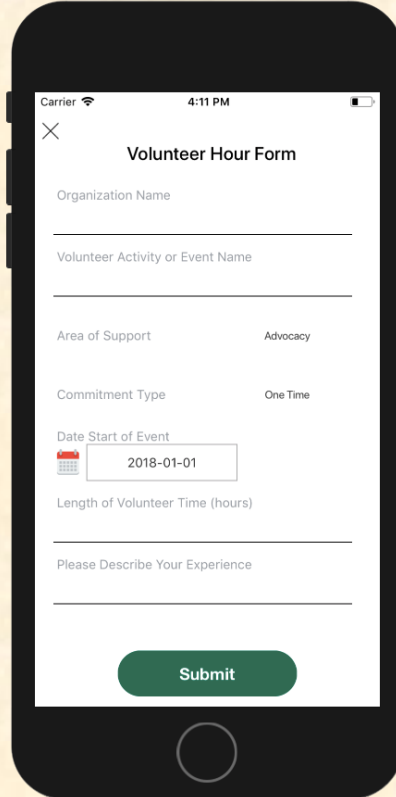
Team SpartanNash Beta Presentation

Leaderboards



Team SpartanNash Beta Presentation

Volunteer Tracking Form



The image shows a black smartphone with a white screen displaying a form titled "Volunteer Hour Form". The form has a close button (X) in the top left corner. The status bar at the top shows "Carrier", signal strength, "4:11 PM", and battery level. The form fields are as follows:

- Organization Name: A text input field.
- Volunteer Activity or Event Name: A text input field.
- Area of Support: A text input field with "Advocacy" as a placeholder.
- Commitment Type: A text input field with "One Time" as a placeholder.
- Date Start of Event: A date picker showing "2018-01-01".
- Length of Volunteer Time (hours): A text input field.
- Please Describe Your Experience: A text input field.

At the bottom of the form is a green "Submit" button.

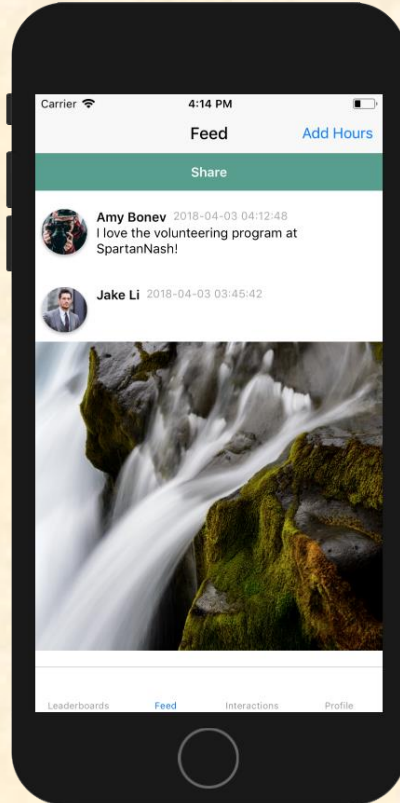




Team SpartanNash Beta Presentation

Team SpartanNash Beta Presentation

Newsfeed





Team SpartanNash @ Design Day
Abbott Wang, Tianyi Li, Aleks Bonev, Denis Andreev, Nino Candela

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The Capstone Experience

Team Spectrum Health

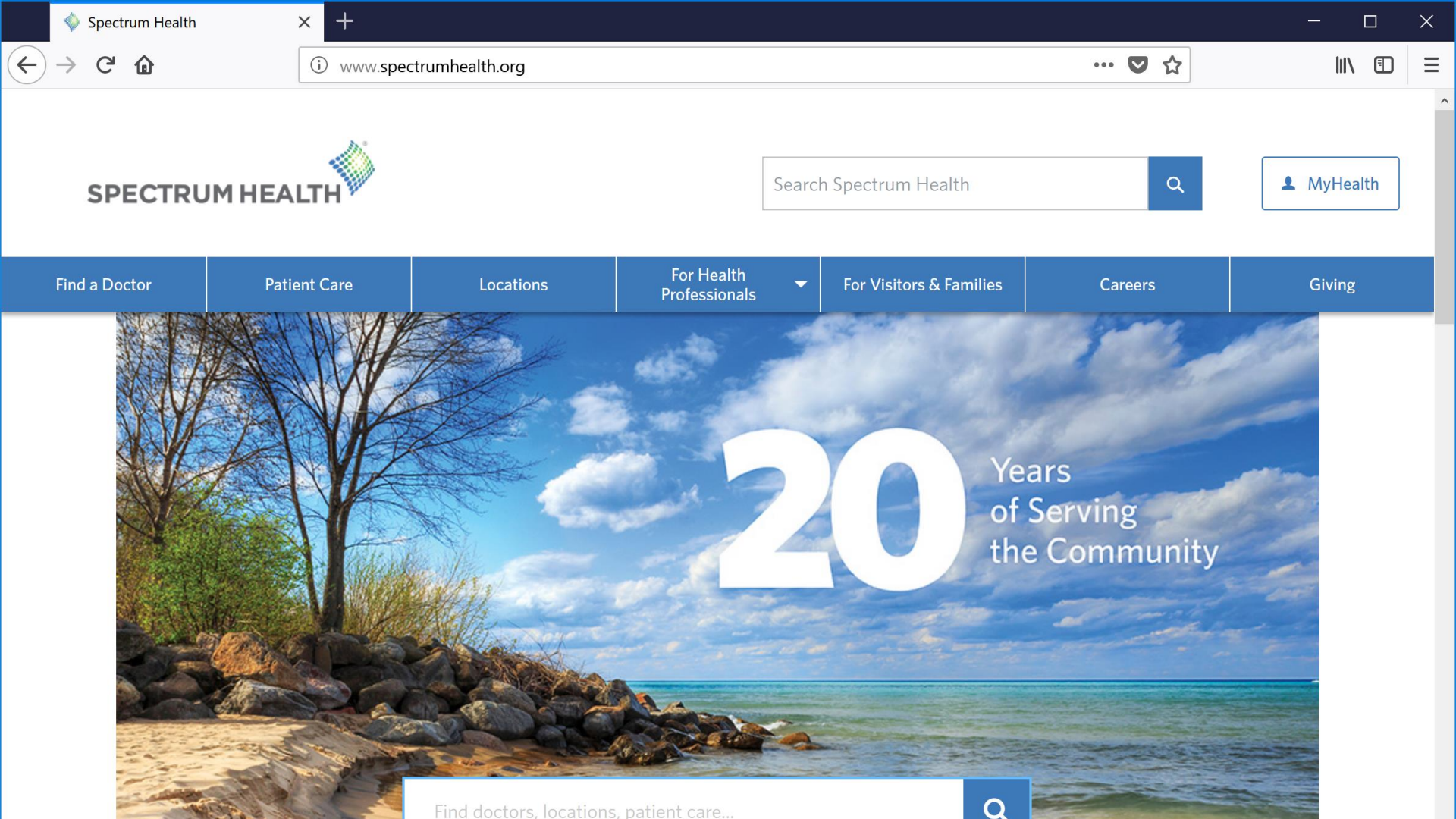
Department of Computer Science and Engineering
Michigan State University
Spring 2018



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Search Spectrum Health 🔍

👤 MyHealth

Find a Doctor

Patient Care

Locations

For Health Professionals ▼

For Visitors & Families

Careers

Giving



Find doctors, locations, patient care... 🔍

Team Spectrum Health Project Overview

Spectrum Health Go

- Functionalities
 - Improve Patient and Visitor Experience
 - Help Navigate Spectrum Health Facilities
- Features
 - Create Apple iOS and Google Android Apps
 - Provide Real-Time On-Screen Directions
 - Guide via Pre-Configured Waypoints
 - Use Optical Character Recognition (OCR)
 - Collect Anonymous Route Data
 - Provide Administrative Web App
 - Create and Print Waypoints
 - Configure and Improve Routes
 - Add New Locations and Routes
- Technologies
 - CSS / HTML / JavaScript
 - Apple iOS / Swift
 - Google Android / Java
 - Microsoft .NET / C#
 - Microsoft SQL Server
 - Microsoft Azure
 - GitHub / ZenHub
 - Optical Character Recognition (OCR)
 - Identity Server



SPECTRUM HEALTH

Grand Rapids, Michigan

The Capstone Experience



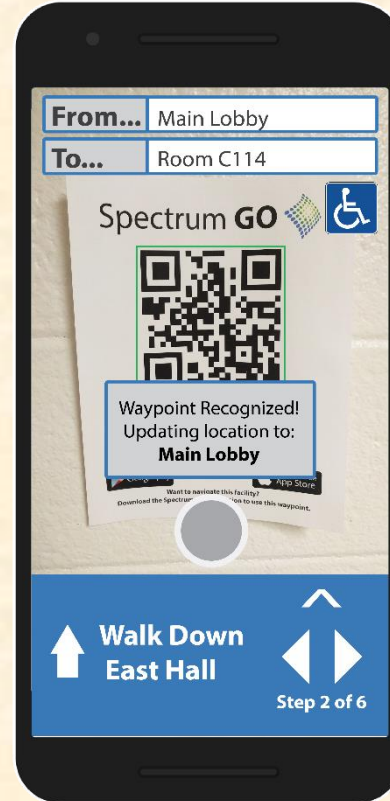
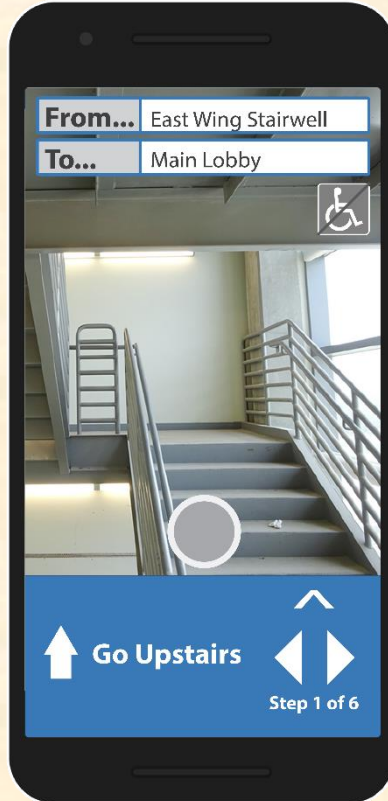


Team Spectrum Health

Andrew Astakhov, Collin Skonieski, Rachel Polus, Pierce Neal, Xin Zhao

Team Spectrum Health Project Plan Presentation

Screen Mockup: Android App

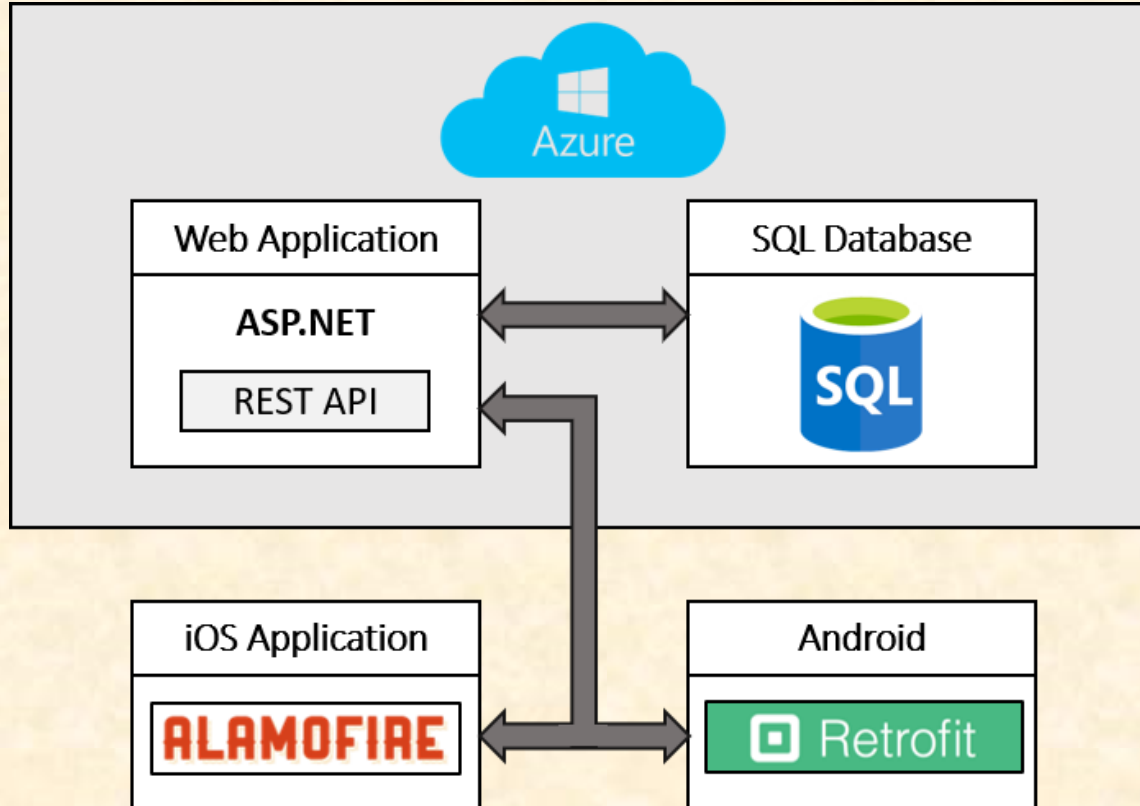




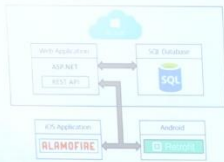
Team Spectrum Health Project Plan Presentation

Team Spectrum Health Project Plan Presentation

Architecture Diagram



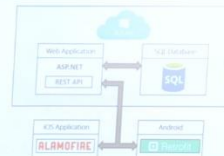
System Architecture



System Architecture



System Architecture



Team Spectrum Health
Project Plan Presentation

Team Spectrum Health Project Plan Presentation

Screen Mockup: Web App

SPECTRUM HEALTH



SpectrumGO LOBBY Waypoint

Paths

To Operating Room	Update
Directions: Turn left, Walk forward until	Angle: -90
To Nursing Ward	Update
Directions: Turn right, Walk forward an	Angle: 90
To Cardiology	Update
Directions: Turn around, Take the first	Angle: 180
To Pharmacy	Update
Directions: Take the staircase on your	Angle: 45

Add

Delete



Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

Web Application



Manage Facilities



Manage Waypoints



Manage Connections

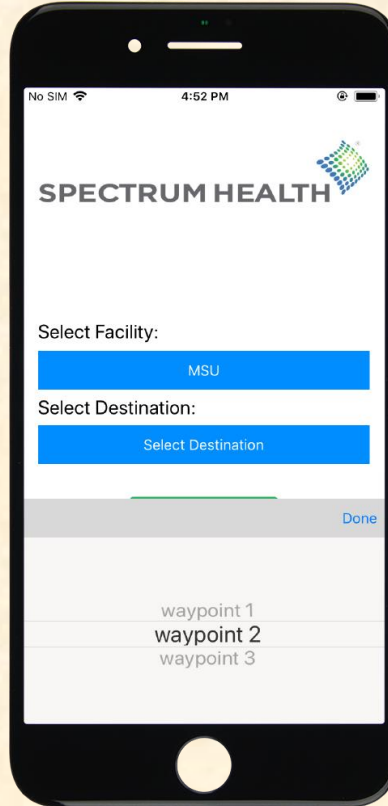
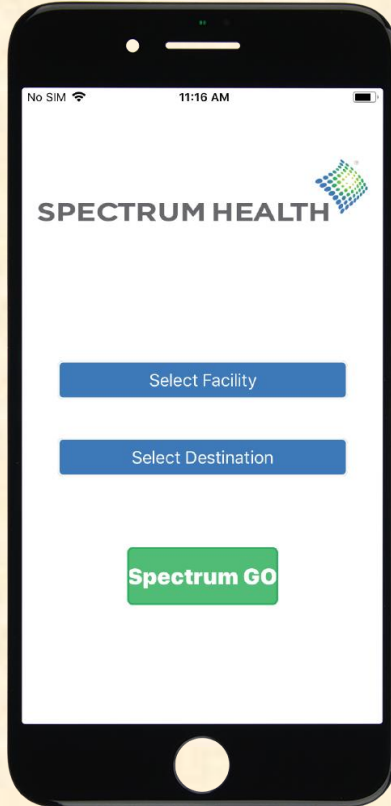


Manage Pathways

Engineering Building ▼

Team Spectrum Health Alpha Presentation

iOS Application

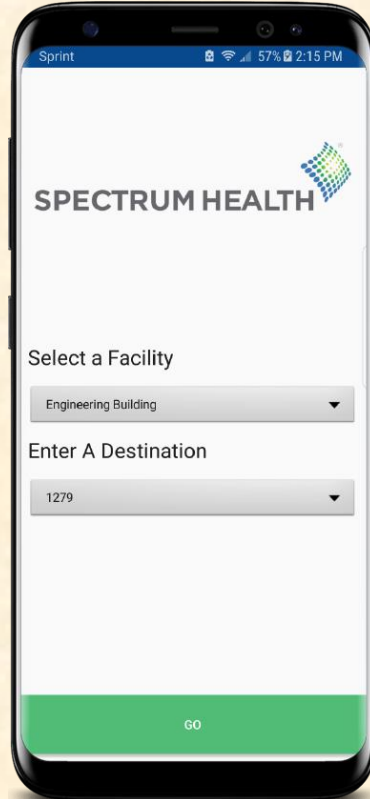




Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

Android Application





Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

Web Application Waypoint Page



SPECTRUM HEALTH



Waypoints At Engineering Building

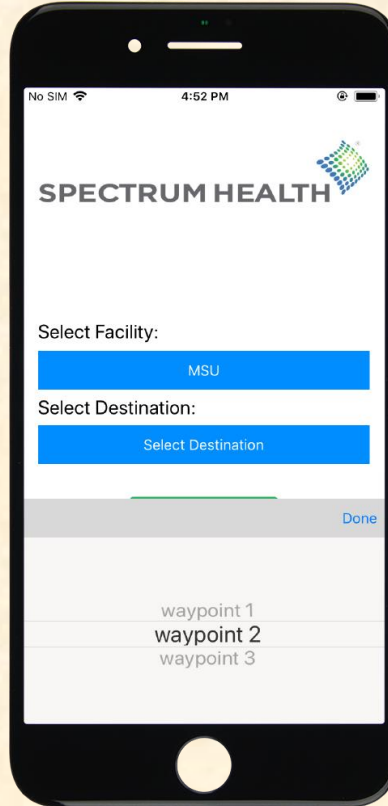
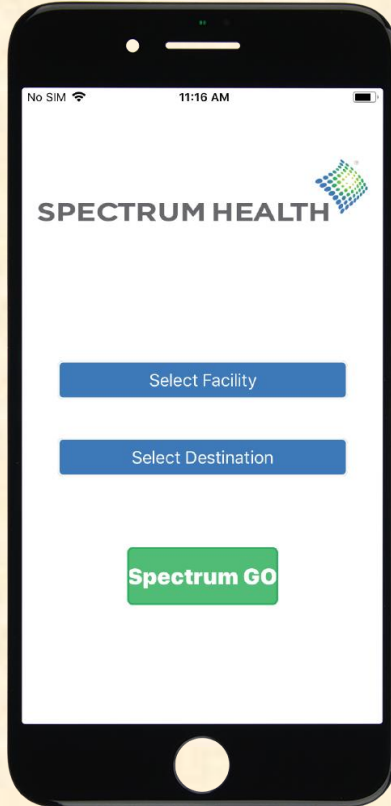
Facilities	Name				
Engineering Building	Capstoned Lab	QR Code	Edit	Manage Connections	Delete
Engineering Building	Room 3353	QR Code	Edit	Manage Connections	Delete
Engineering Building	Room 3355 (Pantry)	QR Code	Edit	Manage Connections	Delete
Engineering Building	Drinkin' Fountain	QR Code	Edit	Manage Connections	Delete

[Home](#)[Create New](#)

localhost:5000/Waypoints/QRCode/1

Team Spectrum Health Beta Presentation

iOS Application

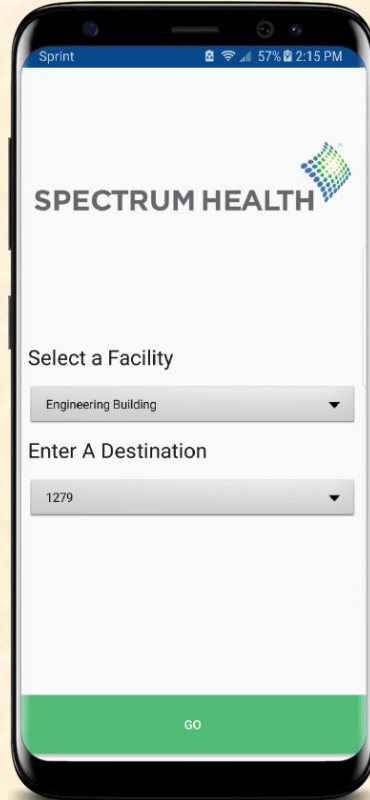




Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

Android Application





Team Spectrum Health @ Design Day
Andrew Astakhov, Xin Zhao, Pierce Neal, Rachel Polus, Collin Skonieski

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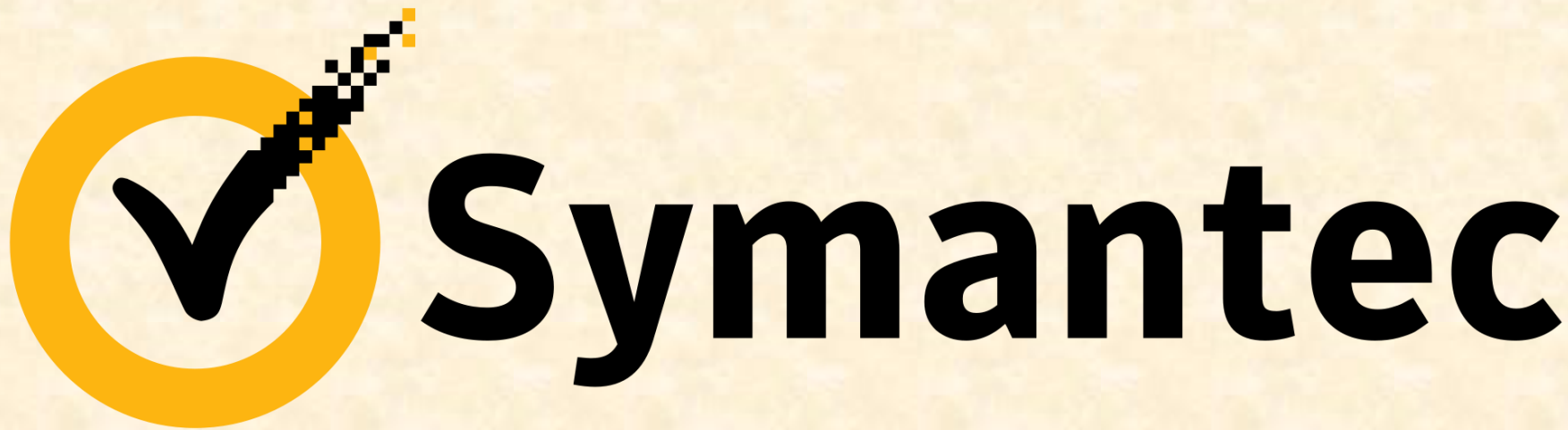
The Capstone Experience

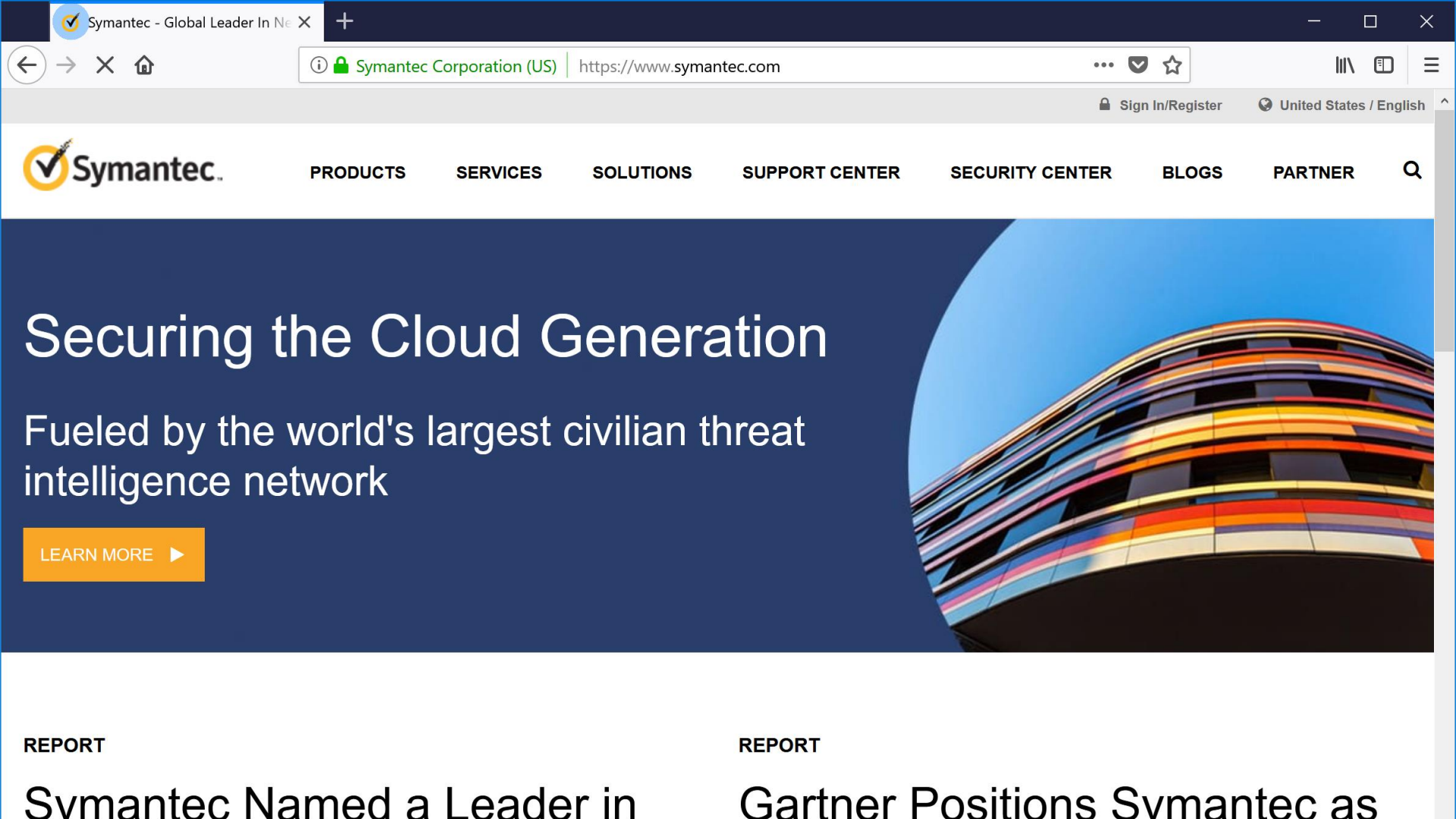
Team Symantec

Department of Computer Science and Engineering
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SECURITY CENTER

BLOGS

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REPORT

Symantec Named a Leader in

REPORT

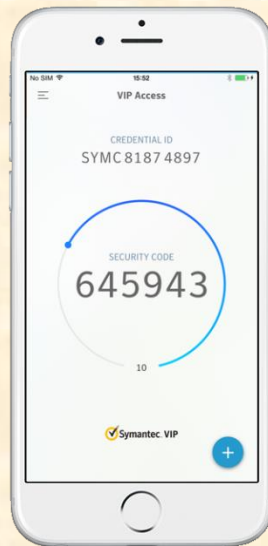
Gartner Positions Symantec as

Team Symantec

Project Overview

Detecting Security Threats from User Authentications

- Functionalities
 - Detect Security Threats
 - Use Symantec Validation and ID Protection (VIP)
 - Visualize VIP Authentication Patterns
- Features
 - Ingest VIP Reporting Service Log Data
 - Create Operational Dashboard with Alerting
 - Number of Authentications Per Time Unit
 - Successful vs Failed Authentications
 - Unique Users Per Time Unit
 - Distribution of Risk Reasons
 - Create Security Dashboard and Alerting
 - Trends of Failed Authentications
 - Find Risky Users
 - Flag Increases in Credential Use
 - Integrate with Splunk Enterprise and Splunk Cloud
- Technologies
 - Symantec VIP Reporting Service
 - Splunk
 - Amazon Web Service (AWS)
 - RESTful Web Services
 - Elastic Search, Kibana, Logstash
 - Apache Spark





Team Symantec

Robert Novak, Abby Urbanski, Stephen Alfa, Keerthana Kolisetty, Echo Wu

Team Symantec Project Plan Presentation

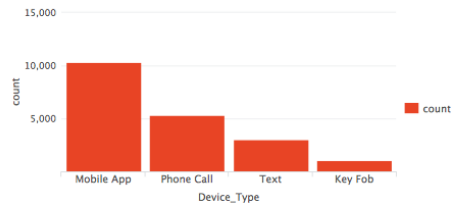
Screen Mockup: Dashboard in Splunk

Operational Trends

Panels that display basic statistics of VIP authentications

Edit Export ...

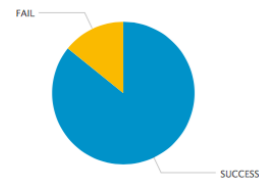
Authentications Across Different Device Types



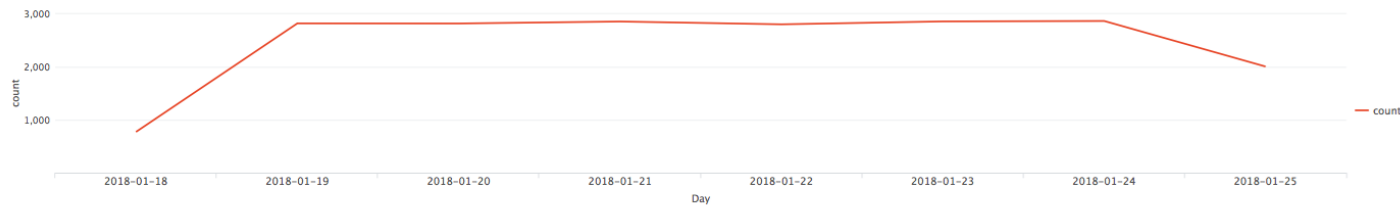
Total Number of Authentications

19,809

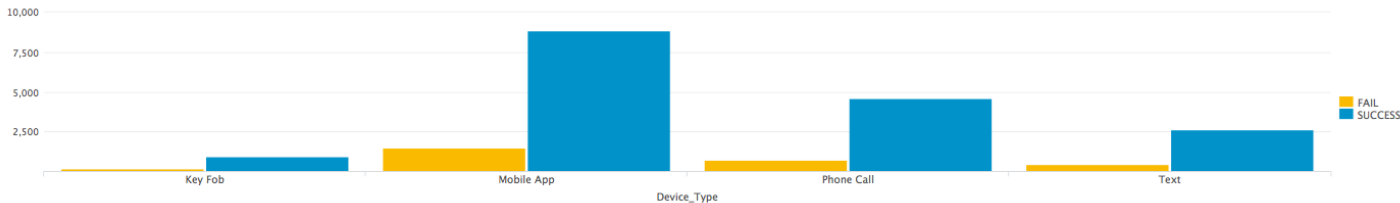
Success vs. Failure Authentications



Number of Authentications Over Last Seven Days



Success vs Fail Attempts For Each Device Type





Screen Mockup: Bar Graph Panel

Authentications Across Different Device Types



Screen Mockup: Bar Graph Panel

Authentications Across Different Device Types



Screen Mockup: Bar Graph Panel

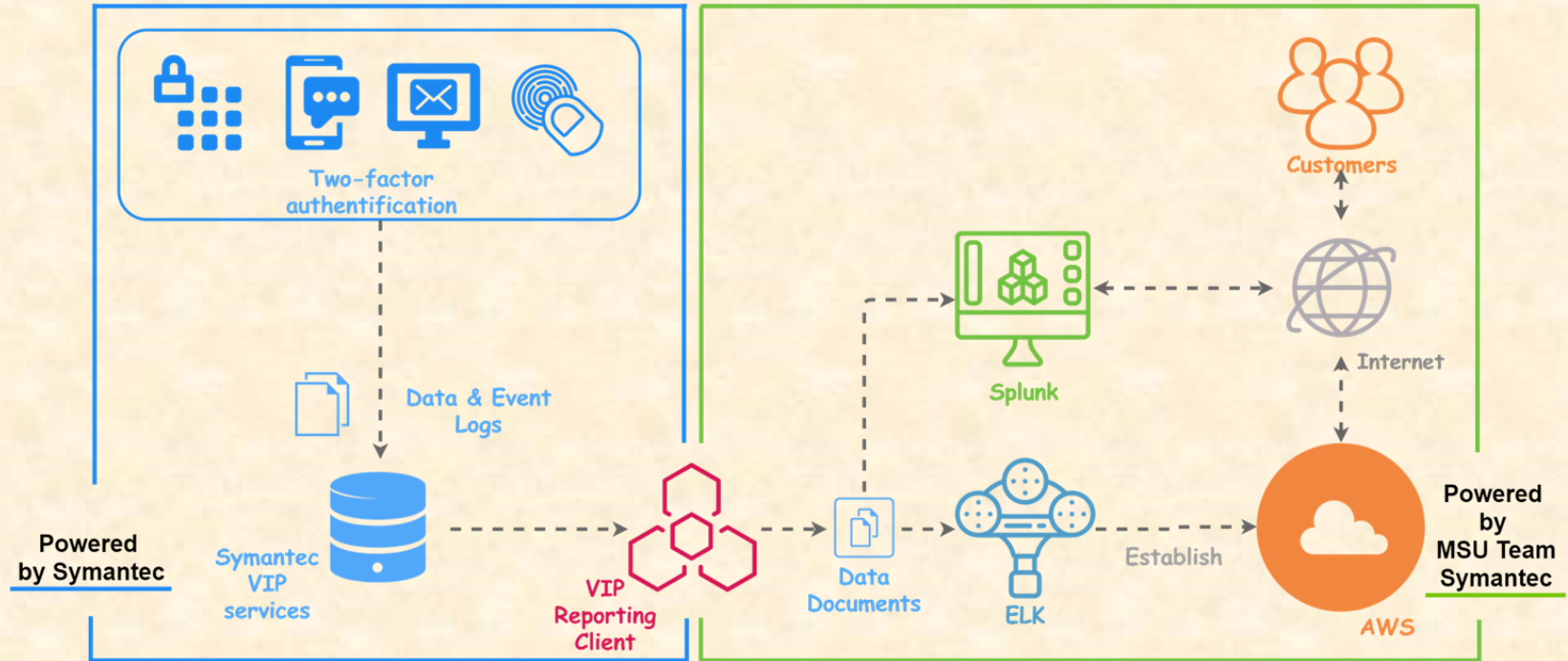
Authentications Across Different Device Types

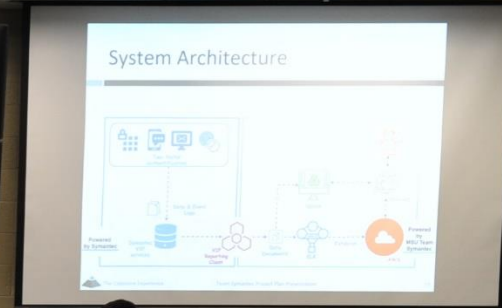
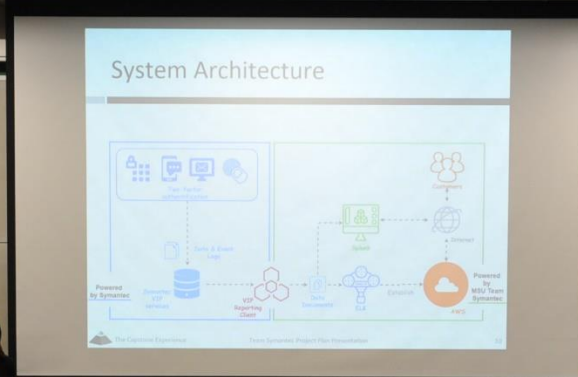
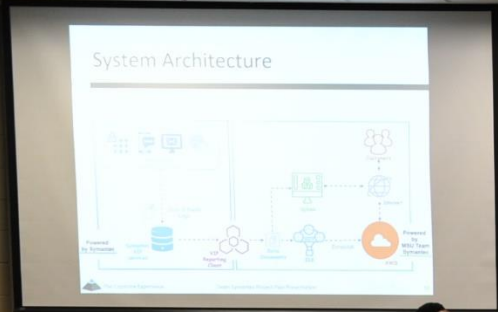


Team Symantec
Project Plan Presentation

Team Symantec Project Plan Presentation

Architecture Diagram

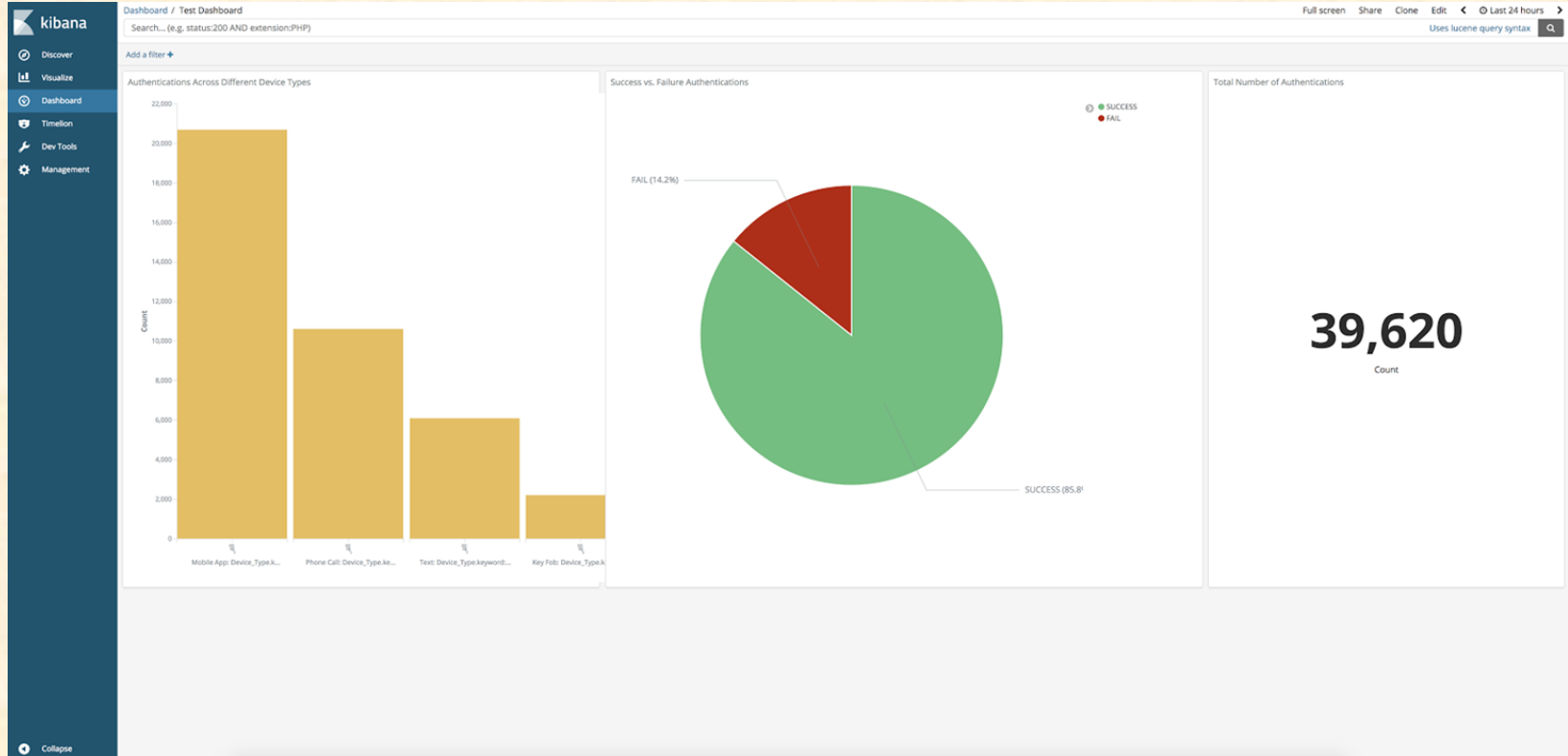




Team Symantec
Project Plan Presentation

Team Symantec Project Plan Presentation

Screen Mockup: Dashboard in ELK

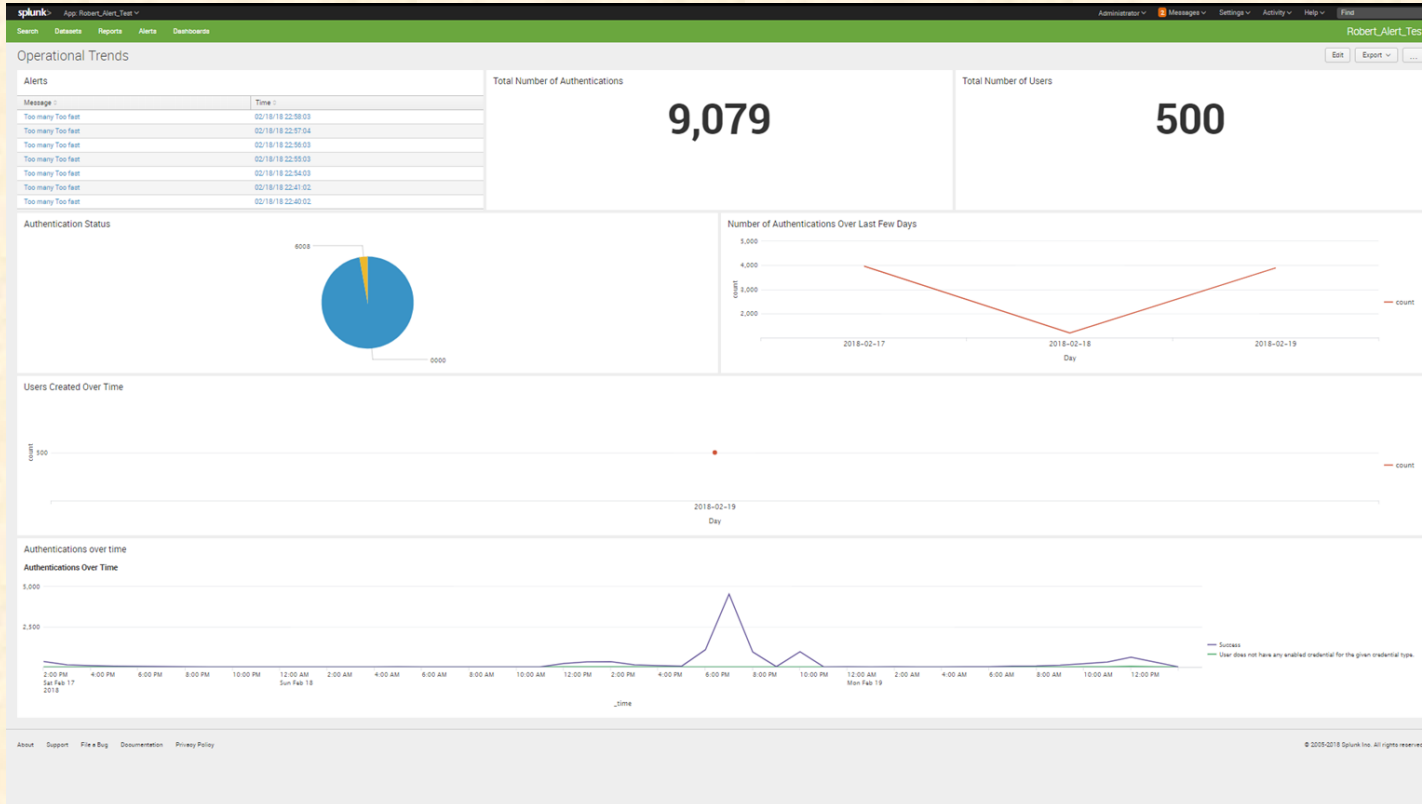




Team Symantec Alpha Presentation

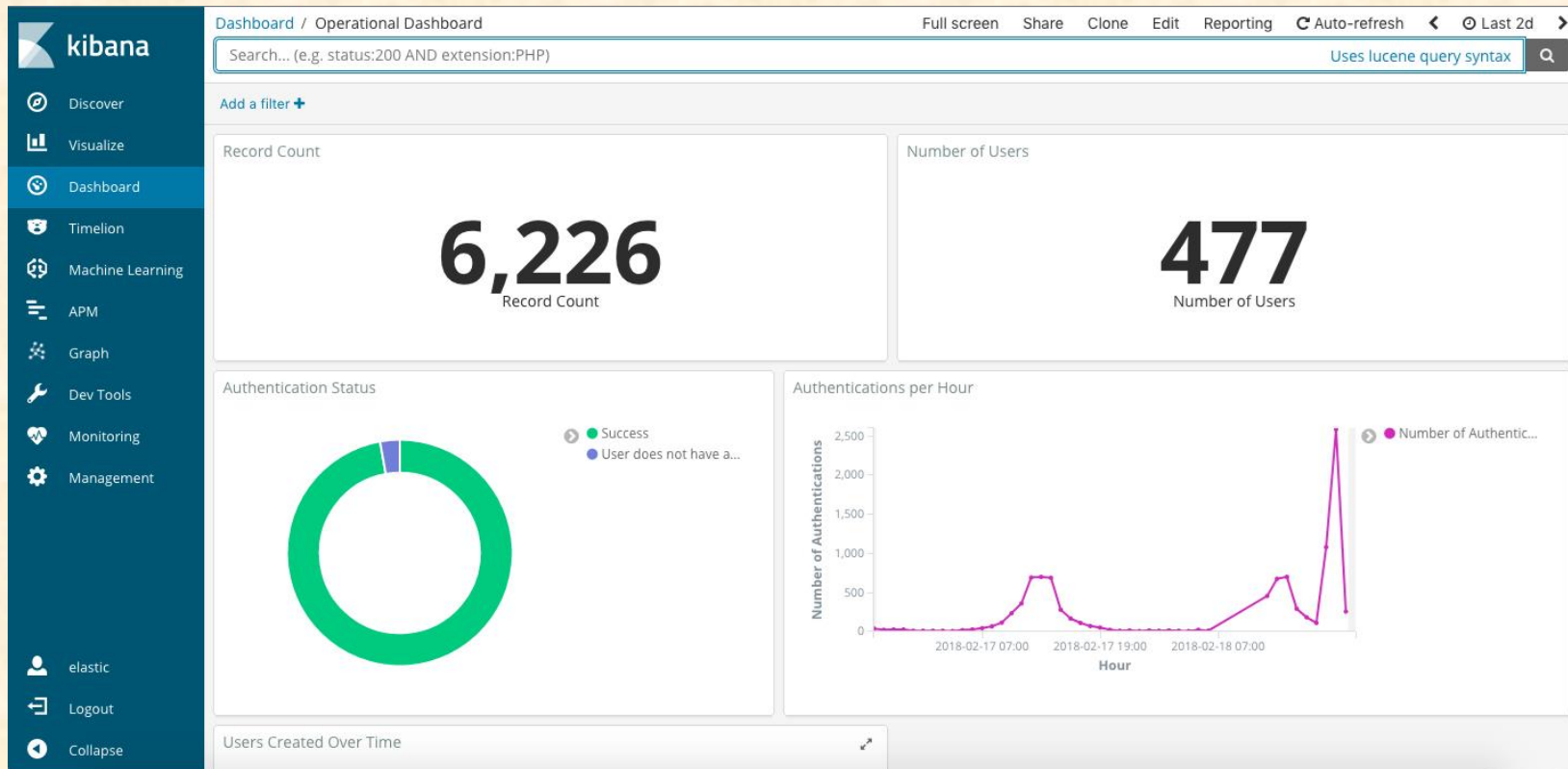
Team Symantec Alpha Presentation

Splunk Dashboard



Team Symantec Alpha Presentation

ELK Dashboard

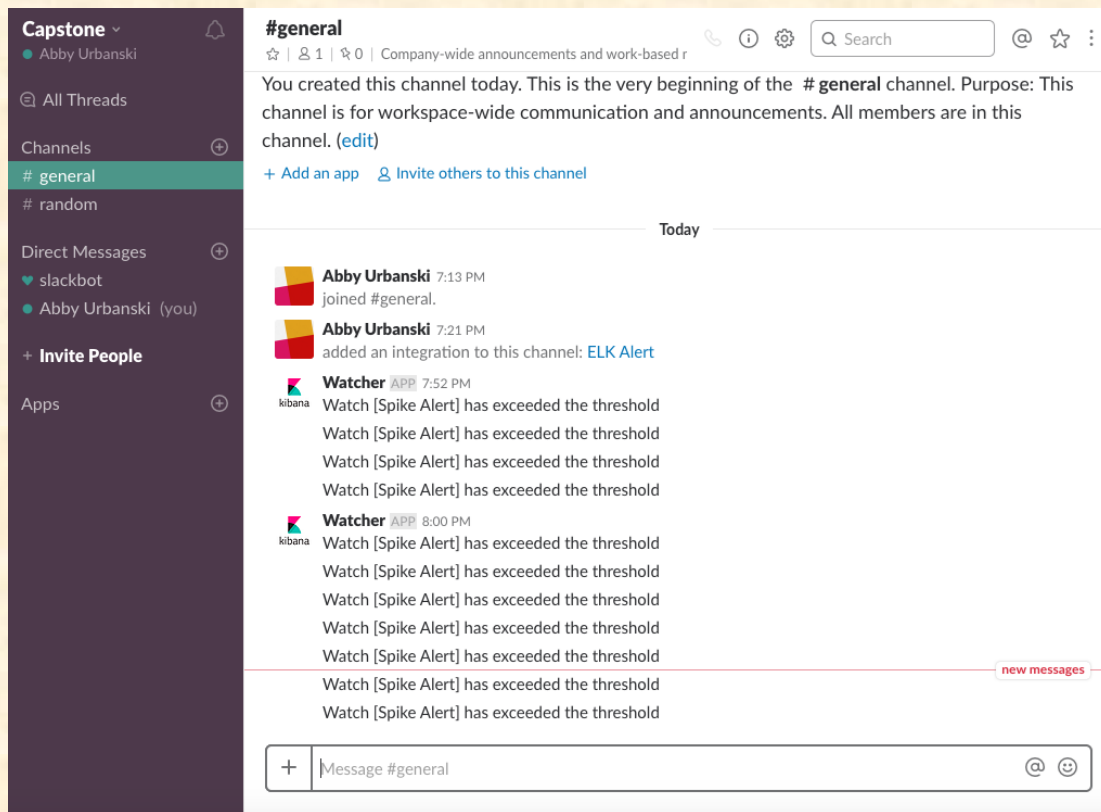




Team Symantec Alpha Presentation

Team Symantec Alpha Presentation

ELK Alerting on Slack



The screenshot shows a Slack interface with a sidebar on the left and a main channel view on the right. The sidebar includes a 'Capstone' header, a list of users (Abby Urbanski), 'All Threads', 'Channels' (with #general selected), 'Direct Messages' (slackbot, Abby Urbanski), 'Invite People', and 'Apps'. The main view shows the '#general' channel with a description: 'You created this channel today. This is the very beginning of the #general channel. Purpose: This channel is for workspace-wide communication and announcements. All members are in this channel. (edit)'. Below the description are links to 'Add an app' and 'Invite others to this channel'. A 'Today' separator is present. The message history shows: 1. Abby Urbanski (7:13 PM) joined #general. 2. Abby Urbanski (7:21 PM) added an integration to this channel: ELK Alert. 3. A 'Watcher' app (7:52 PM) sent four identical messages: 'Watch [Spike Alert] has exceeded the threshold'. 4. The 'Watcher' app (8:00 PM) sent another four identical messages: 'Watch [Spike Alert] has exceeded the threshold'. A 'new messages' indicator is visible on the right side of the message list. At the bottom is a message input field with a plus icon, the placeholder text 'Message #general', and icons for mentions and emojis.

Capstone ▾
● Abby Urbanski

All Threads

Channels +
general
random

Direct Messages +
♥ slackbot
● Abby Urbanski (you)

+ Invite People

Apps +

#general
☆ | 👤 1 | 📄 0 | Company-wide announcements and work-based r

You created this channel today. This is the very beginning of the **#general** channel. Purpose: This channel is for workspace-wide communication and announcements. All members are in this channel. ([edit](#))

+ Add an app | 👤 Invite others to this channel

Today

Abby Urbanski 7:13 PM
joined #general.

Abby Urbanski 7:21 PM
added an integration to this channel: [ELK Alert](#)

Watcher APP 7:52 PM
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold

Watcher APP 8:00 PM
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold
Watch [Spike Alert] has exceeded the threshold

new messages

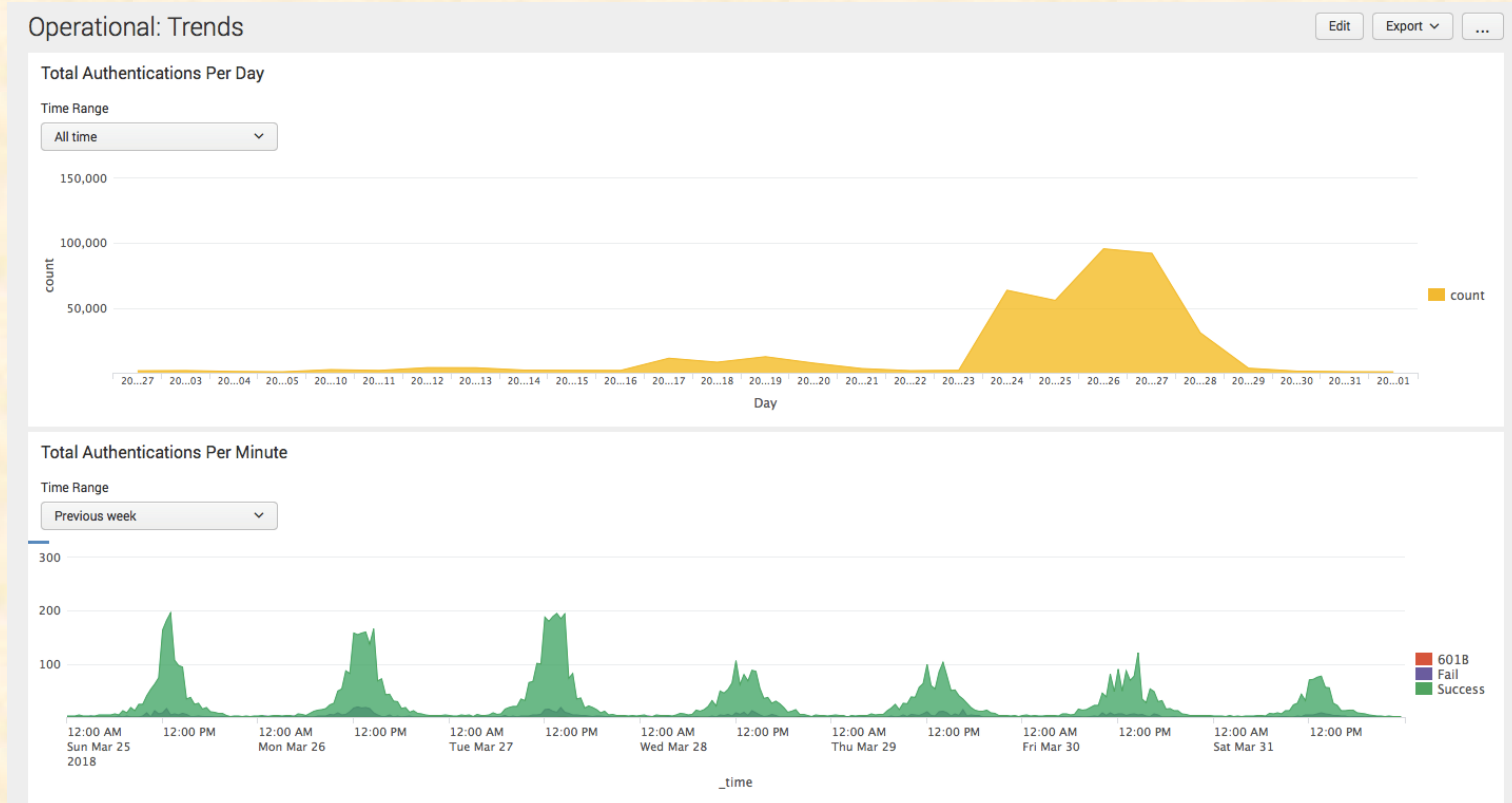
+ | Message #general



Team Symantec Beta Presentation

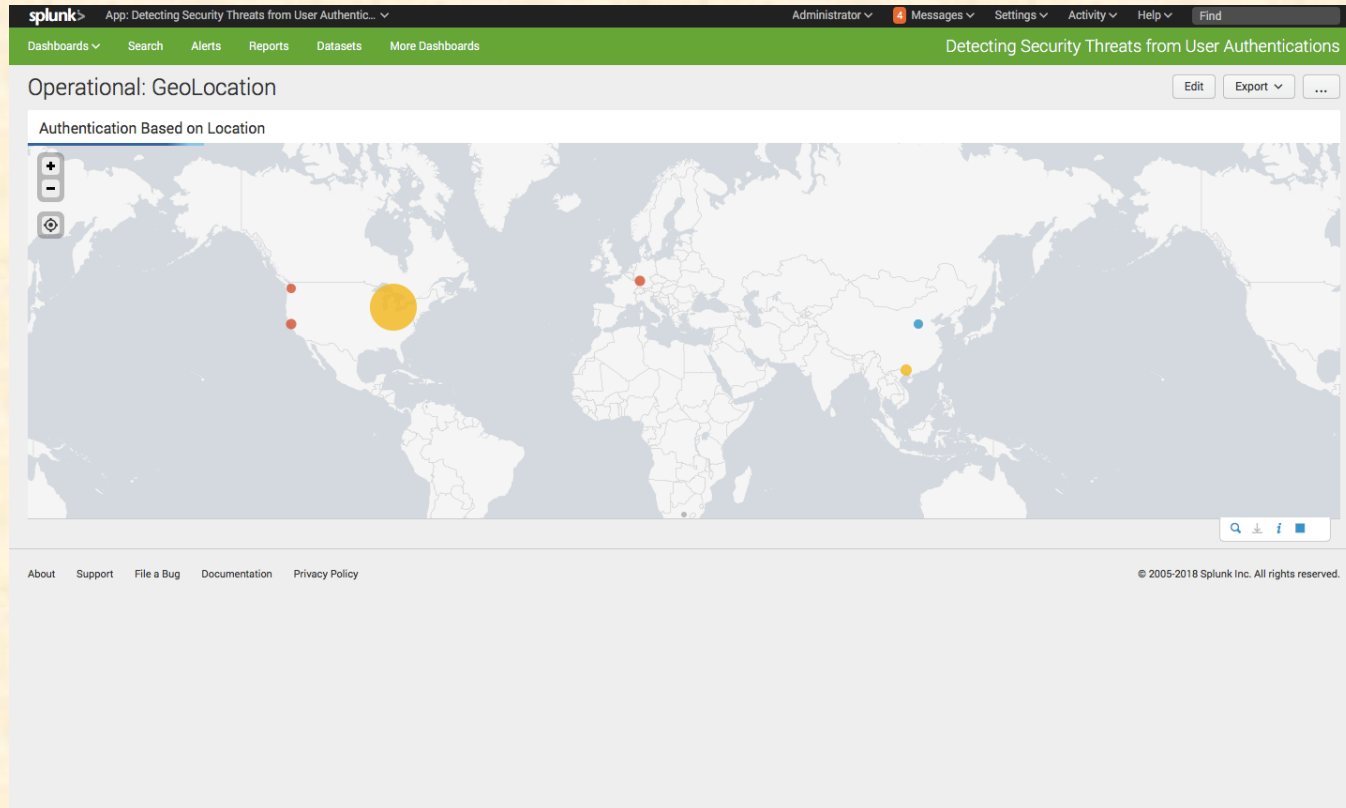
Team Symantec Beta Presentation

Splunk: Operation Trends Dashboard



Team Symantec Beta Presentation

Splunk: Geolocation Dashboard

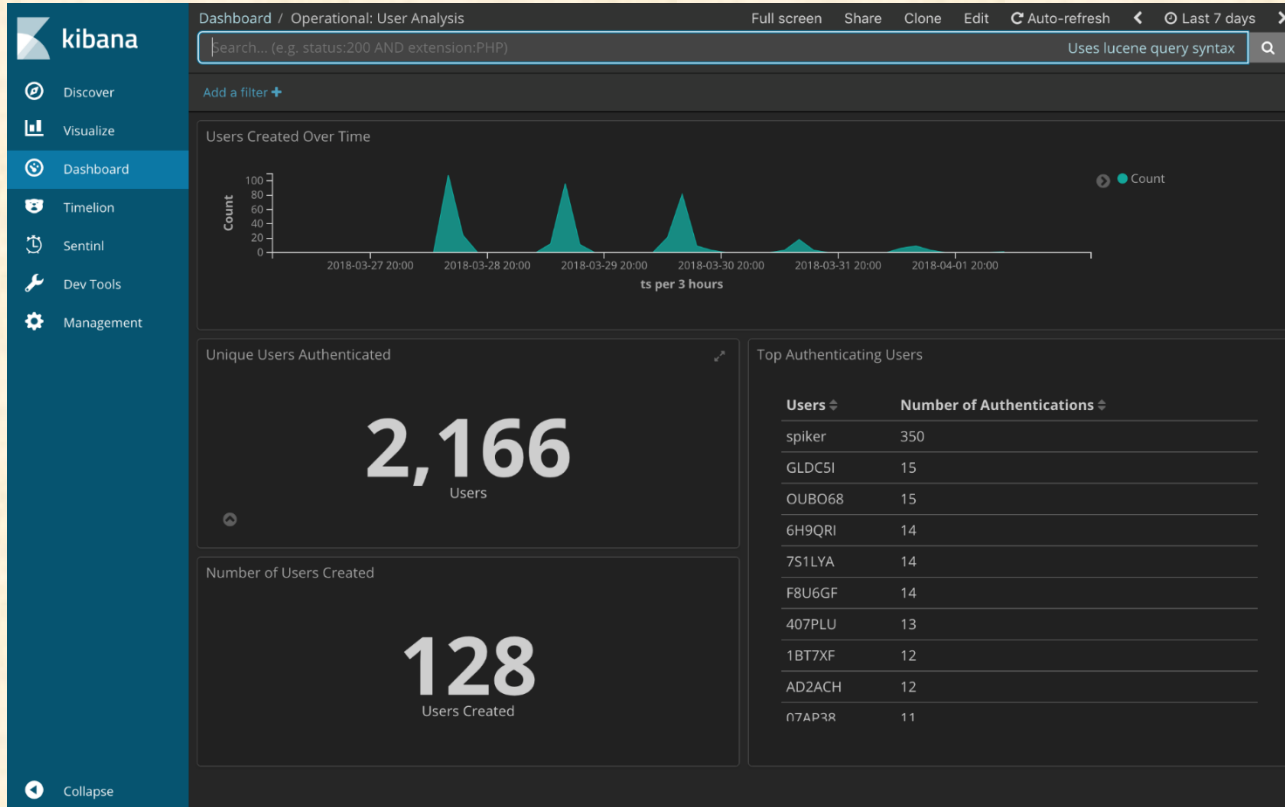




Team Symantec Beta Presentation

Team Symantec Beta Presentation

ELK: Operational User Analysis Dashboard





Team Symantec @ Design Day

Keerthana Kolisetty, Abby Urbanski, Echo Wu, Robert Novak, Stephen Alfa

MICHIGAN STATE
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The Capstone Experience

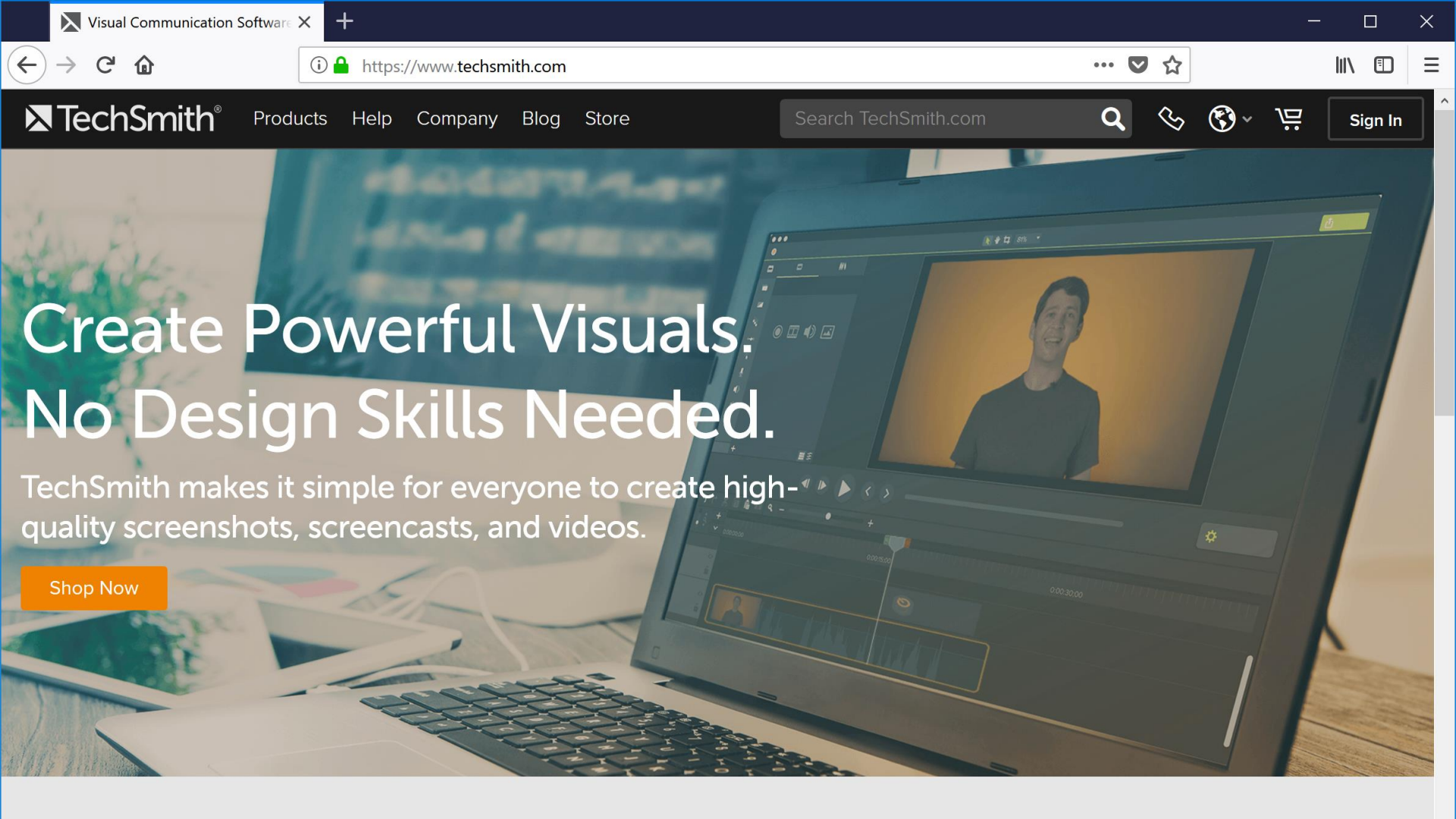
Team TechSmith

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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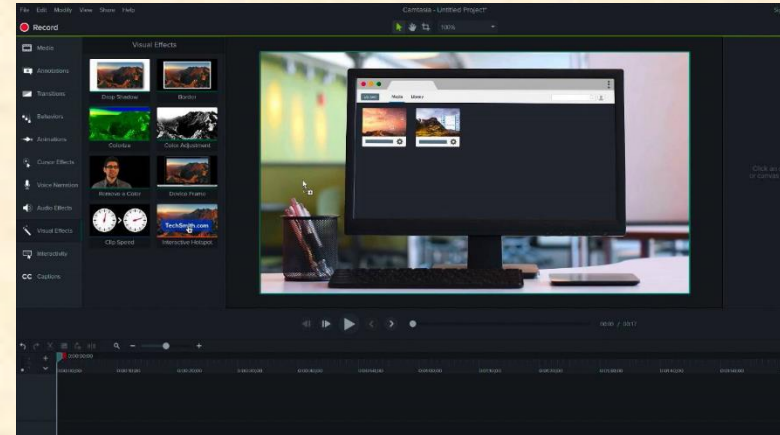
TechSmith makes it simple for everyone to create high-quality screenshots, screencasts, and videos.

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Team TechSmith Project Overview

Snagit and Camtasia Output Extensibility

- Functionalities
 - Simplify Sharing of Media Produced by TechSmith Products
 - Extend Output Capabilities of Snagit and Camtasia
- Features
 - Use TechSmith Extensibility Framework
 - Build Three Plugins
 - TechSmith Video Review
 - Wistia
 - Student Choice
 - Design Highly Polished User Experience (UX)
 - Provide Media Upload Service with Link
 - Create Independent Test Harness
- Technologies
 - Microsoft .NET / C#
 - Windows Presentation Foundation (WPF)
 - TechSmith Cloud SDK
 - TechSmith Extensibility Framework (TEF)
 - Managed Extensibility Framework





Team TechSmith

Ryan Schiller, Logan Arent, Collin Dillinger, Carter Chamberlain

Team TechSmith Project Plan Presentation

Screen Mockup: Output Mockups

Imgur Output Options

Imgur Account
Logged in as:
example@gmail.com
[Switch Accounts...](#)

Imgur Post
Title:
Description:

Clipboard
☒ Image link
☐ Direct link
☐ Markdown link
☐ HTML embed code
☐ BBCode
☐ BBCode (linked)

[Upload](#) [Cancel](#)

TechSmith Video Review Output Options

TechSmith Account
Signed in as:
example@gmail.com
[Learn more about TechSmith Accounts.](#)

TechSmith Video Review
Title:
Review-by Date:
Reviewer Prompt:

[Upload](#) [Cancel](#)

Wistia Output Options

Wistia Account
Signed in as:
example@gmail.com
[Switch Accounts...](#)

Video Options
Video File:
Video Name:

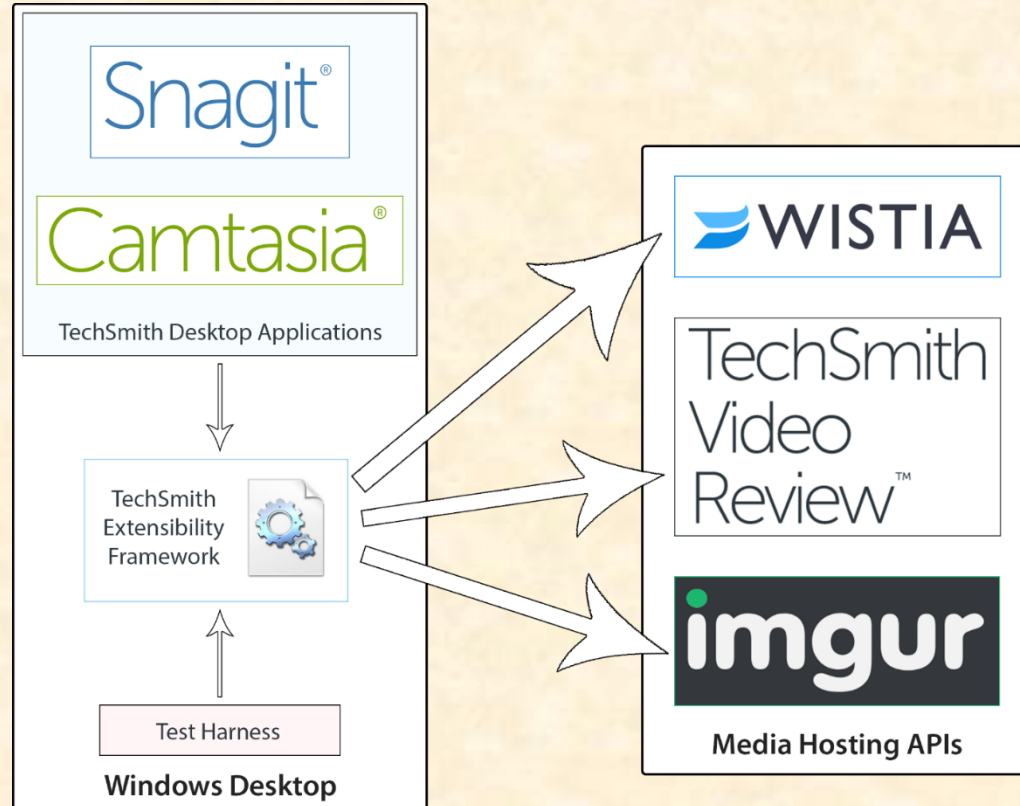
[Upload](#) [Cancel](#)



Team TechSmith Project Plan Presentation

Team TechSmith Project Plan Presentation

Architecture Diagram

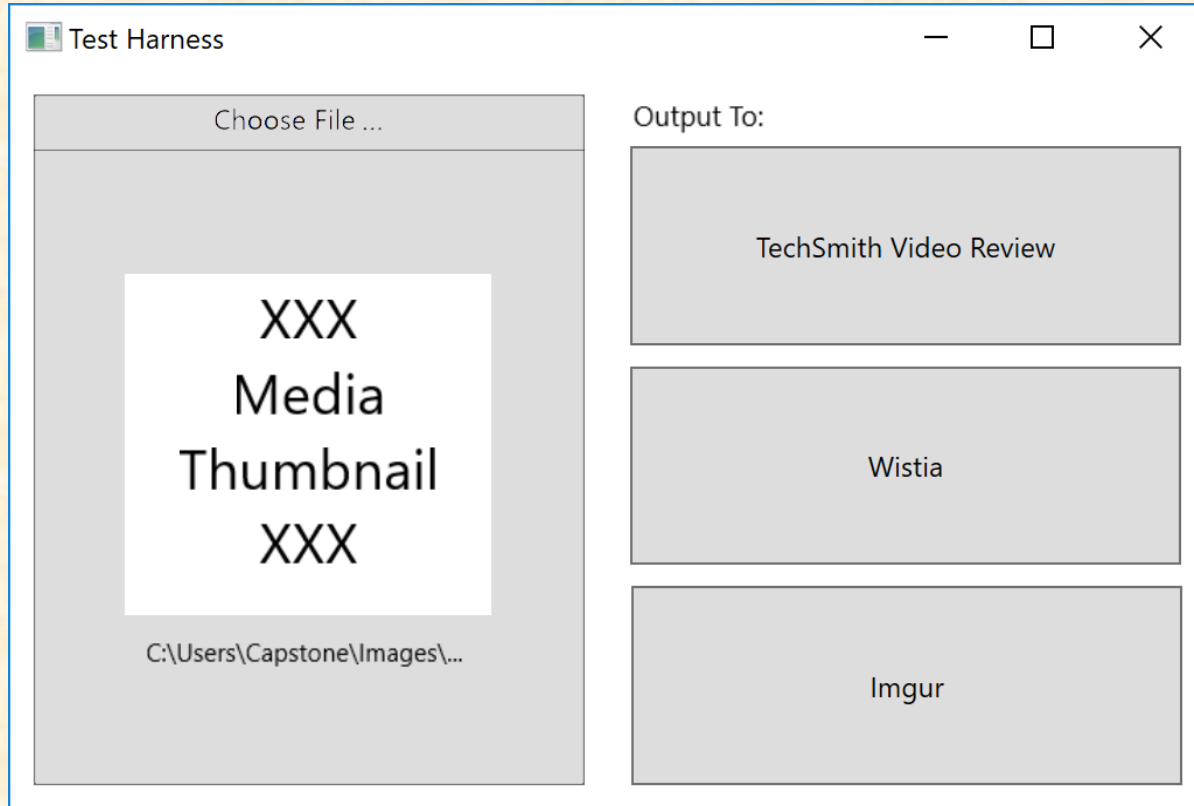




Team TechSmith Project Plan Presentation

Team TechSmith Project Plan Presentation

Screen Mockup: Test Harness

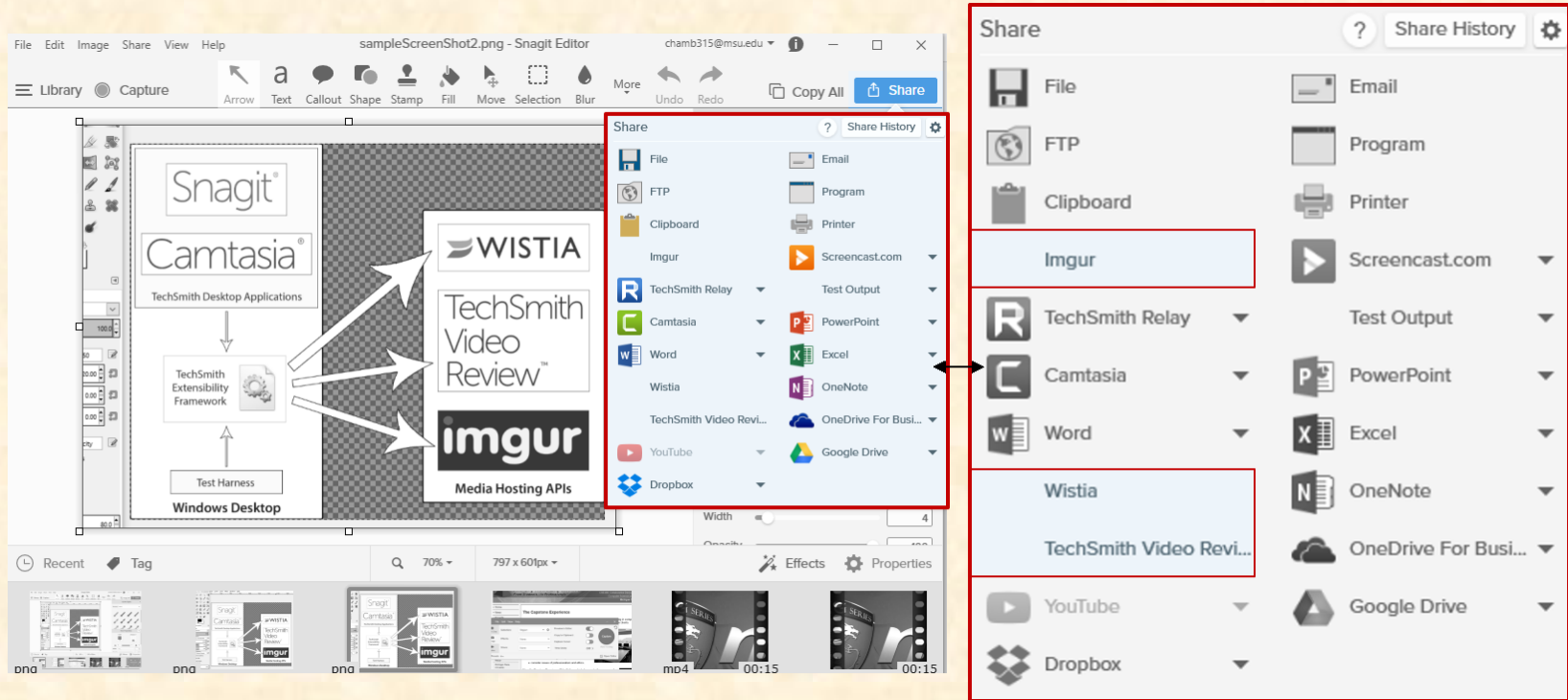




Team TechSmith Alpha Presentation


Team TechSmith Alpha Presentation

Snagit Share Menu



Team TechSmith Alpha Presentation

TechSmith Video Review

 TechSmith Video Review Output Options

TechSmith Account

Logged in as:
example@gmail.com
[Learn more about TechSmith Accounts.](#)

TechSmith Video Review

Title: test

Review-by Date: 2/28/2018

Reviewer Prompt: Would love some feedback on the colors

Upload Cancel

← → ↺ 🏠

🔒 https://videoreview.techsmith.com/dashboard


+ Start Review

1/10

All Reviews

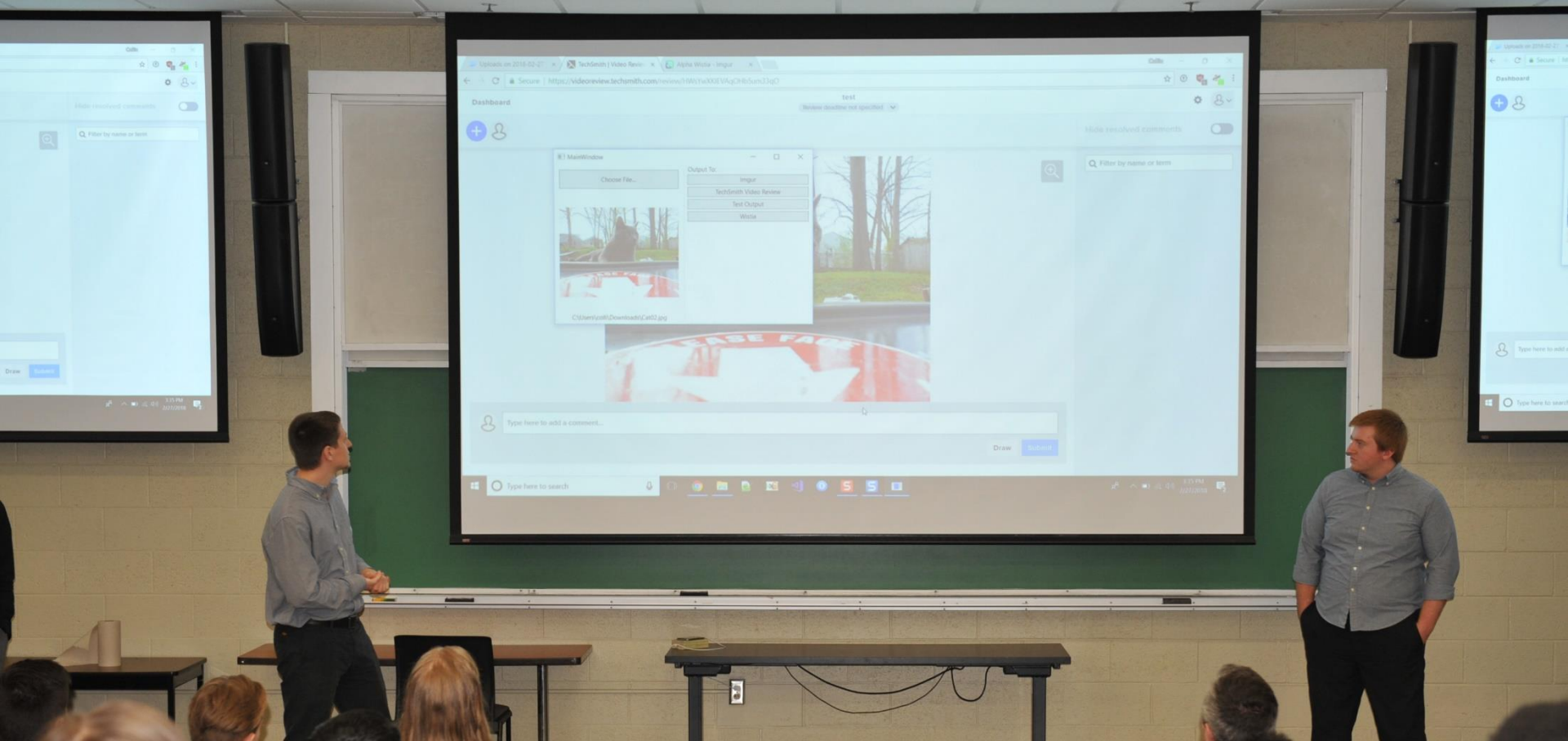
My Reviews

Shared with Me



test

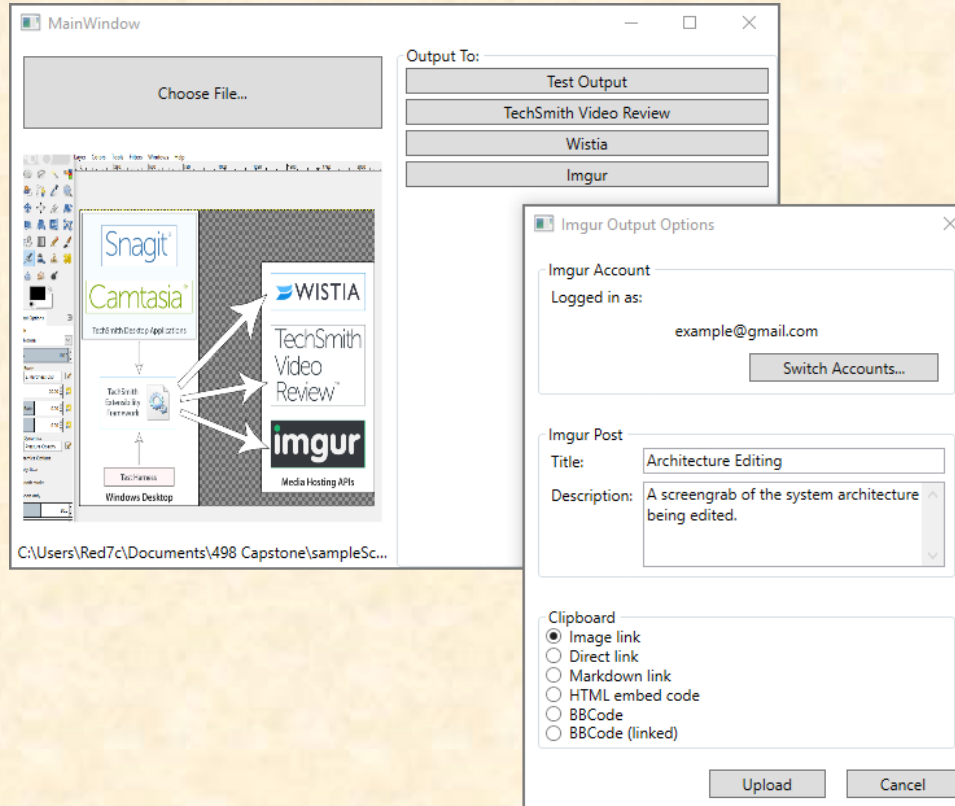
...



Team TechSmith Alpha Presentation

Team TechSmith Alpha Presentation

Test Harness

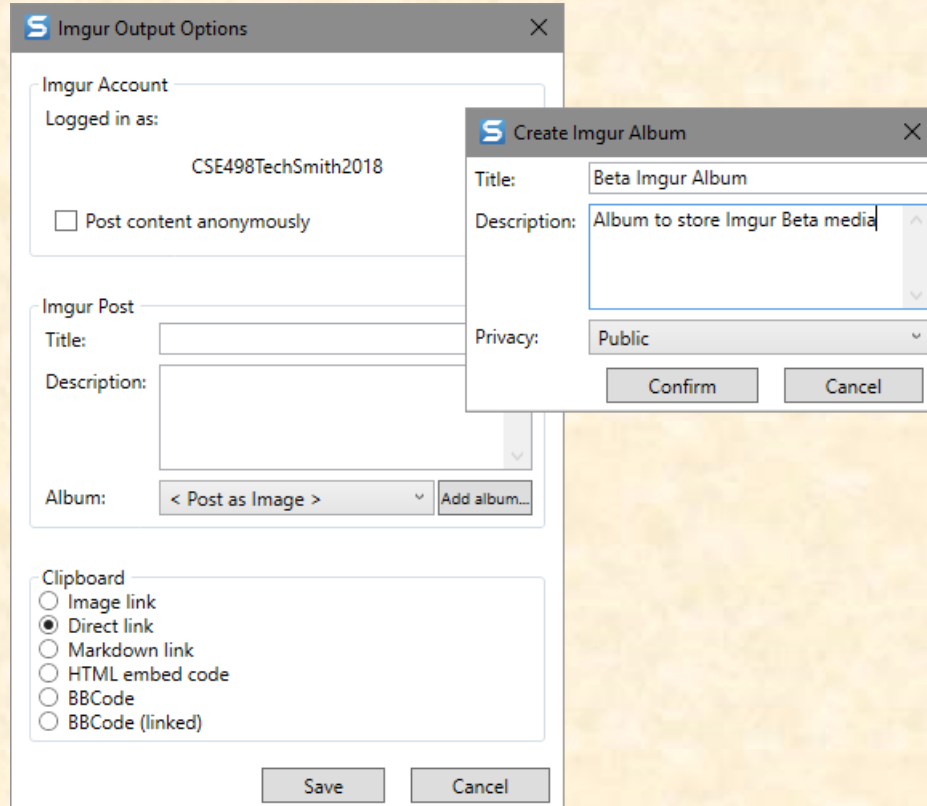




Team TechSmith Beta Presentation

Team TechSmith Beta Presentation

Updated Imgur Options



The image shows two overlapping dialog boxes from the Team TechSmith Beta Presentation. The background dialog is titled 'Imgur Output Options' and the foreground dialog is titled 'Create Imgur Album'.

Imgur Output Options Dialog:

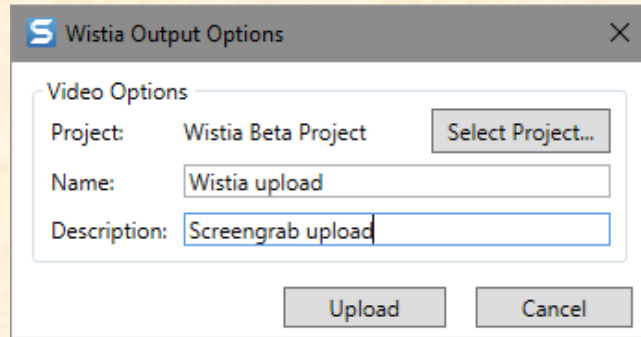
- Imgur Account:** Logged in as: CSE498TechSmith2018. There is a checkbox for 'Post content anonymously' which is currently unchecked.
- Imgur Post:** Fields for 'Title:' and 'Description:' are present. Below them is an 'Album:' dropdown menu currently set to '< Post as Image >' and an 'Add album...' button.
- Clipboard:** A list of radio button options: 'Image link', 'Direct link' (which is selected), 'Markdown link', 'HTML embed code', 'BBCode', and 'BBCode (linked)'.
- Buttons at the bottom: 'Save' and 'Cancel'.

Create Imgur Album Dialog:

- Title:** A text field containing 'Beta Imgur Album'.
- Description:** A text area containing 'Album to store Imgur Beta media'.
- Privacy:** A dropdown menu currently set to 'Public'.
- Buttons at the bottom: 'Confirm' and 'Cancel'.

Team TechSmith Beta Presentation

Updated Wistia Options



A screenshot of the 'Wistia Output Options' dialog box. It features a title bar with a 'W' logo and a close button. The main area is titled 'Video Options' and contains three input fields: 'Project' (set to 'Wistia Beta Project' with a 'Select Project...' button), 'Name' (set to 'Wistia upload'), and 'Description' (set to 'Screengrab upload'). At the bottom are 'Upload' and 'Cancel' buttons.

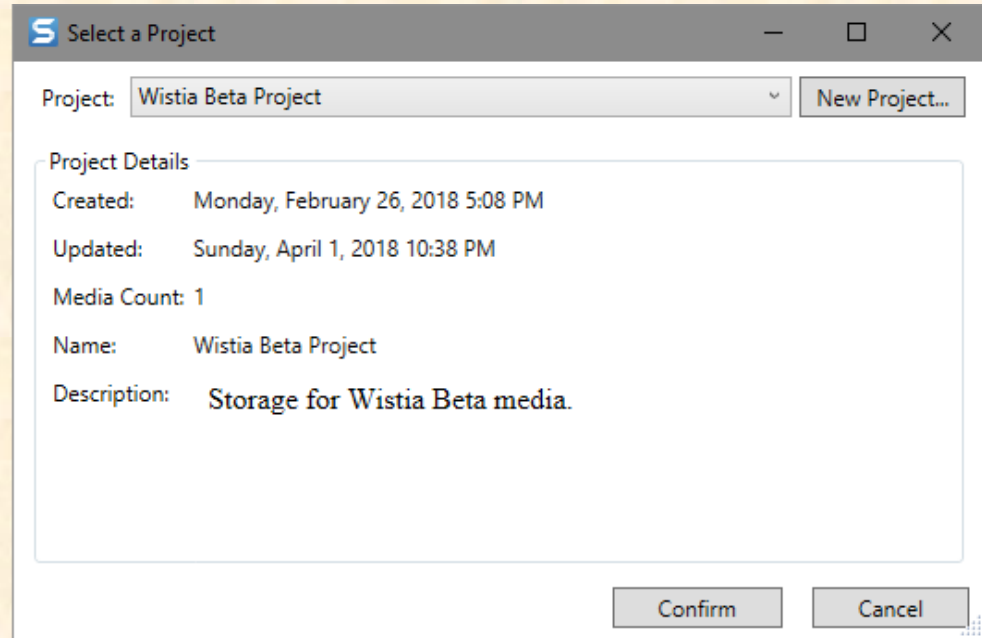
Wistia Output Options

Video Options

Project: Wistia Beta Project

Name:

Description:



A screenshot of the 'Select a Project' dialog box. It has a title bar with a 'W' logo and window controls. The 'Project' dropdown is set to 'Wistia Beta Project', with a 'New Project...' button to its right. Below is a 'Project Details' section showing metadata: 'Created: Monday, February 26, 2018 5:08 PM', 'Updated: Sunday, April 1, 2018 10:38 PM', 'Media Count: 1', 'Name: Wistia Beta Project', and 'Description: Storage for Wistia Beta media.'. At the bottom are 'Confirm' and 'Cancel' buttons.

Select a Project

Project: Wistia Beta Project

Project Details

Created: Monday, February 26, 2018 5:08 PM

Updated: Sunday, April 1, 2018 10:38 PM

Media Count: 1

Name: Wistia Beta Project

Description: Storage for Wistia Beta media.

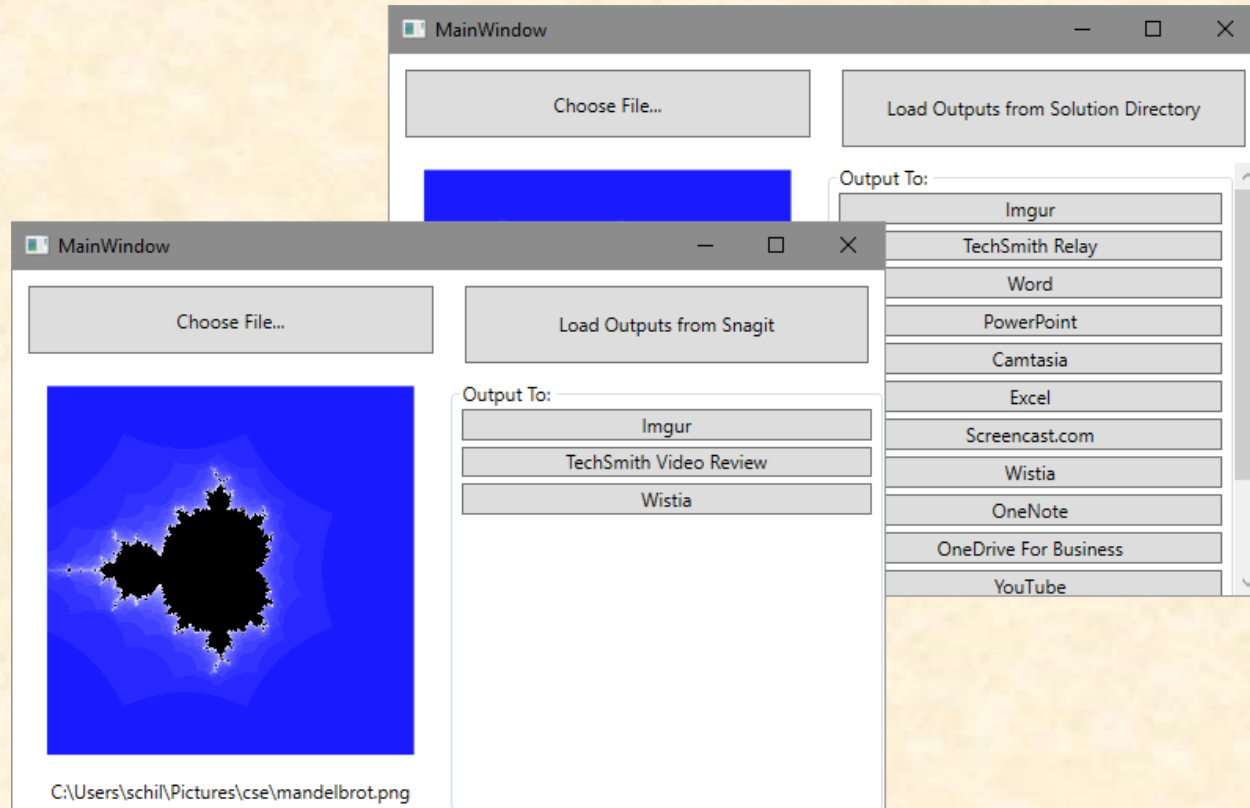


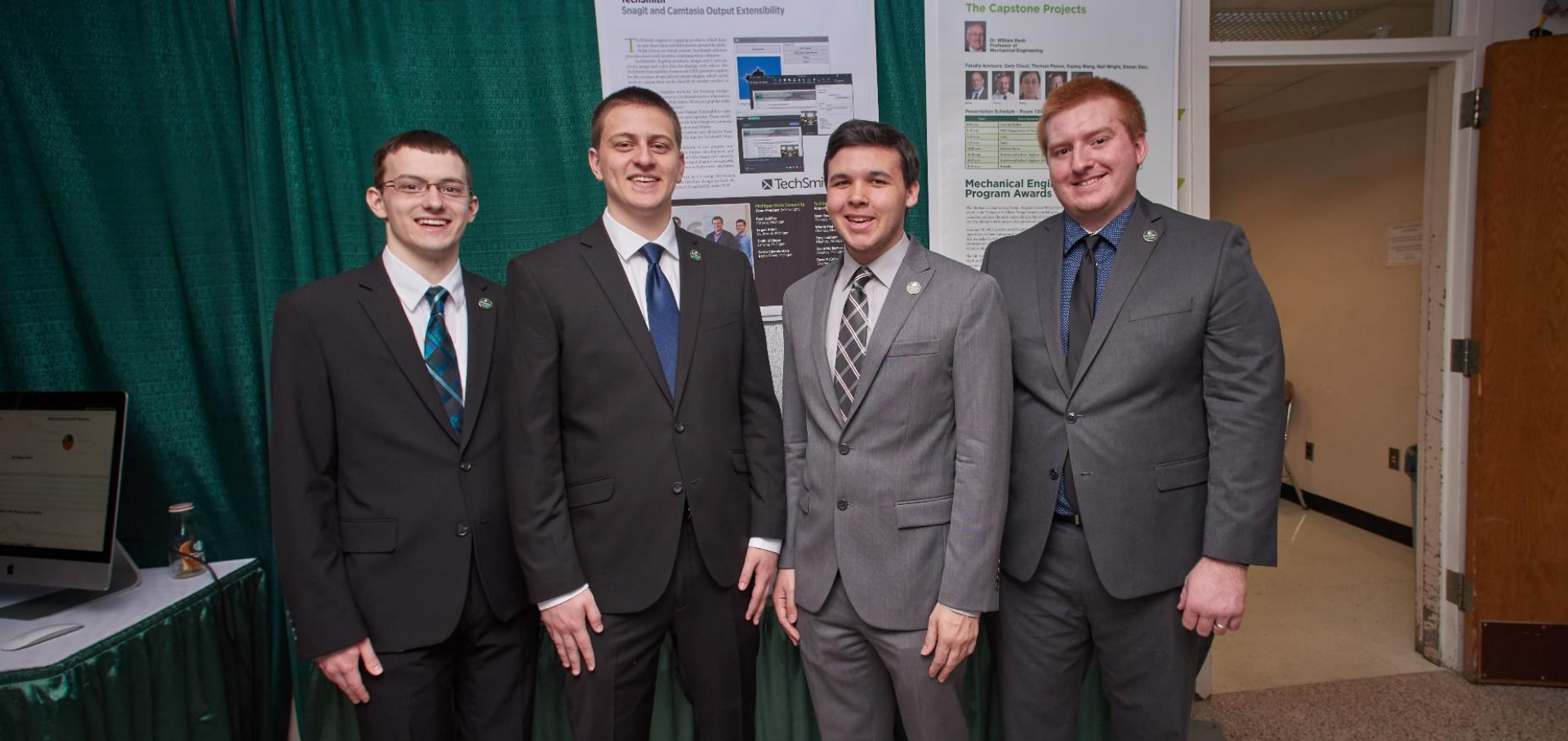


Team TechSmith Beta Presentation

Team TechSmith Beta Presentation

Beta Test Harness





Team TechSmith @ Design Day
Ryan Schiller, Logan Arent, Carter Chamberlain, Collin Dillinger

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The Capstone Experience

Team Union Pacific

Department of Computer Science and Engineering
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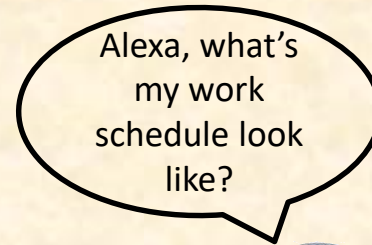
Locomotive No. 1943, The Spirit, spotlights Union Pacific's relationship with thousands of veterans who helped build America after defending the United States – a tradition dating back to the company's founding. **Find out more.**



Team Union Pacific Project Overview

“Alexa, what’s my work schedule look like?”

- Functionalities
 - Provide Information About Upcoming Work Assignments
 - Utilize Voice Activated Digital Assistant
 - Target Trainmen, Yardmen and Enginemen (TY&E)
- Features
 - Create Suite of Mobile Apps
 - Responsive Design
 - Support Apple iOS and Google Android Devices
 - Manage Users
 - Register
 - Identify
 - De-Activate
 - Support All Major Voice Interfaces
 - Amazon Echo
 - Google Home
 - Apple Siri
 - Microsoft Cortana
 - Use JSON Web Services
 - Write Documentation for Each System
- Technologies
 - Java
 - JavaScript / AngularJS
 - Amazon Echo
 - Google Home
 - Apple Siri
 - Microsoft Cortana
 - Natural Language Processing (NLP)



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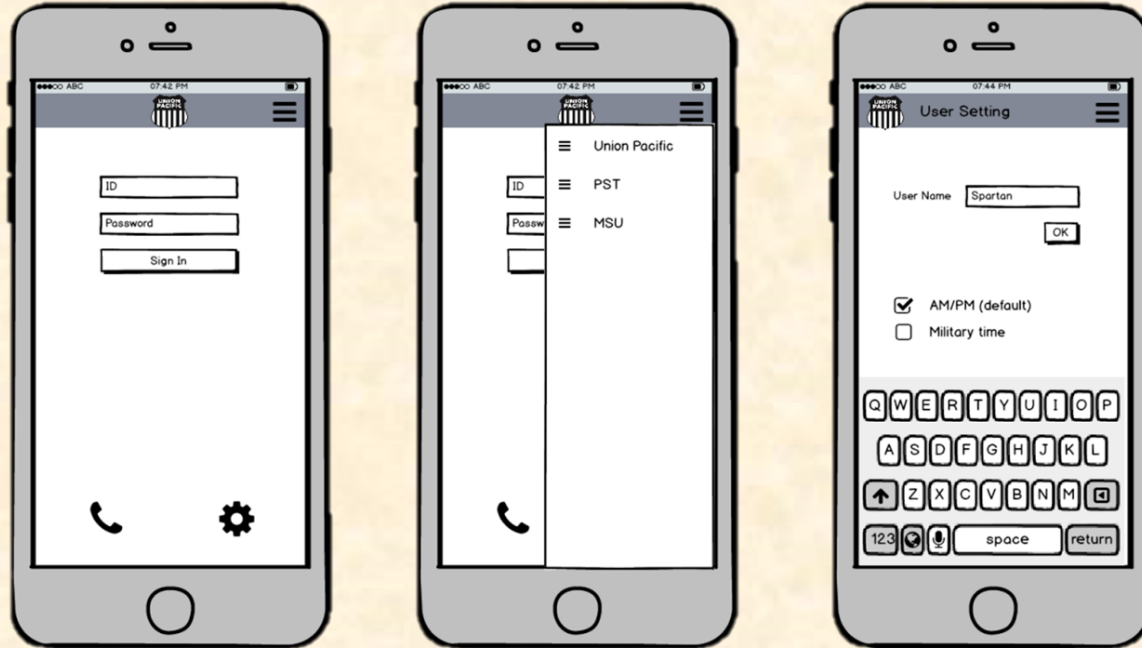


Team Union Pacific

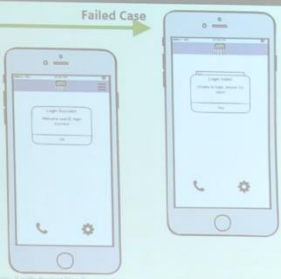
Jared McMillan, Daniel Agbay, M Kim, David Hubble, Austin McGee

Team Union Pacific Project Plan Presentation

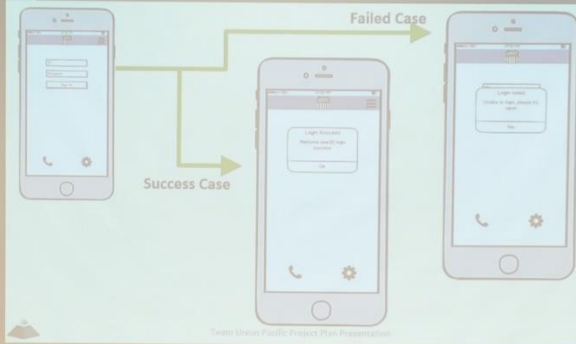
Screen Mockup: Mobile Application



Mobile Application



Screen Mockup: Mobile Application



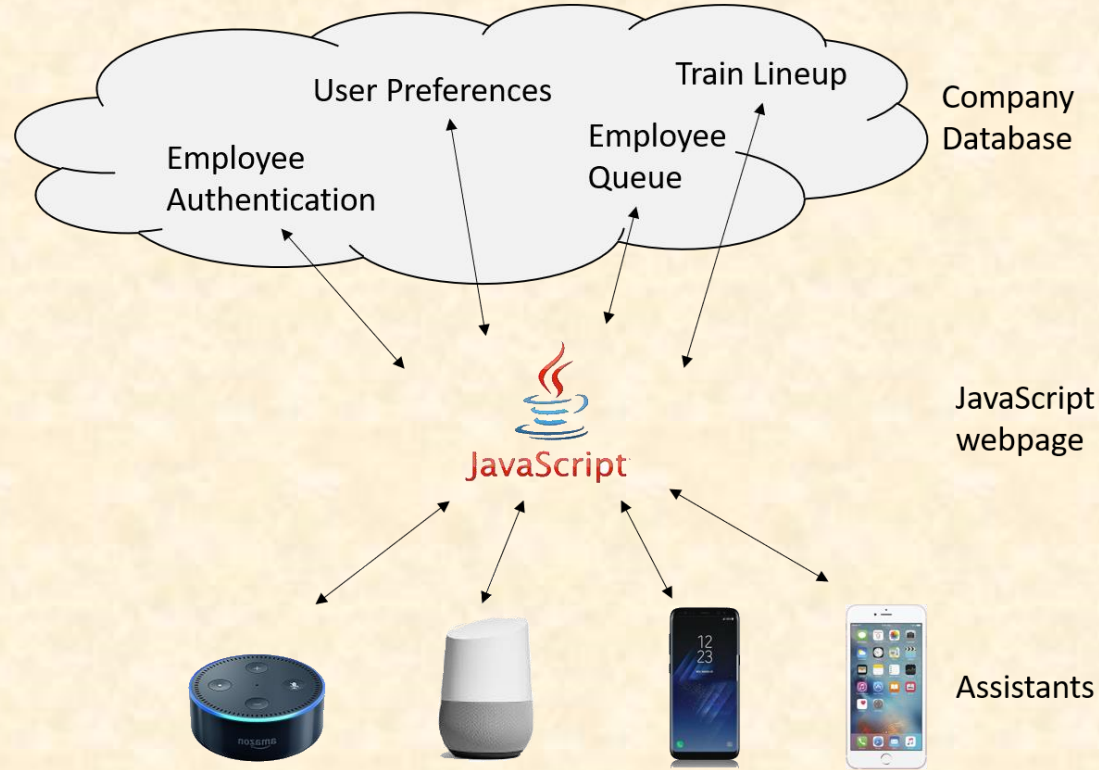
Screen Mo



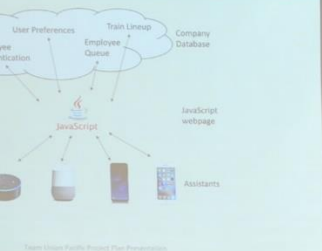
Team Union Pacific
Project Plan Presentation

Team Union Pacific Project Plan Presentation

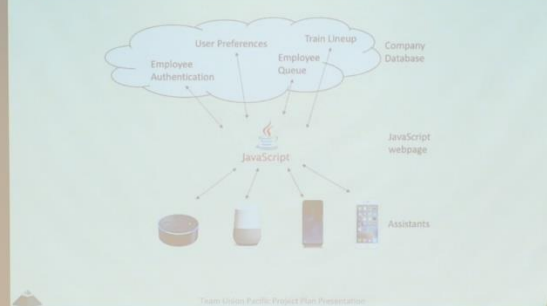
Architecture Diagram



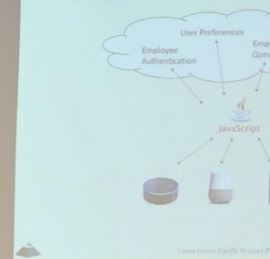
Architecture



System Architecture



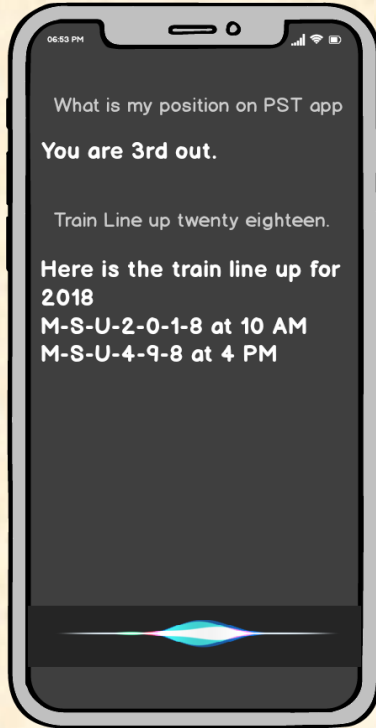
System Architecture



Team Union Pacific
Project Plan Presentation

Team Union Pacific Project Plan Presentation

Screen Mockup: Assistant Conversation



Alexa, open the PST app.

Hello Sparty, what can I help for you today?

What's my times out?

You are currently 4th out right now.

Thanks, that's all.

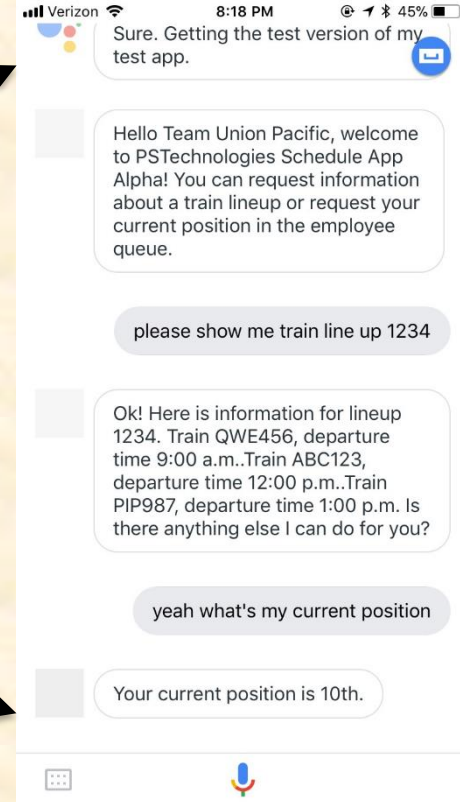
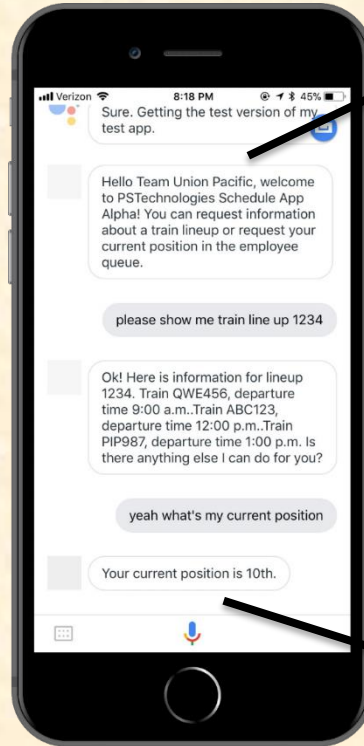
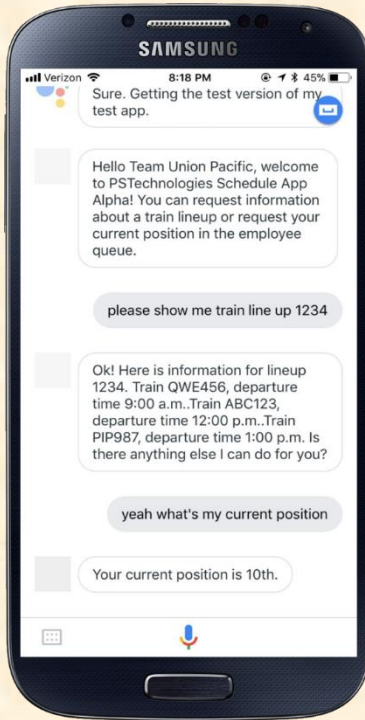




Team Union Pacific
Alpha Presentation

Team Union Pacific Alpha Presentation

Google Assistant Interaction



Team Union Pacific Alpha Presentation

Alexa Interaction

Alexa, open my PST app.

Welcome to PST application, you may request train lineup info or your queue position.

Show me train lineup 1234.

Here is train lineup 1234:
MSU2018, departure time 10:00am, ABC123 departure time 3:00pm.

Would you like to check other things?

Yes, what's my position?

You are 5th.

Would you like to check other things?

Stop.

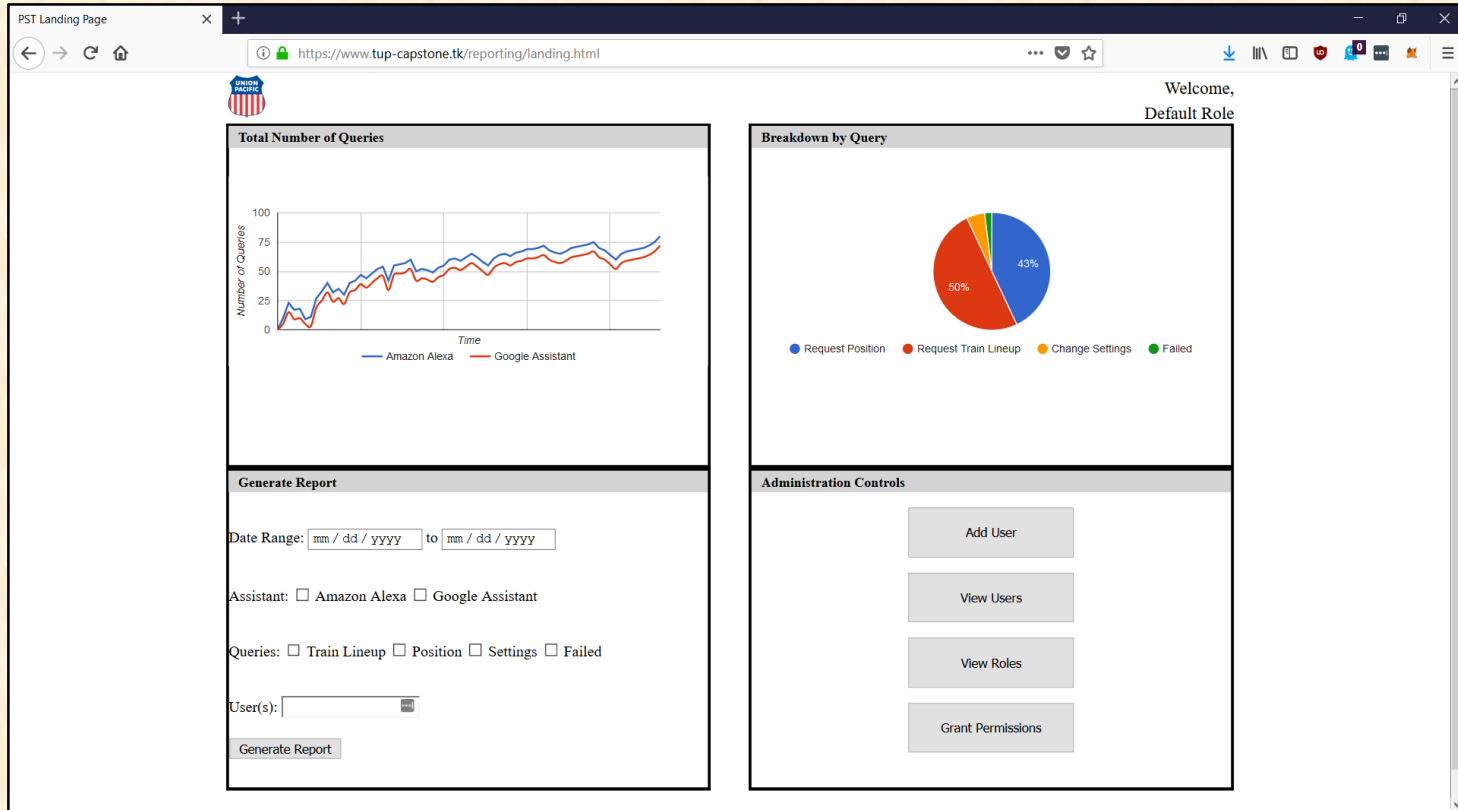




Team Union Pacific Alpha Presentation

Team Union Pacific Alpha Presentation

Web App Reporting Page

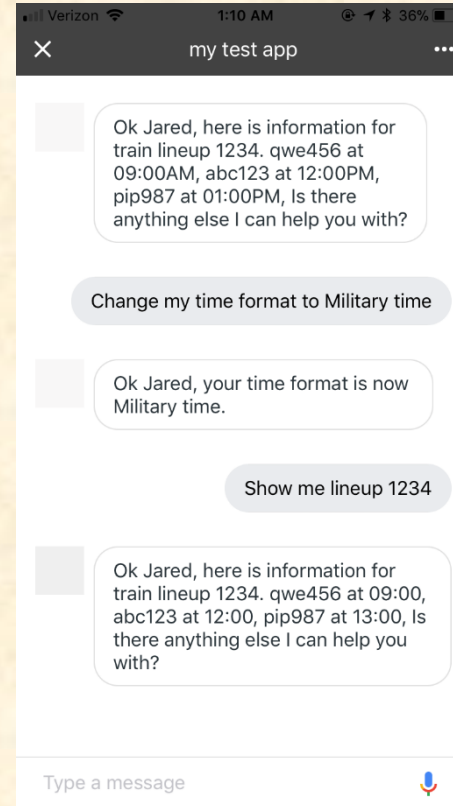
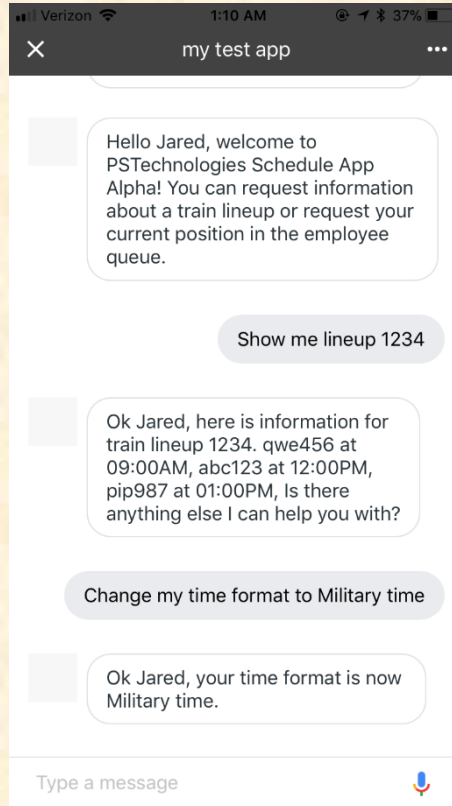




Team Union Pacific Beta Presentation

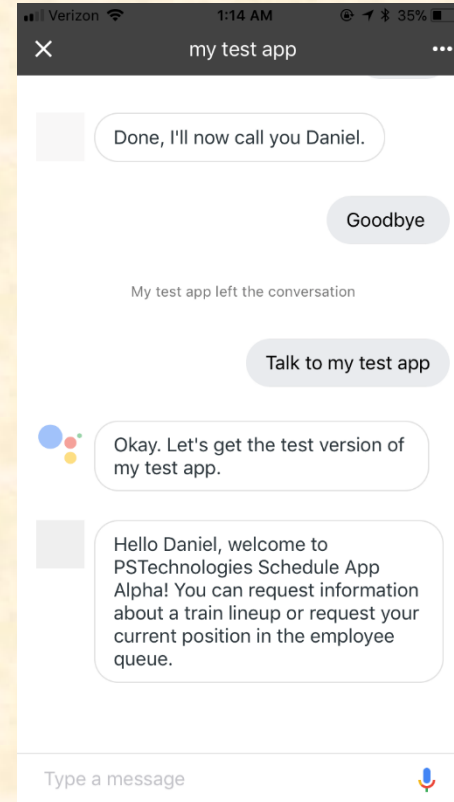
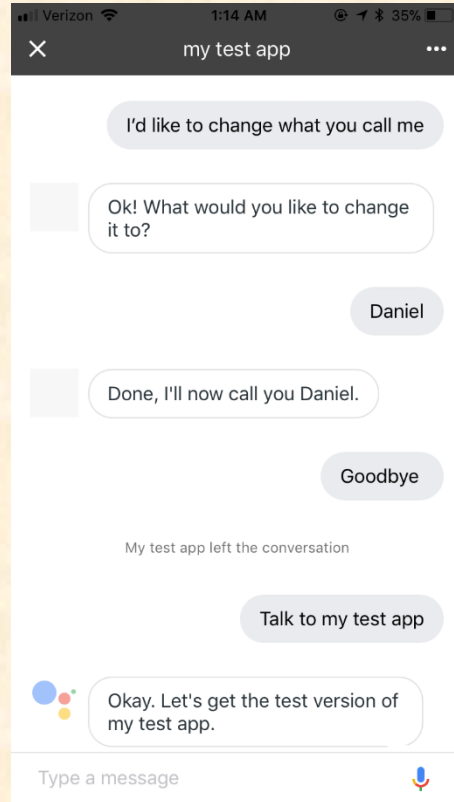
Team Union Pacific Beta Presentation

Request Train Lineup



Team Union Pacific Beta Presentation

Change Username

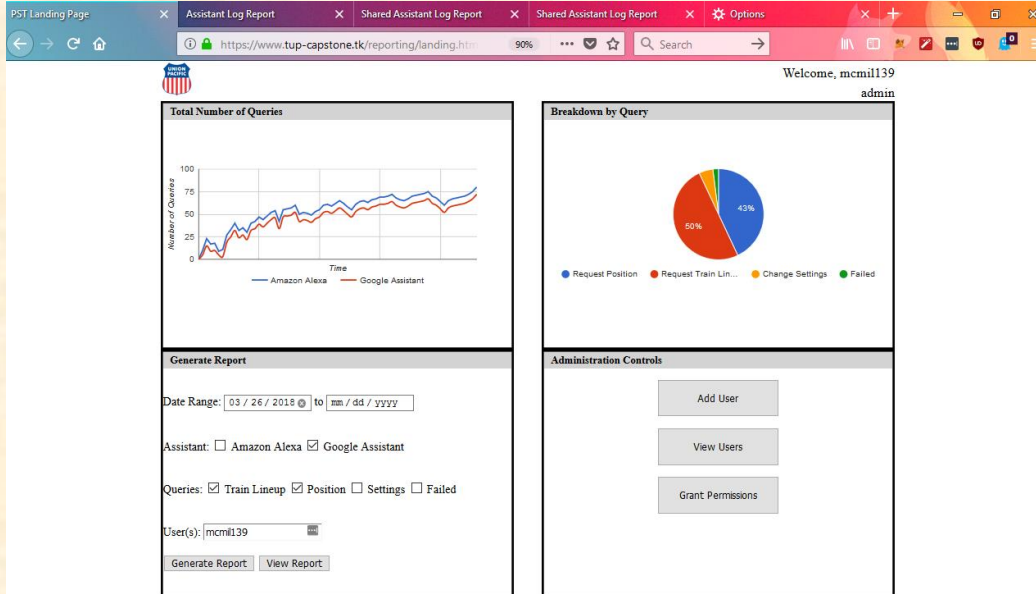




Team Union Pacific Beta Presentation

Team Union Pacific Beta Presentation

Web App Dashboard





Team Union Pacific @ Design Day
David Hubble, Jared McMillan, Austin McGee, M Kim, Daniel Agbay

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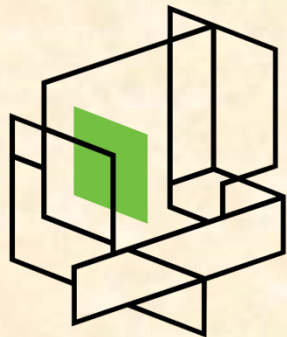
The Capstone Experience

Team Urban Science

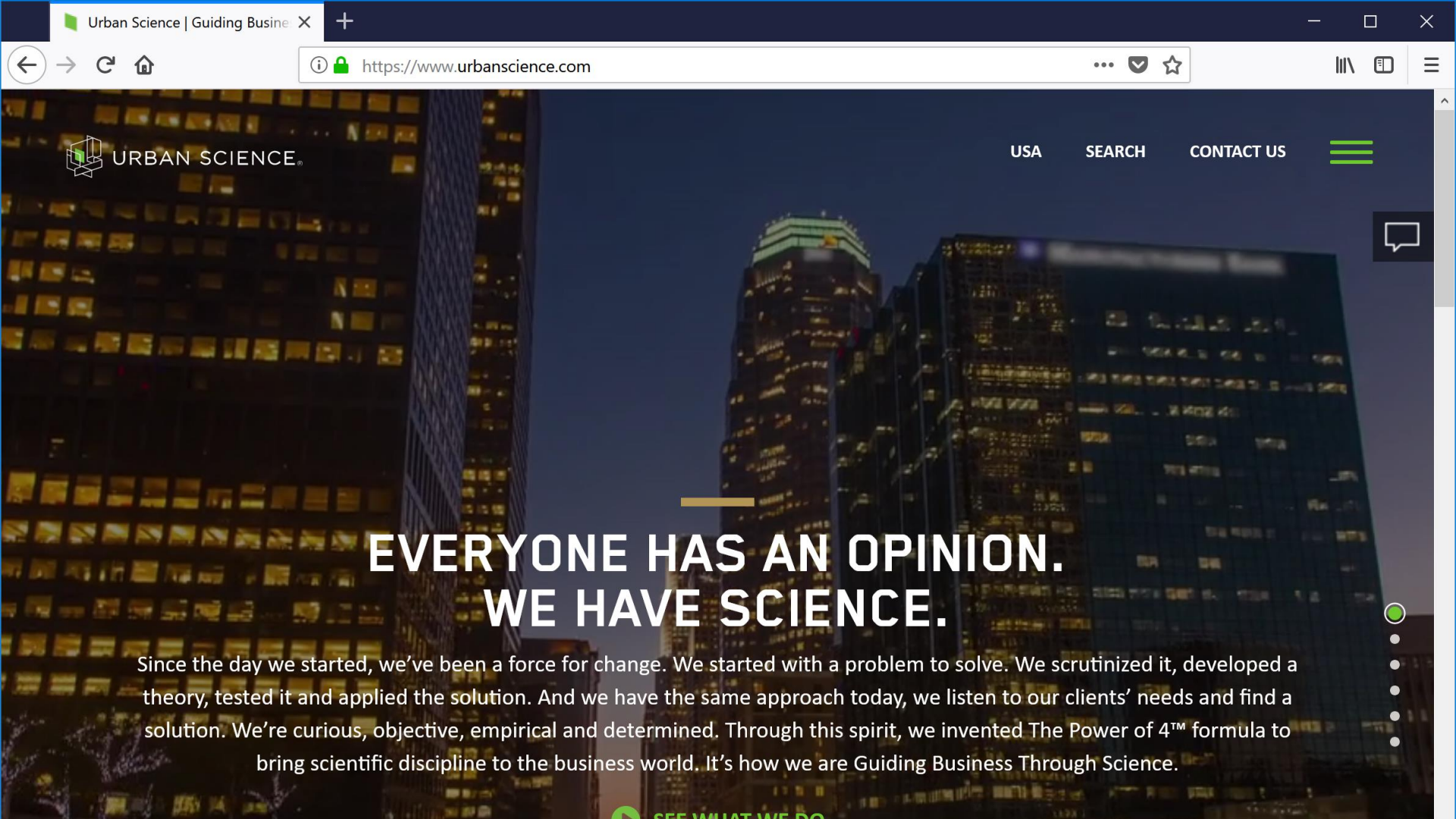
Department of Computer Science and Engineering
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Team Urban Science Project Overview

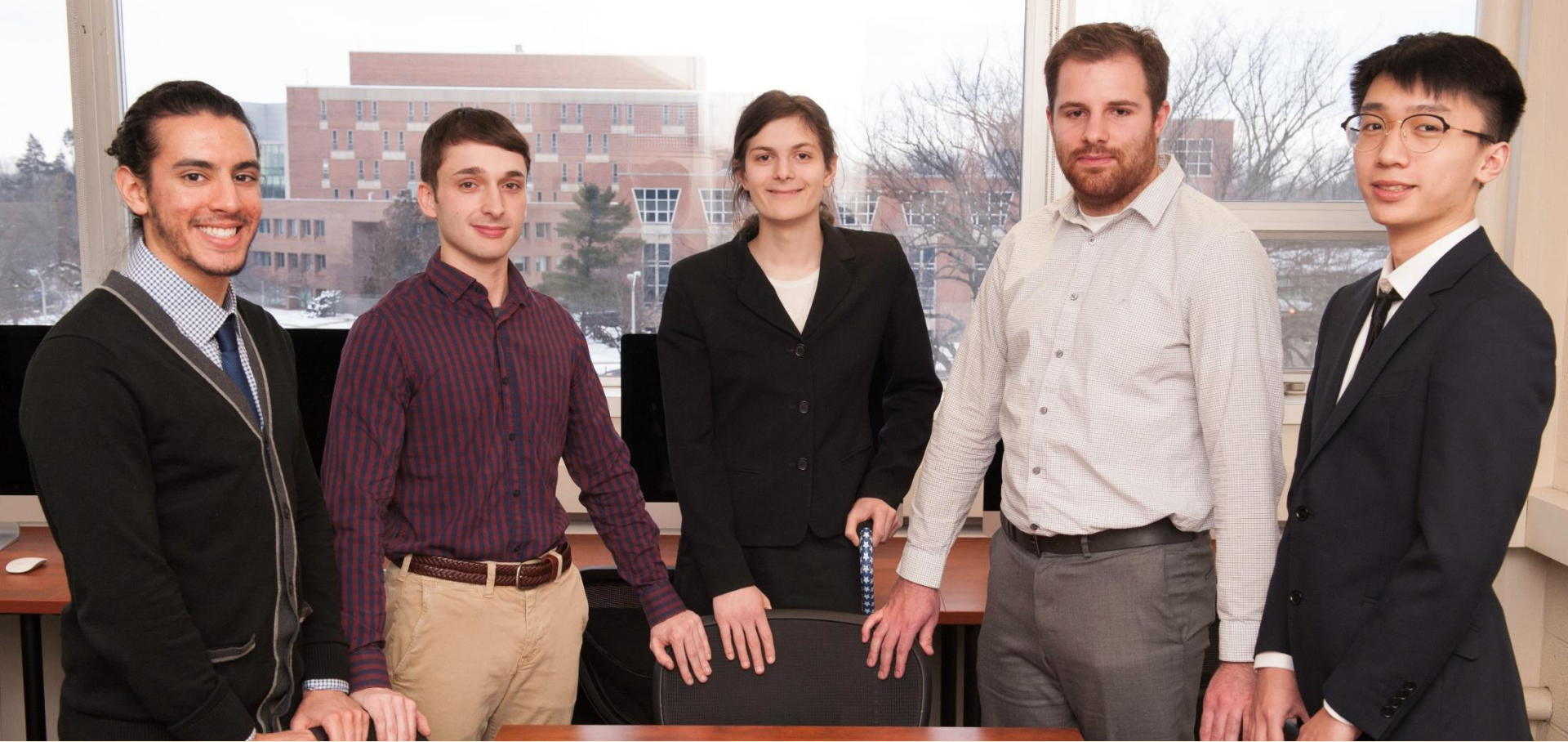
Mobile Maestro

- Functionalities
 - Control Maestro Exoskeletal Arm
 - Use Mobile App with Voice Input
- Features
 - Handle Various Arm Controls
 - Up, Down, Lock
 - Lock, Standby
 - Provide Voice Control
 - Safe Word for Home/Reset Position
 - All Functions
 - Implement Self-Leveling with Calibration
 - Support Apple iOS and Google Android
 - Collect Usage Statistics
- Technologies
 - Maestro Exoskeletal Arm
 - CSS / HTML / JavaScript
 - Microsoft .NET / C#
 - Apple iOS / Swift
 - Google Android / Java
 - Bluetooth Low Energy (BLE)
 - Natural Language Processing (NLP)



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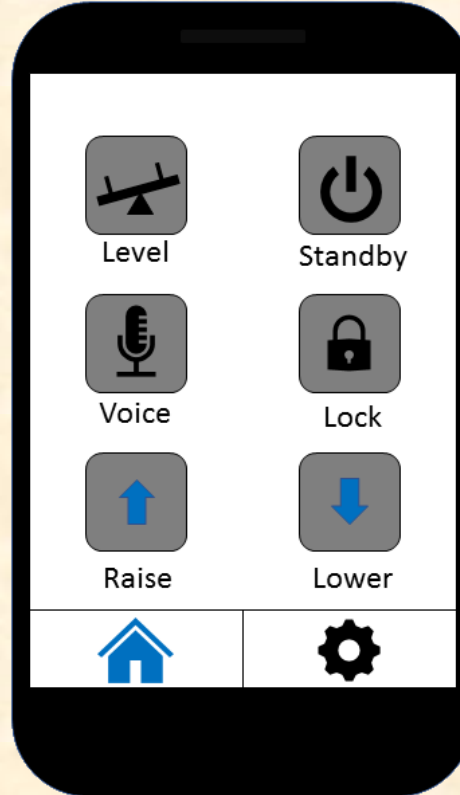


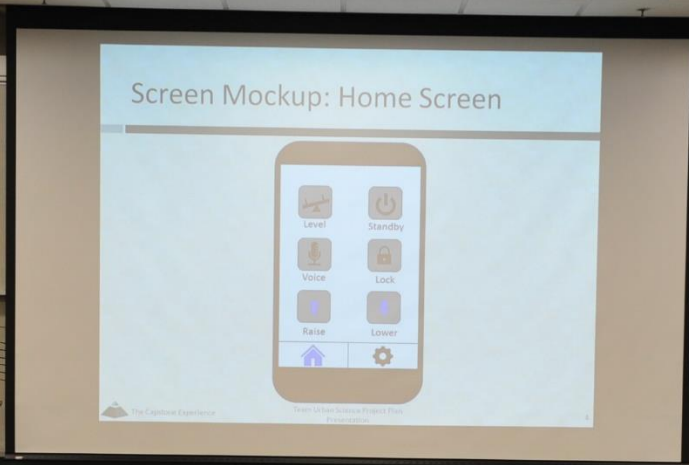
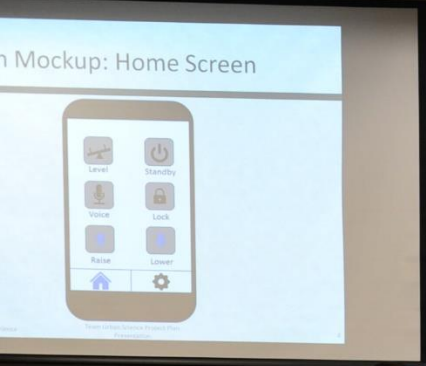
Team Urban Science

Mustafa Jebara, Dane Rosseter, Samantha Oldenburg, Alex Wuillaume, Shun Ran

Team Urban Science Project Plan Presentation

Screen Mockup: Home Screen

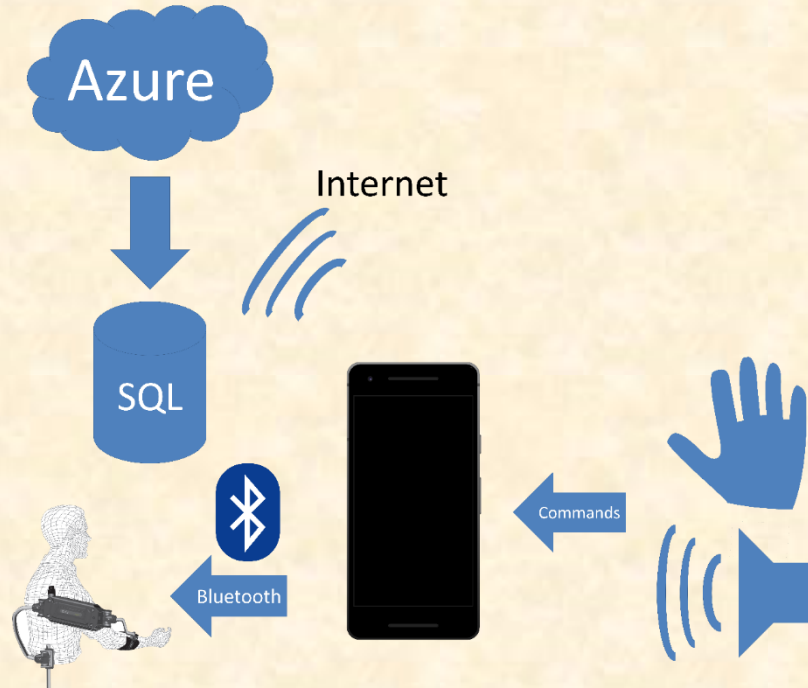




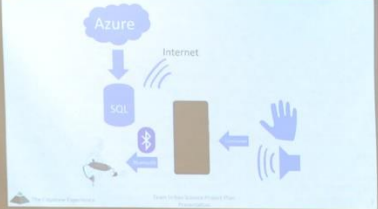
Team Urban Science
Project Plan Presentation

Team Urban Science Project Plan Presentation

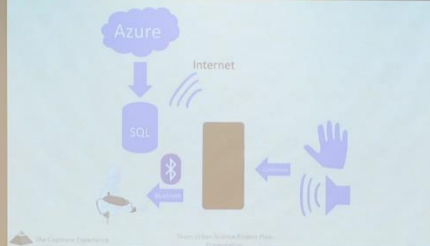
Architecture Diagram



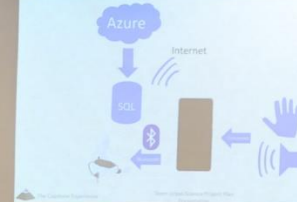
System Architecture



System Architecture



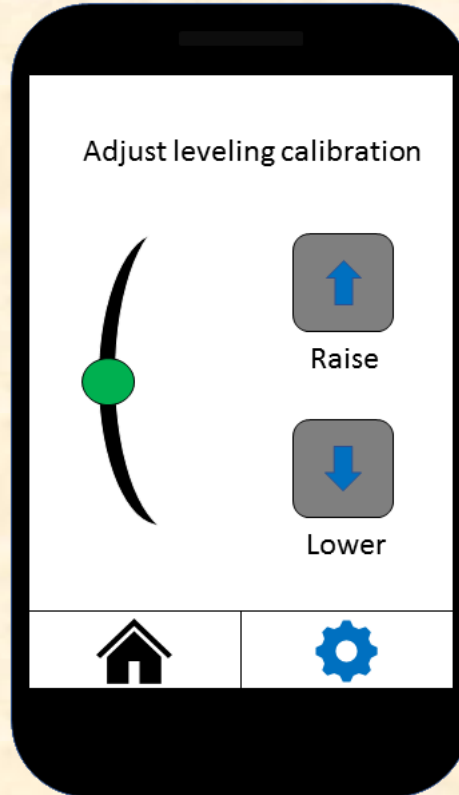
System Architecture



Team Urban Science
Project Plan Presentation

Team Urban Science Project Plan Presentation

Screen Mockup: Leveling Settings

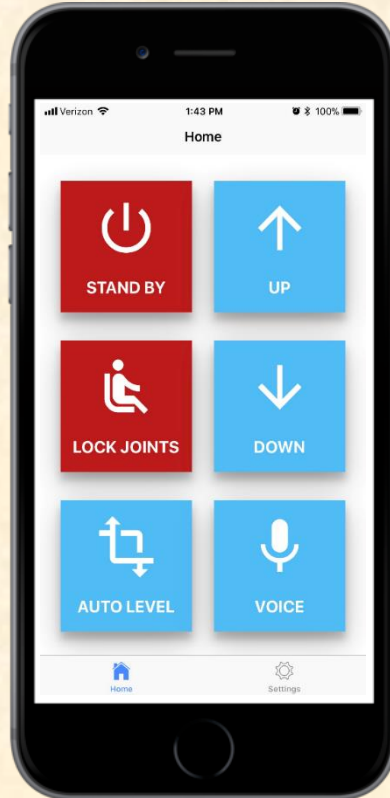




Team Urban Science Alpha Presentation

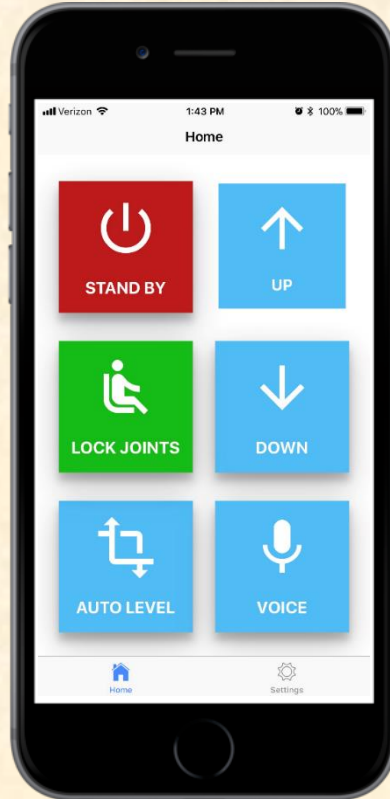
Team Urban Science Alpha Presentation

No Buttons Active



Team Urban Science Alpha Presentation

Up and Lock Active

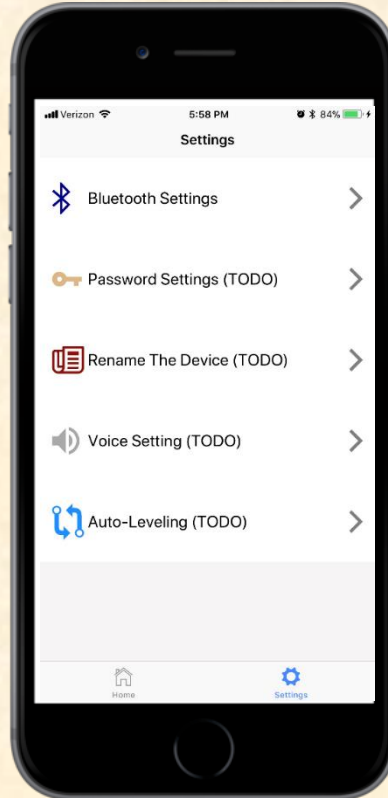




Team Urban Science Alpha Presentation

Team Urban Science Alpha Presentation

Setting Page

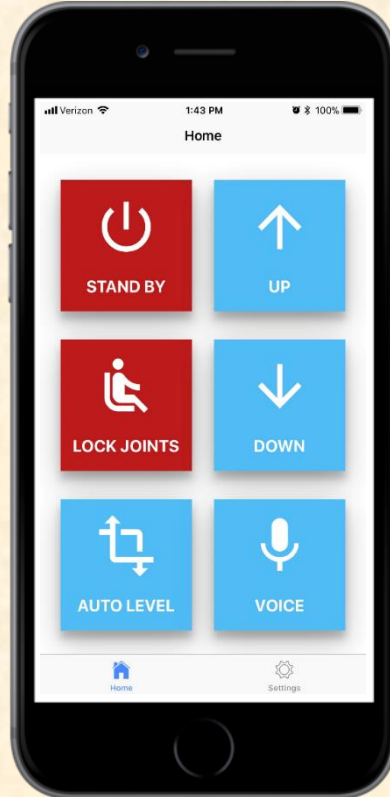




Team Urban Science Beta Presentation

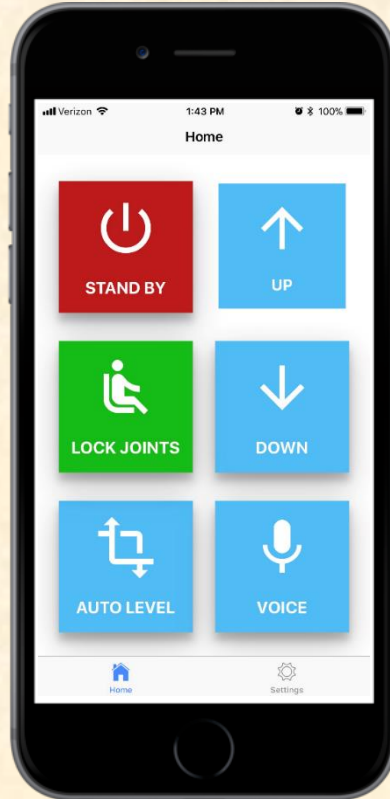
Team Urban Science Beta Presentation

Main Page – No Buttons Active



Team Urban Science Beta Presentation

Main Page – Up and Lock Active

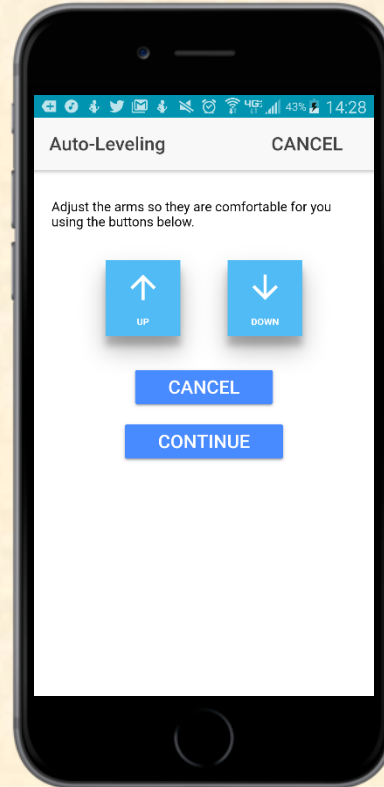




Team Urban Science Beta Presentation

Team Urban Science Beta Presentation

Auto Leveling Setup





Team Urban Science @ Design Day

Shun Ran, Dane Rosseter, Samantha Oldenburg, Alex Wuillaume, Mustafa Jebara

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Team USAA

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[WHO WE SERVE](#)

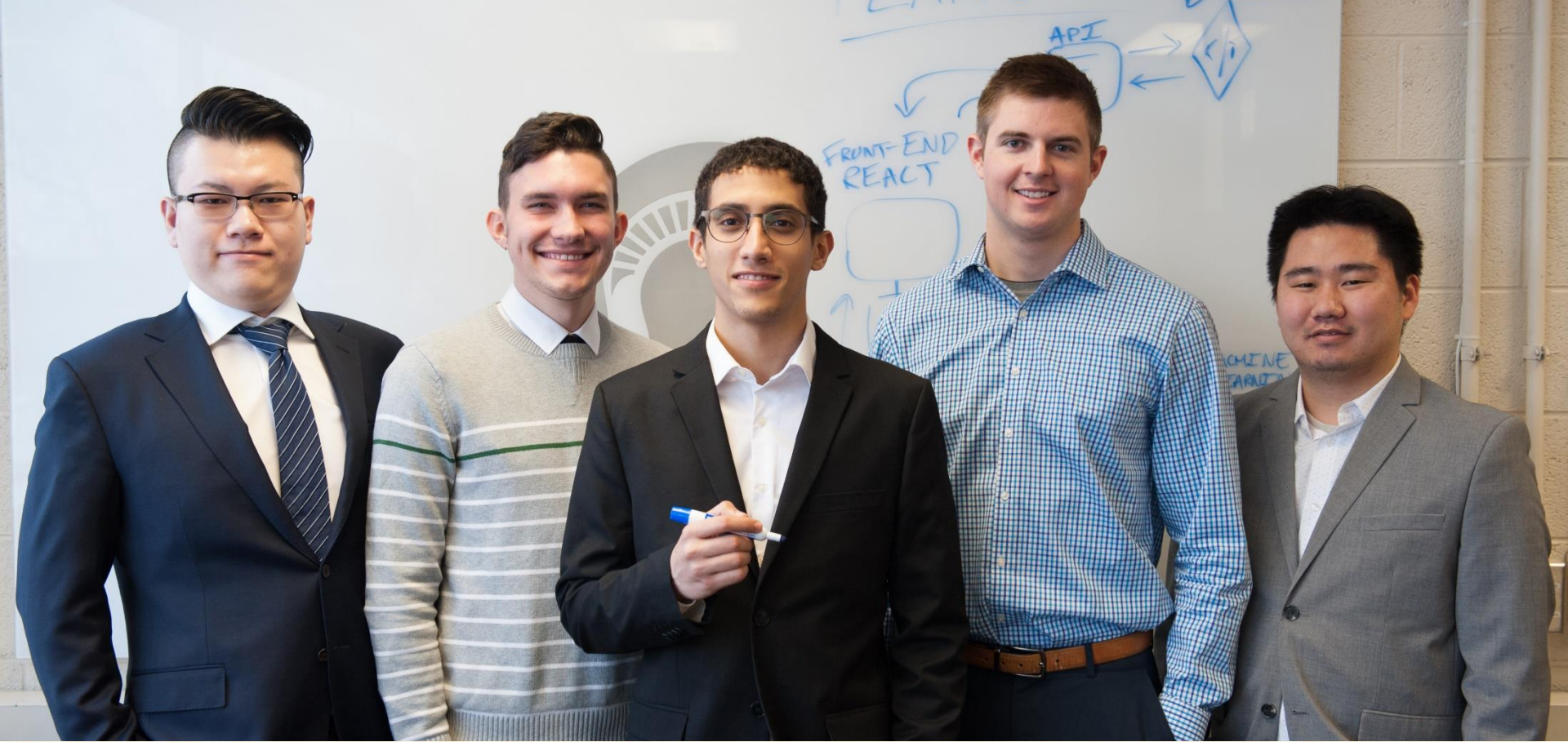
Team USAA

Project Overview

LIMElight: Life Insurance Made Easy

- Functionalities
 - Obtain Life Insurance Quote
 - Improve the Experience
 - For Applicant
 - For Insurer
 - Decrease Duration, Complexity and Cost
- Features
 - Provide Smooth User Experience
 - Responsive Web
 - Native Apple iOS and Google Android Apps
 - Generate Personalized Quote
 - Use Minimal Inputs from Applicant
 - Leverage Machine Learning
 - Match Underwritten Premium Closely
 - Create Health Record Blockchain
 - Controlled by Applicant
 - Ensure Privacy and Security
 - Accessible via RESTful API
- Technologies
 - Apple iOS / Swift
 - Google Android / Java
 - Blockchain
 - Machine Learning / Python
 - Microsoft Azure
 - RESTful Web Services
 - JavaScript / REACT / Angular 2+ / Vue






Team USAA

Xingchi Zhou, Nathaniel Finley, Abe Ahmed, Mike Ronayne, Dong Lee

Team USAA Project Plan Presentation

Screen Mockup: Quoting Process



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Get a Term Life Insurance Quote

☒ M ☐ F

Age 37

Weight 180

Height 6' 1"


Do you smoke? ☐ Y ☒ N

Do you exercise? ☒ Y ☐ N

[GET A QUOTE](#)



Mockup: Quoting Process




Get a Term Life Insurance Quote

Age Height Weight Do you smoke? ☐ Yes ☒ No Do you exercise? ☐ Yes ☒ No

GET A QUOTE

Team USAA Project Plan Presentation

Screen Mockup: Quoting Process



Get a Term Life Insurance Quote

M ☒ F ☐


Age Height Weight

Do you smoke? ☐ Yes ☒ No Do you exercise? ☐ Yes ☒ No

GET A QUOTE

The Capstone Experience Team USAA Project Plan Presentation

Screen Mockup: Quoting Process



Get a Term Life Insurance Quote

Age Height Weight Do you smoke? ☐ Yes ☒ No Do you exercise? ☐ Yes ☒ No

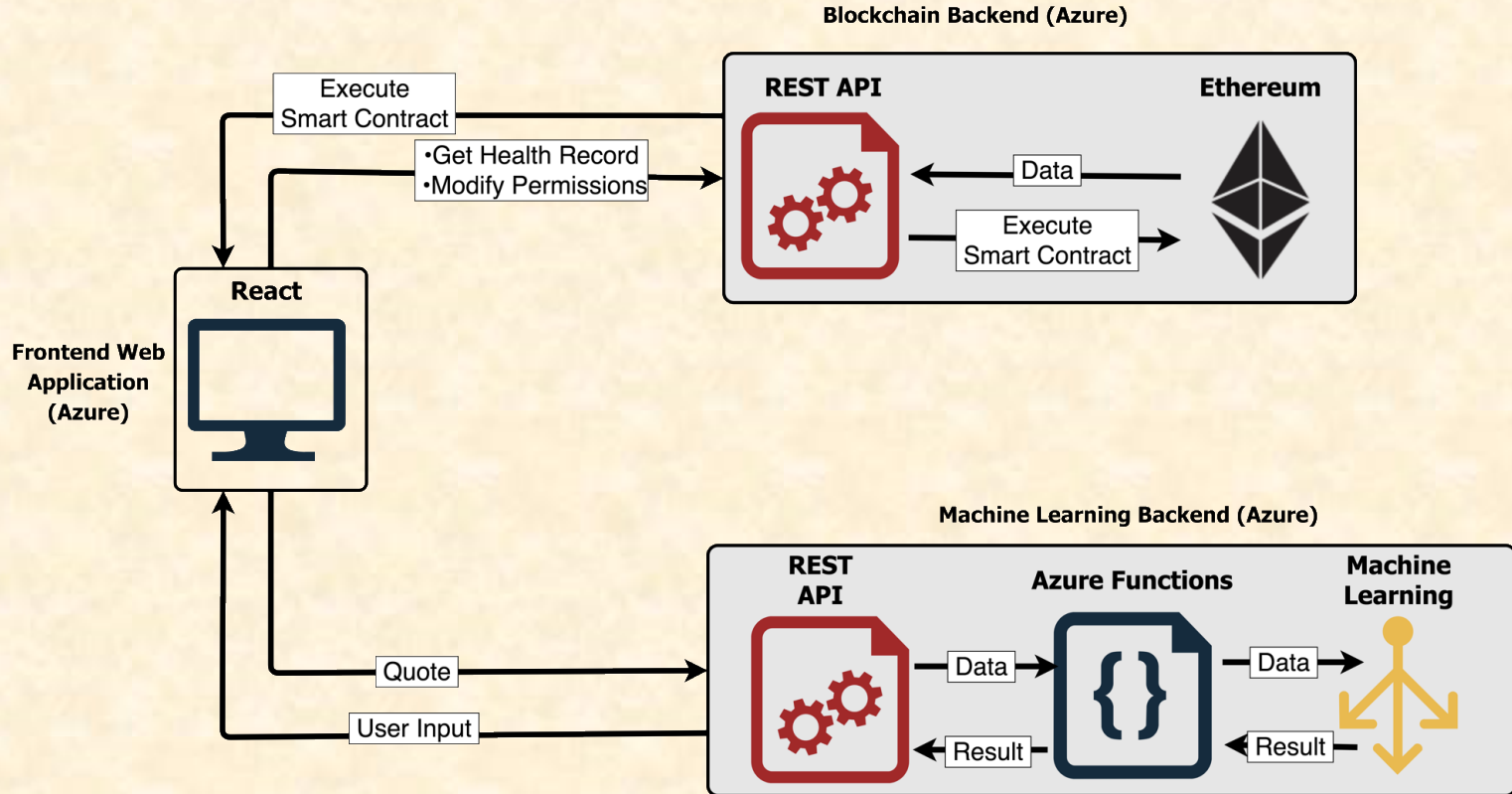
GET A QUOTE

Team USAA Project Plan Presentation

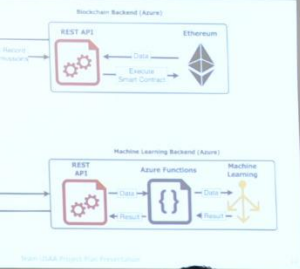
Team USAA
Project Plan Presentation

Team USAA Project Plan Presentation

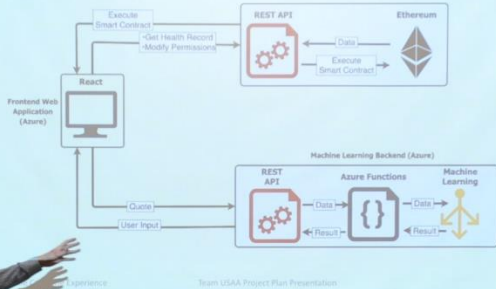
Architecture Diagram



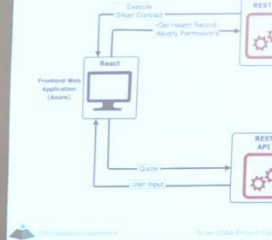
Structure



System Architecture



System Architecture




Team USAA
Project Plan Presentation

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Screen Mockup: Patient Login

Record Mgt

https://www.limelight.usaa.com/manage-health-records



We know what it means to serve®

[Get a Quote](#) [Manage Health Records](#) [Admin](#)

Manage Who Can View Your Health Records

Entity	Permission	
	Y	N
USAA	<input checked="" type="radio"/>	<input type="radio"/>
Sparrow Health	<input type="radio"/>	<input checked="" type="radio"/>

Update

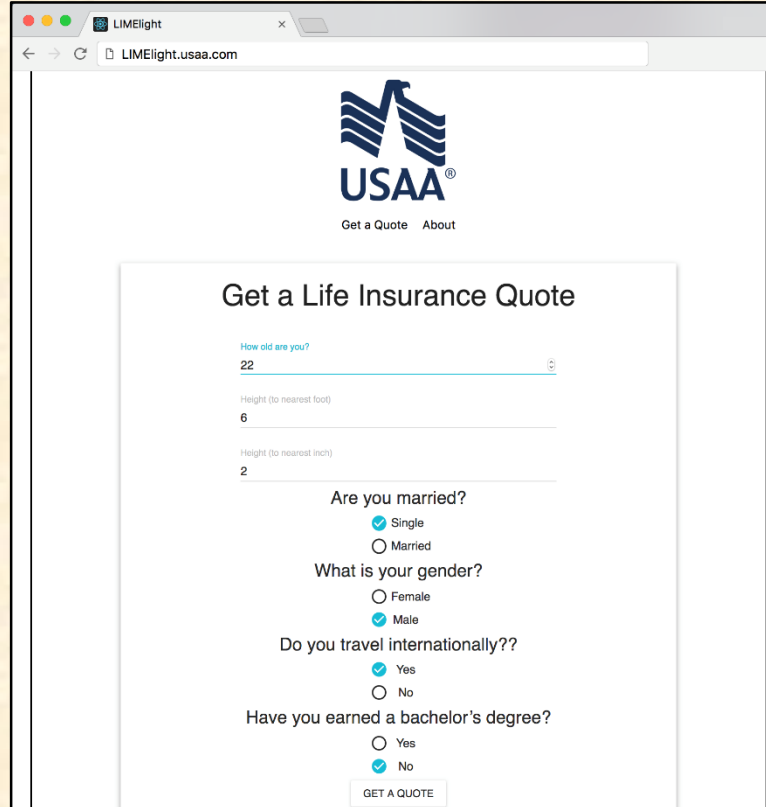




Team USAA Alpha Presentation

Team USAA Alpha Presentation

Get A Quote



The screenshot shows a web browser window with the URL `LIMElight.usaa.com`. The page features the USAA logo and navigation links for "Get a Quote" and "About". The main content is a "Get a Life Insurance Quote" form with the following fields and options:

- How old are you?**: Input field with value `22`.
- Height (to nearest foot)**: Input field with value `6`.
- Height (to nearest inch)**: Input field with value `2`.
- Are you married?**: Radio buttons for `Single` (selected) and `Married`.
- What is your gender?**: Radio buttons for `Female` and `Male` (selected).
- Do you travel internationally??**: Radio buttons for `Yes` (selected) and `No`.
- Have you earned a bachelor's degree?**: Radio buttons for `Yes` and `No` (selected).

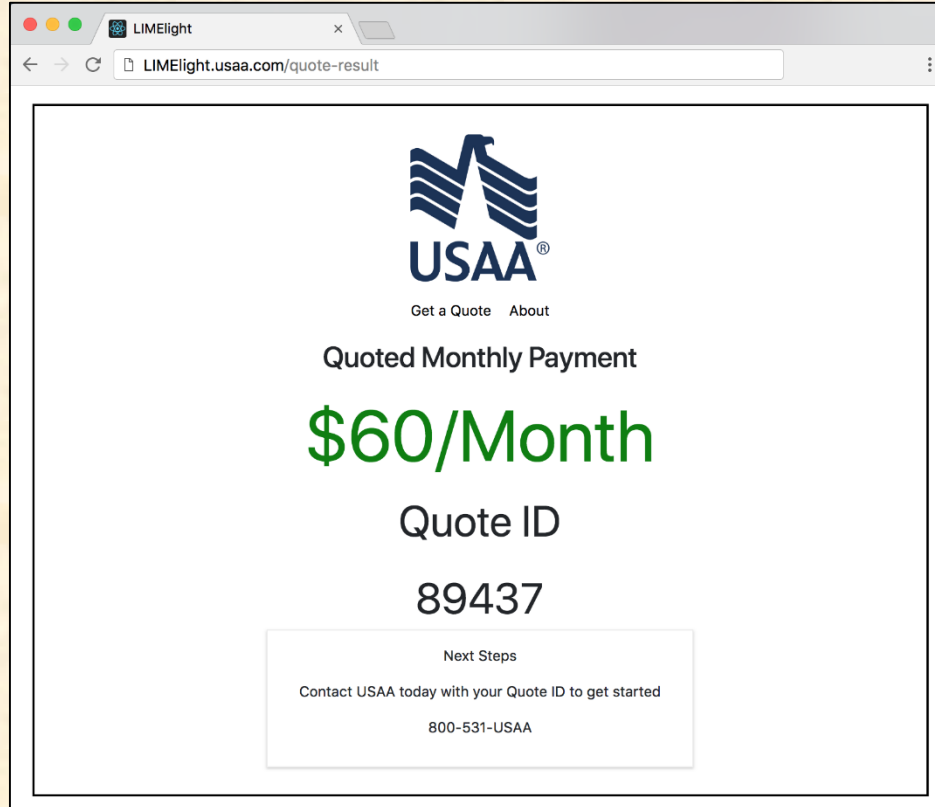
A "GET A QUOTE" button is located at the bottom of the form.

The Capstone Experience



Team USAA Alpha Presentation

Quote Result



The screenshot shows a web browser window with the address bar displaying "LIMElight.usaa.com/quote-result". The page content includes the USAA logo, navigation links "Get a Quote" and "About", and the following information:

Quoted Monthly Payment
\$60/Month
Quote ID
89437

Next Steps
Contact USAA today with your Quote ID to get started
800-531-USAA

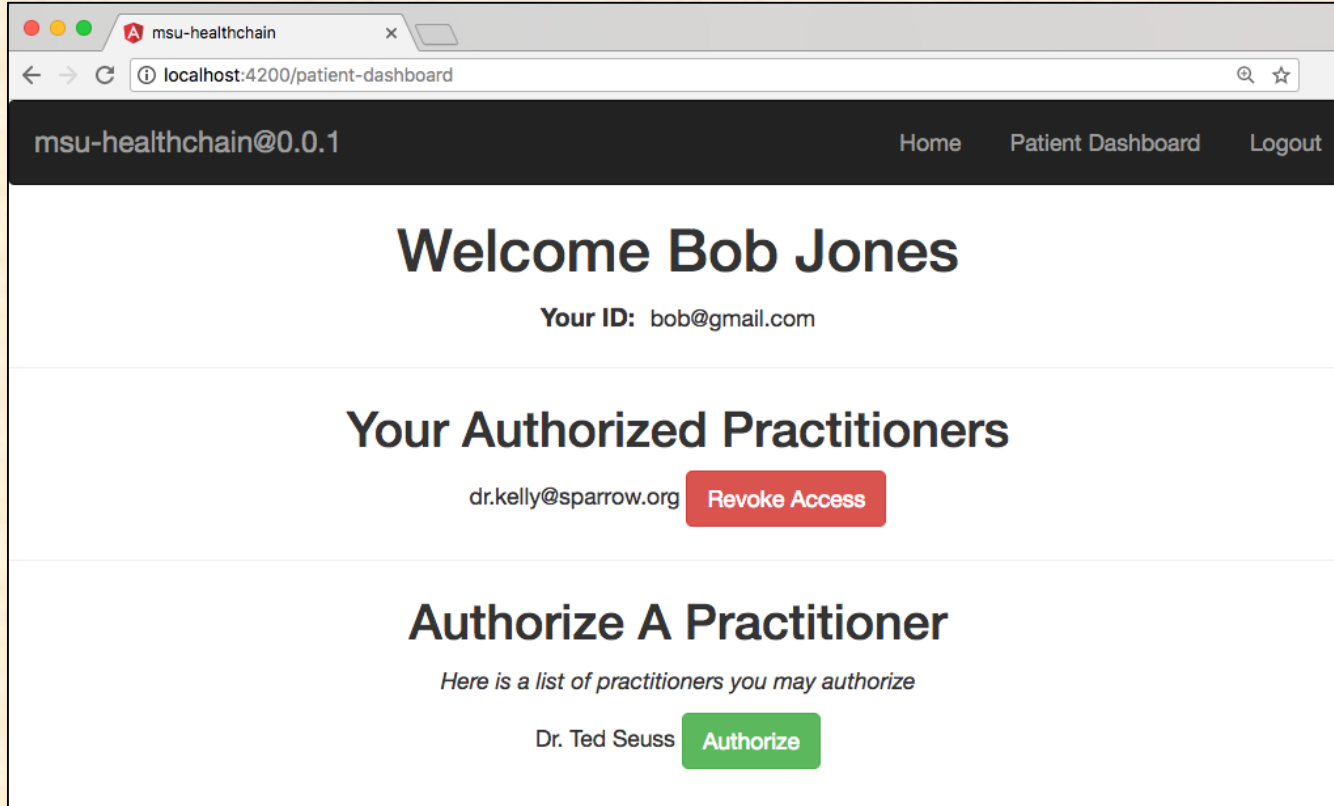




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Team USAA Alpha Presentation

Patient Blockchain View





Team USAA Beta Presentation

Team USAA Beta Presentation

Get a Quote

The screenshot shows a web browser window with the URL `https://msu-cse-498-usaa.firebaseio.com`. The page header features the USAA logo and navigation links: "Get A Quote", "About", and "Visit USAA". The main heading is "Get A Life Insurance Quote".

The form is a multi-step process with five steps listed on the left:


- 1. Age (marked with a checkmark)
- 2. Height (current step, marked with a blue circle)
- 3. Coverage Amount
- 4. Recent Car Accidents
- 5. Recreational Flying

The "Height" step contains input fields for "6" feet and "3" inches. Below these fields are two buttons: a red "BACK" button and a blue "NEXT" button. At the bottom of the form is a "GET A QUOTE" button.



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Quote Result

 [Get A Quote](#) [About](#) [Visit USAA](#)

Your Personalized Quote

Price

\$60/Month

Quote ID

13611

Next Steps

Contact USAA today with your Quote ID to get started

[1-800-531-USAA](tel:1-800-531-USAA)

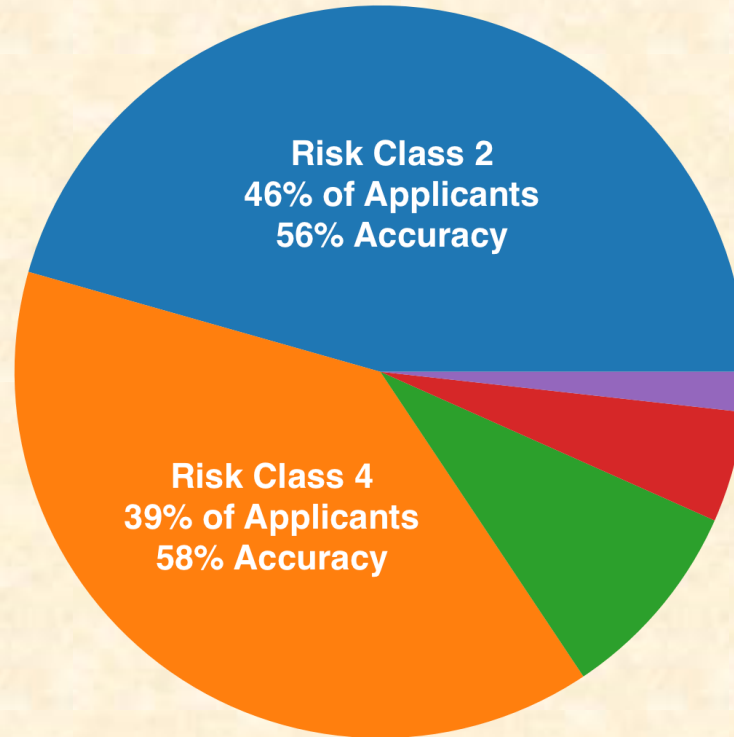




Team USAA
Beta Presentation

Team USAA Beta Presentation

Dataset Analysis





Team USAA @ Design Day

Xingchi Zhou, Nathaniel Finley, Dong Lee, Mike Ronayne, Abe Ahmed

MICHIGAN STATE
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The Capstone Experience

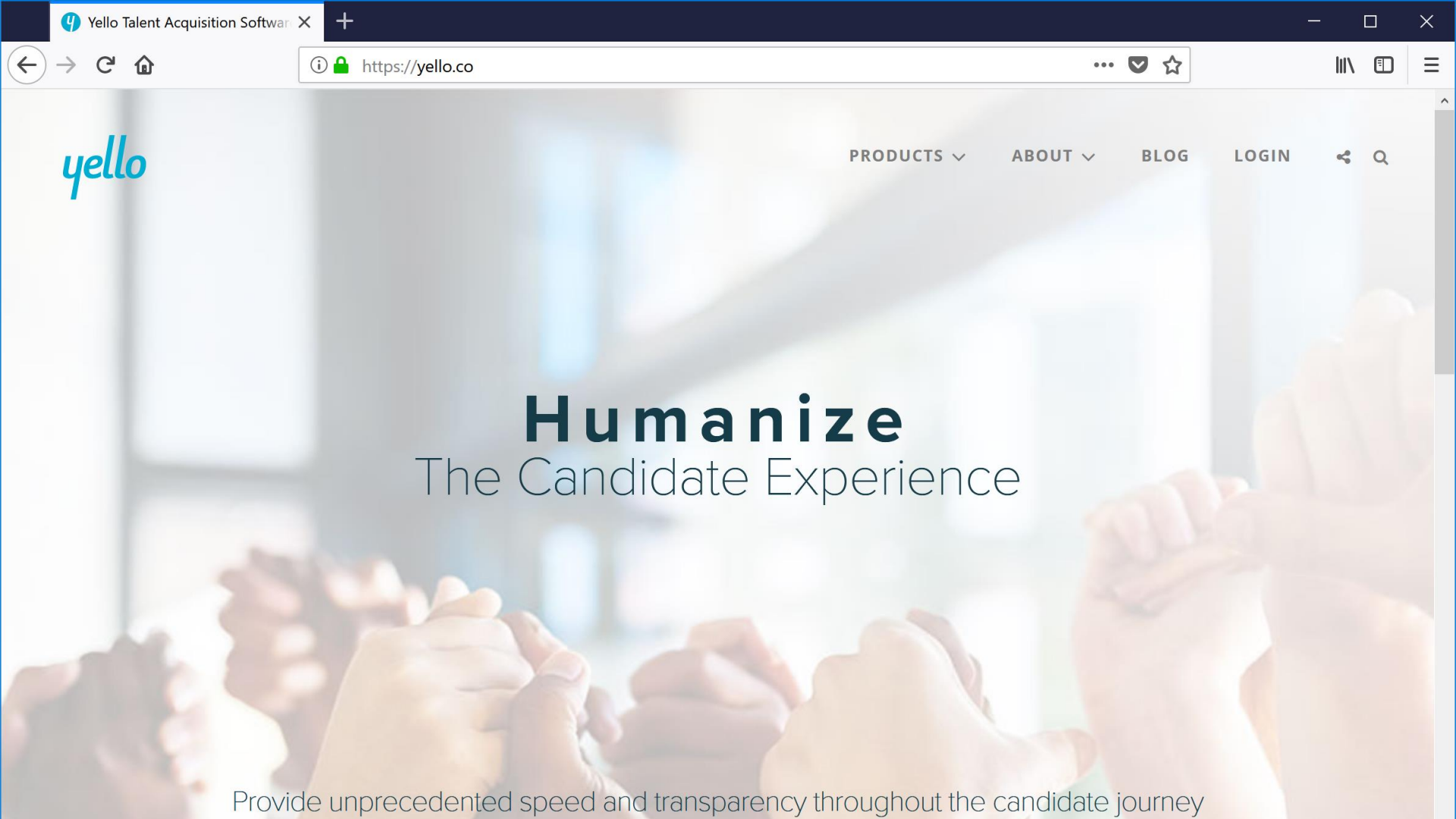
Team Yello

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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

yello



Humanize

The Candidate Experience

Provide unprecedented speed and transparency throughout the candidate journey

Team Yello

Project Overview

InViAnTo: Interview Video Analysis Tool

- Functionalities
 - Evaluate Video Interview Automatically
 - Include Sentiment and Emotional Analysis
- Features
 - Design and Build Web App
 - Record Live Video
 - Support Prerecorded Video
 - Enable Viewing and Rerecording by Applicant
 - Transcribe All Recordings and Store with Video
 - Apply Sentiment Analysis on Transcription
 - Run Emotion Detection on Audio and Video
 - Provide Administrative Web App
 - To View Results
 - By Hiring Team
- Technologies
 - CSS / HTML / JavaScript / JSON
 - Ruby on Rails
 - Microsoft Azure Emotion API
 - Microsoft Language Understanding Intelligent Services (LUIS)
 - Machine Learning
 - TensorFlow
 - scikit-learn

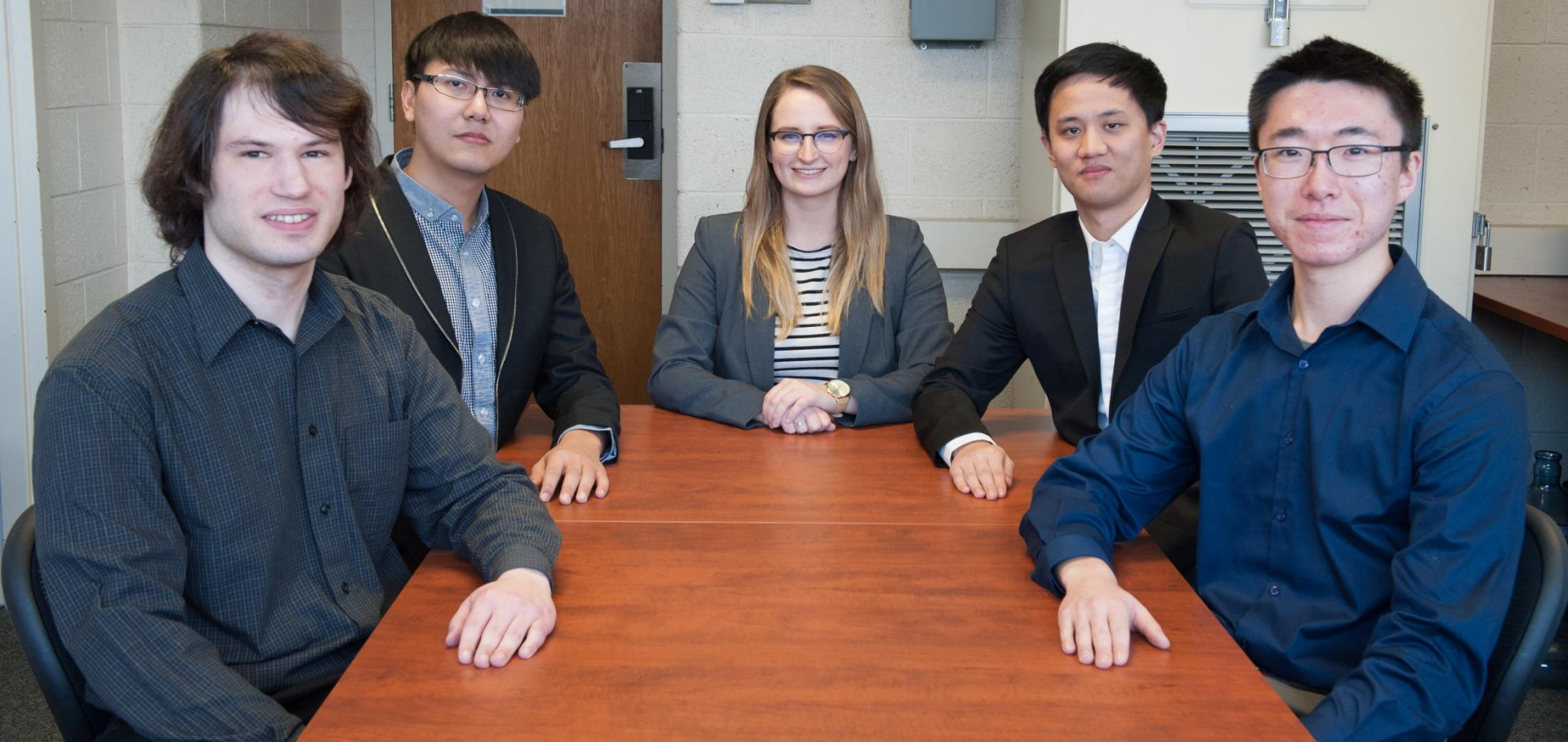


yello

Chicago, Illinois

The Capstone Experience



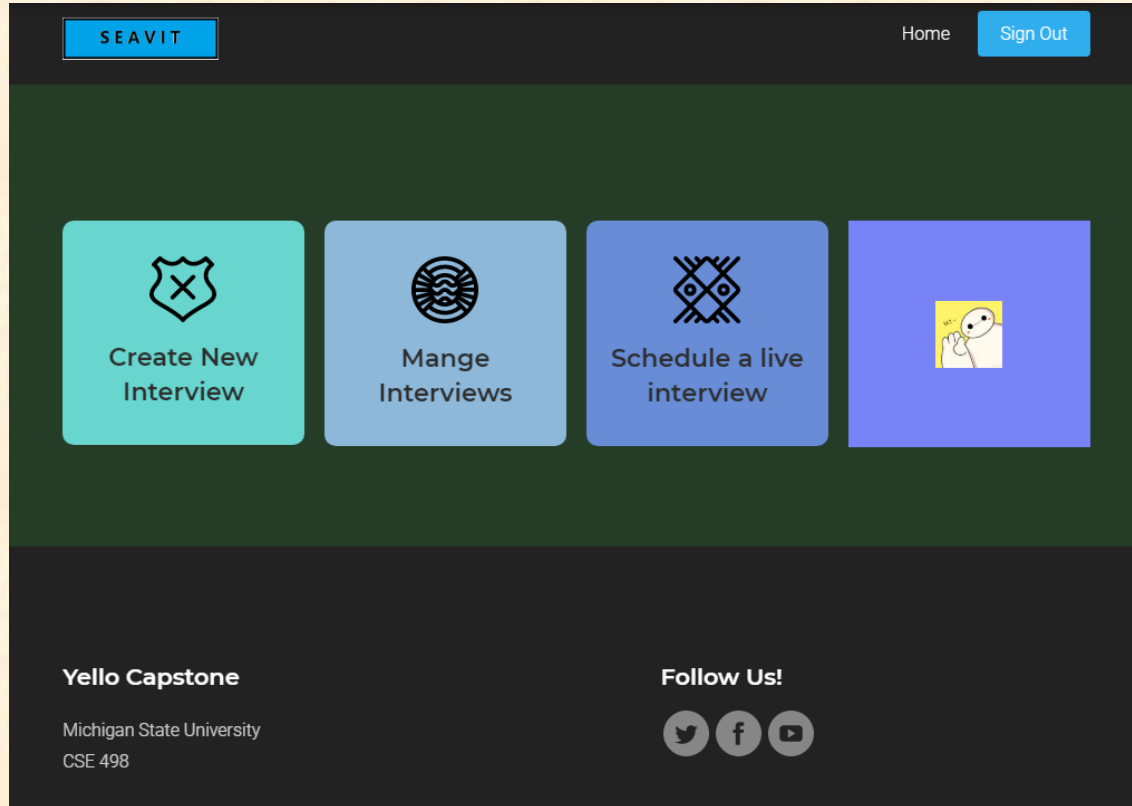


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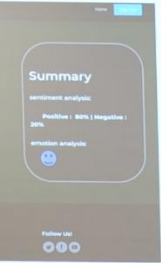
Jonathon Zeitler, Leo Yao, Jenn Proos, Quan Zhou, Brian Wang

Team Yello Project Plan Presentation

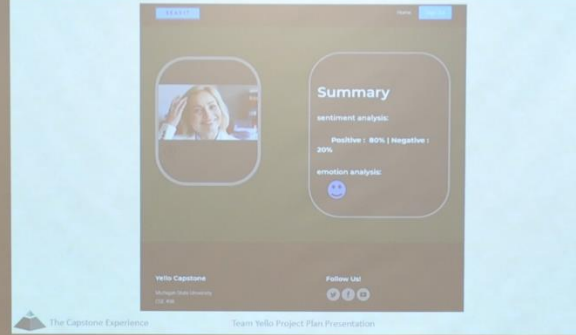
Screen Mockup: Staff Management Page



Interview Result Page



Screen Mockup: Interview Result Page



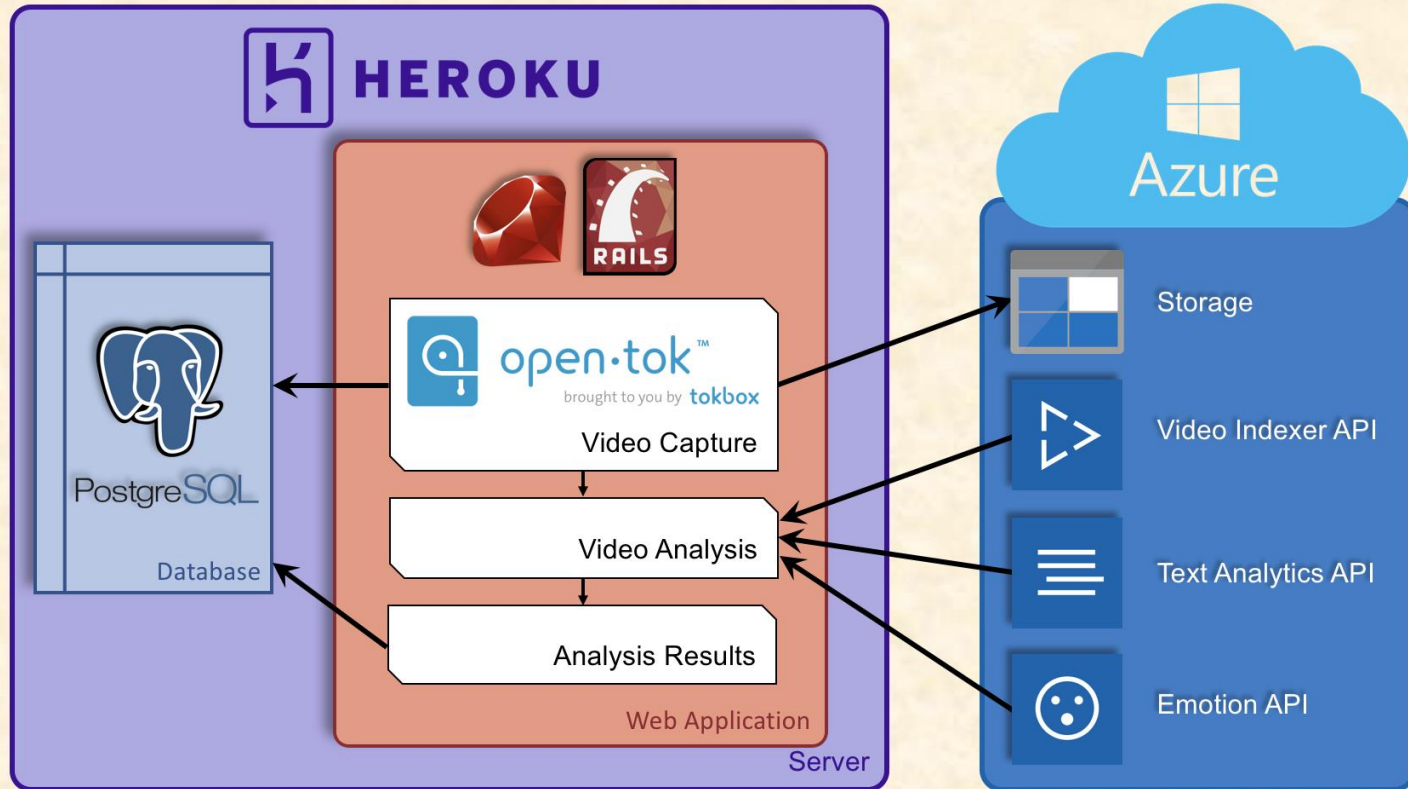
Screen Mockup

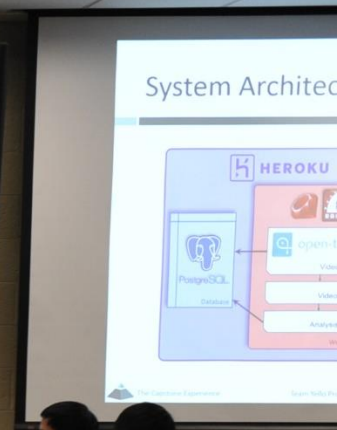
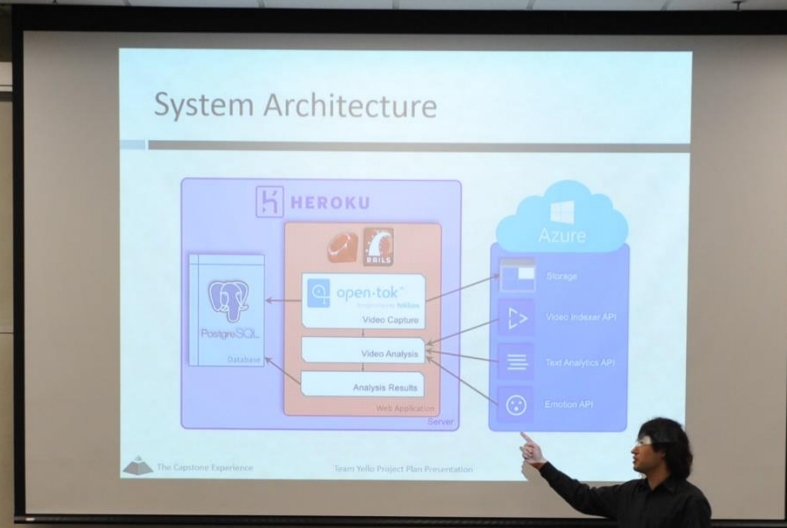
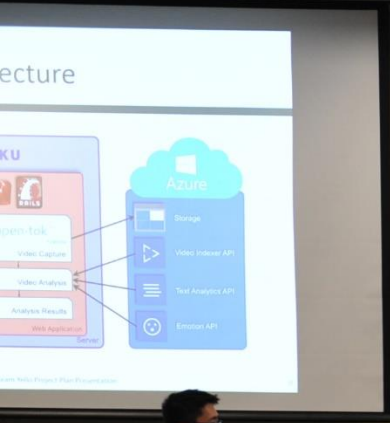


Team Yello
Project Plan Presentation

Team Yello Project Plan Presentation

Architecture Diagram

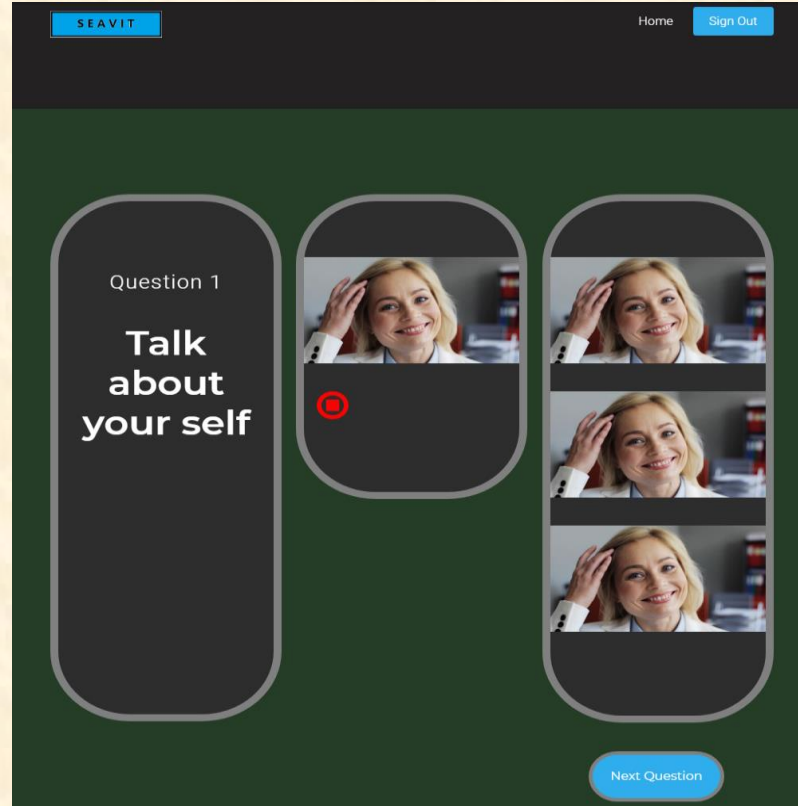




Team Yello
Project Plan Presentation

Team Yello Project Plan Presentation

Screen Mockup: Interview Recording Page





Team Yello Alpha Presentation

Team Yello Alpha Presentation

Candidate Video Response


SEAVIT Jenn

Secure | https://alpha-yello-app.herokuapp.com/question_responses/69 carl@gallagher.co [Candidate] Sign Out

Facebook Web Designer

Question 2

Describe a situation where you had to work in a team that didn't get on very well. What happened? What did you do and what role did you take? How did the situation evolve?

Record 

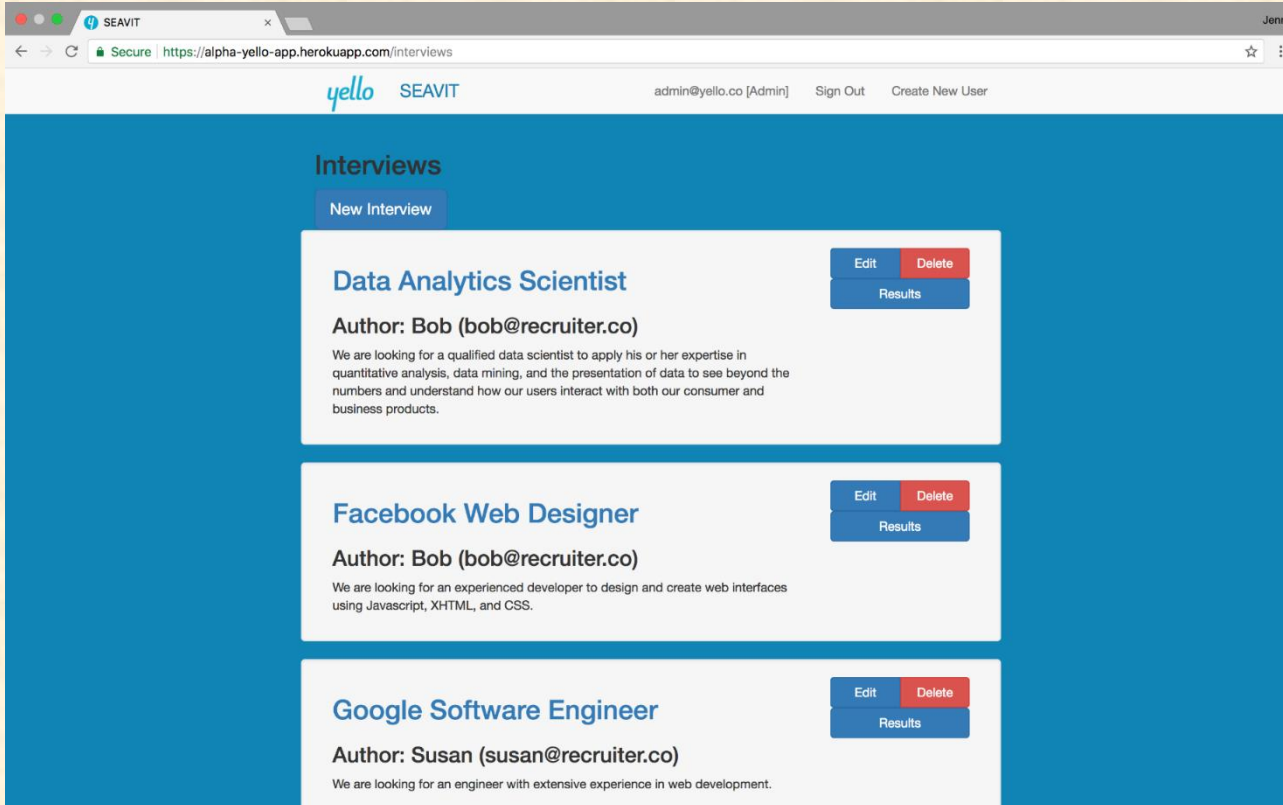
[Submit](#) [Previous](#) [Next](#) [Finish](#)

[Back to Interviews](#)



Team Yello Alpha Presentation

Managing Interviews



The screenshot displays a web browser window with the URL `https://alpha-yello-app.herokuapp.com/interviews`. The page features a blue header with the 'yello SEAVIT' logo and user navigation links: 'admin@yello.co [Admin]', 'Sign Out', and 'Create New User'. The main content area, titled 'Interviews', includes a 'New Interview' button and three job listings. Each listing has an 'Edit' button, a 'Delete' button, and a 'Results' button.

Interviews

[New Interview](#)

Data Analytics Scientist

Author: Bob (bob@recruiter.co)

We are looking for a qualified data scientist to apply his or her expertise in quantitative analysis, data mining, and the presentation of data to see beyond the numbers and understand how our users interact with both our consumer and business products.

[Edit](#) [Delete](#)

[Results](#)

Facebook Web Designer

Author: Bob (bob@recruiter.co)

We are looking for an experienced developer to design and create web interfaces using Javascript, XHTML, and CSS.

[Edit](#) [Delete](#)

[Results](#)

Google Software Engineer

Author: Susan (susan@recruiter.co)

We are looking for an engineer with extensive experience in web development.

[Edit](#) [Delete](#)

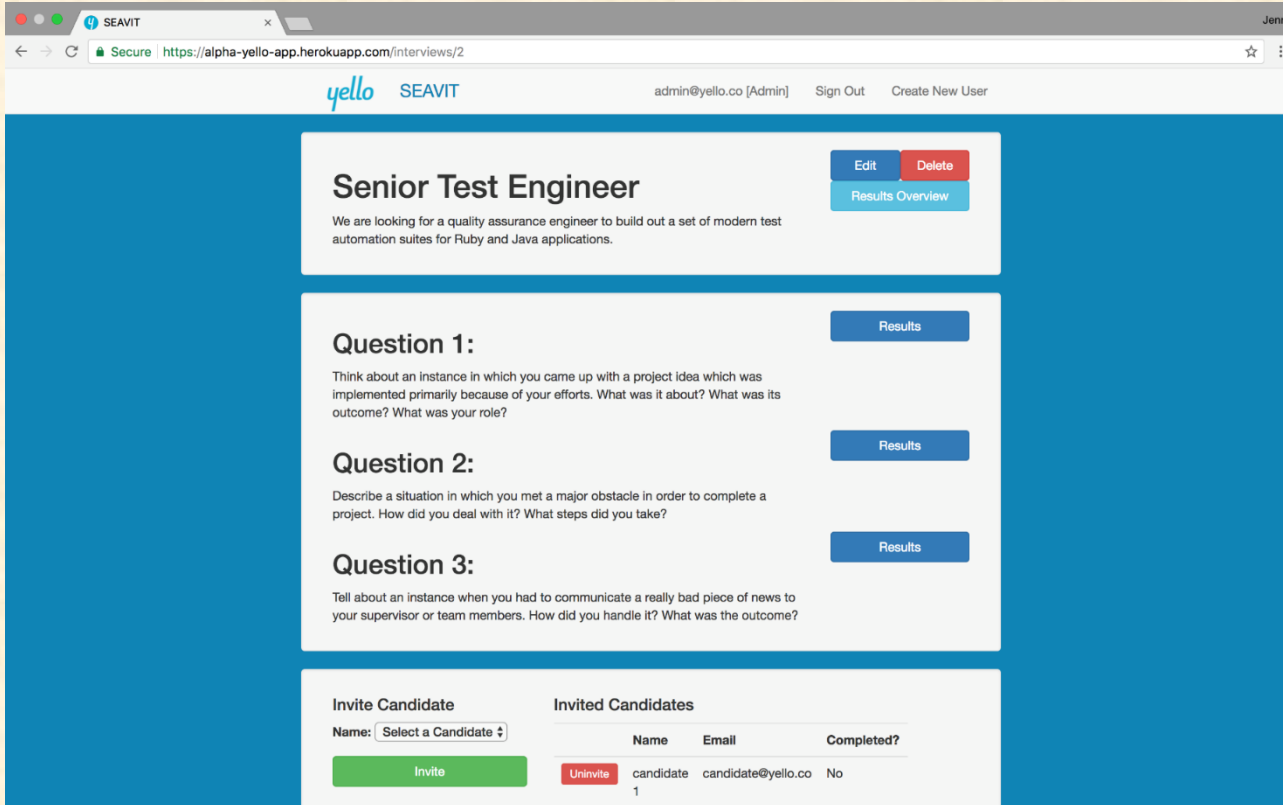
[Results](#)



Team Yello Alpha Presentation

Team Yello Alpha Presentation

Editing An Interview



The screenshot shows a web browser window with the URL `https://alpha-yello-app.herokuapp.com/interviews/2`. The page has a blue header with the "yello SEAVIT" logo and user information: "admin@yello.co [Admin]", "Sign Out", and "Create New User".

The main content area has a blue background. It features a card for "Senior Test Engineer" with a description: "We are looking for a quality assurance engineer to build out a set of modern test automation suites for Ruby and Java applications." Buttons for "Edit", "Delete", and "Results Overview" are visible.

Below this are three interview questions, each with a "Results" button:

- Question 1:** Think about an instance in which you came up with a project idea which was implemented primarily because of your efforts. What was it about? What was its outcome? What was your role?
- Question 2:** Describe a situation in which you met a major obstacle in order to complete a project. How did you deal with it? What steps did you take?
- Question 3:** Tell about an instance when you had to communicate a really bad piece of news to your supervisor or team members. How did you handle it? What was the outcome?

At the bottom, there is a section for "Invite Candidate" and "Invited Candidates". The "Invite Candidate" section has a dropdown menu labeled "Name: Select a Candidate" and a green "Invite" button. The "Invited Candidates" section shows a table with one candidate:

Name	Email	Completed?
candidate	candidate@yello.co	No

There is also a red "Uninvite" button next to the candidate name.





Team Yello Beta Presentation

Team Yello Beta Presentation

Prerecorded Response Page

IVAT

Secure | https://beta-yello-app.herokuapp.com/question_responses/117

candidate1@yello.co [Candidate] Sign Out


Taekwondo Instructor

Question 1

Do you have a national ranking? If so, what is it?

Time Limit: 00:30

Record



Submit Finish

Back to Interviews



Team Yello Beta Presentation

Live Interview Page





Team Yello Beta Presentation

Team Yello Beta Presentation

Analysis Results Page

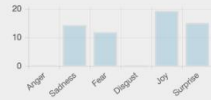
ts_reports/12

Summary:

Emotion Score: 😊 Joy

Sentiment Score: 0.7 (Positive)

Sentiment Variance: 0.07



Question 1:

Are you excited about working here?



Transcript Sentiment:

0.95 (Positive)

Transcript:

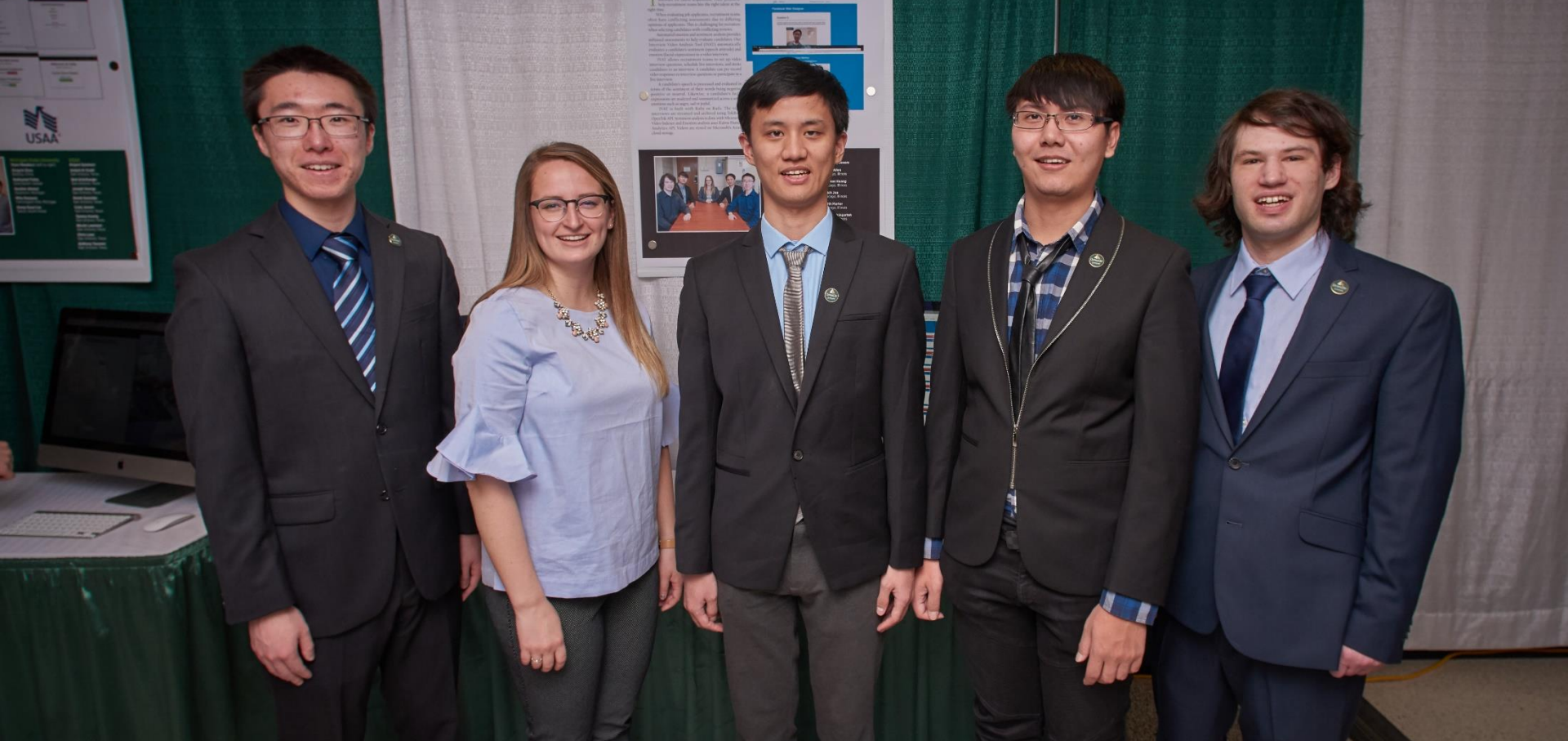
I am so excited about the work at yellow I love learning day I love working on rails I love Elasticsearch posgrados I love Keith. (0.95)

Emotion:

Top Emotion: 😊 Joy

Anger





Team Yello @ Design Day

Brian Wang, Jenn Proos, Quan Zhou, Leo Yao, Jonathon Zeitler

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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



The Capstone Experience Lab



The Capstone Experience Lab



The Capstone Experience Lab



The Capstone Experience Lab



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The Capstone Experience Lab
View of Spartan Stadium

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The Capstone Experience

Design Day Award Winners

December 8, 2017



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



All-Hands
Design Day, April 28, 2017



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



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 Koepp 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

April 27, 2018



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MICHIGAN STATE UNIVERSITY

ENGINEERING



COLLEGE OF
MICHIGAN STATE UNIVERSITY



Auto-Owners Exhibition Award

Team Phoenix Group, Spring 2018

Customer Service System with Chatbot

Aman Goshu, James Finch, Sarah Fillwock, Dan Shumaker, Fatema Alsaleh

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

OF ENGINEERING
STATE UNIVERSITY

ENGINEERING



College of Engineering
MICHIGAN STATE UNIVERSITY



COLLEGE OF E
MICHIGAN STAT

MSU Federal Credit Union Praxis Award

Team Amazon, Spring 2018

AMPED: Amazon Marketplace Podcast Earnings Detection

Zach Whitener, Cam Korzecke, Chess Luo, Dillon Stock, Hansheng Zhao, Hanzhong

Presented by Ben Maxim of MSU Federal Credit Union

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MICHIGAN STATE



TechSmith Screencast Award

Team Quicken Loans, Spring 2018

Fundamenta: Trust in New Home Construction

Riley Annis, Jaiwant Bhushan, Vishal Adusumilli, Turner Anderson, Erin O'Hara

Presented by Wendy Hamilton of TechSmith



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COLLEGE OF ENGINEERING
MICHIGAN STATE UNIVERSITY

Urban Science Sigma Award

Team Herman Miller, Spring 2018

Adjust: Augmented Reality Chair Adjustment Assistant

Kyle Kinsey, Han Huang, Jacob Weber, Kevin Gaban, Mike Bremiller

Presented by Elizabeth Klee, Nik Steel and Andrea Michaud of Urban Science

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2018



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

**>
accenture**

amazon





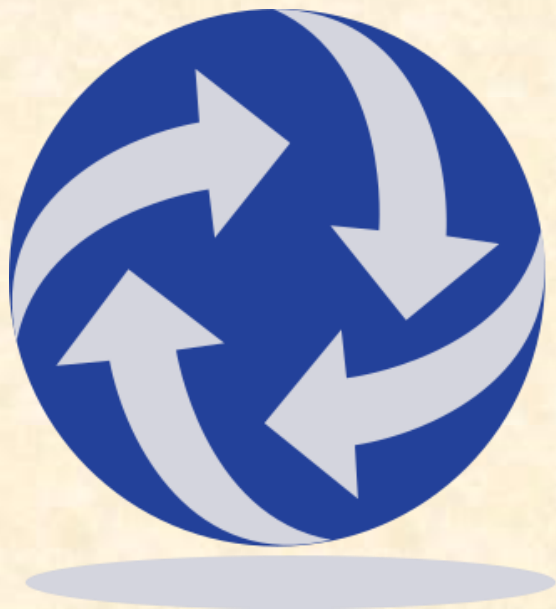
• **A P T I V** •



Auto-Owners **INSURANCE**

LIFE • HOME • CAR • BUSINESS





DRIVEN-4





HermanMiller

meijer®



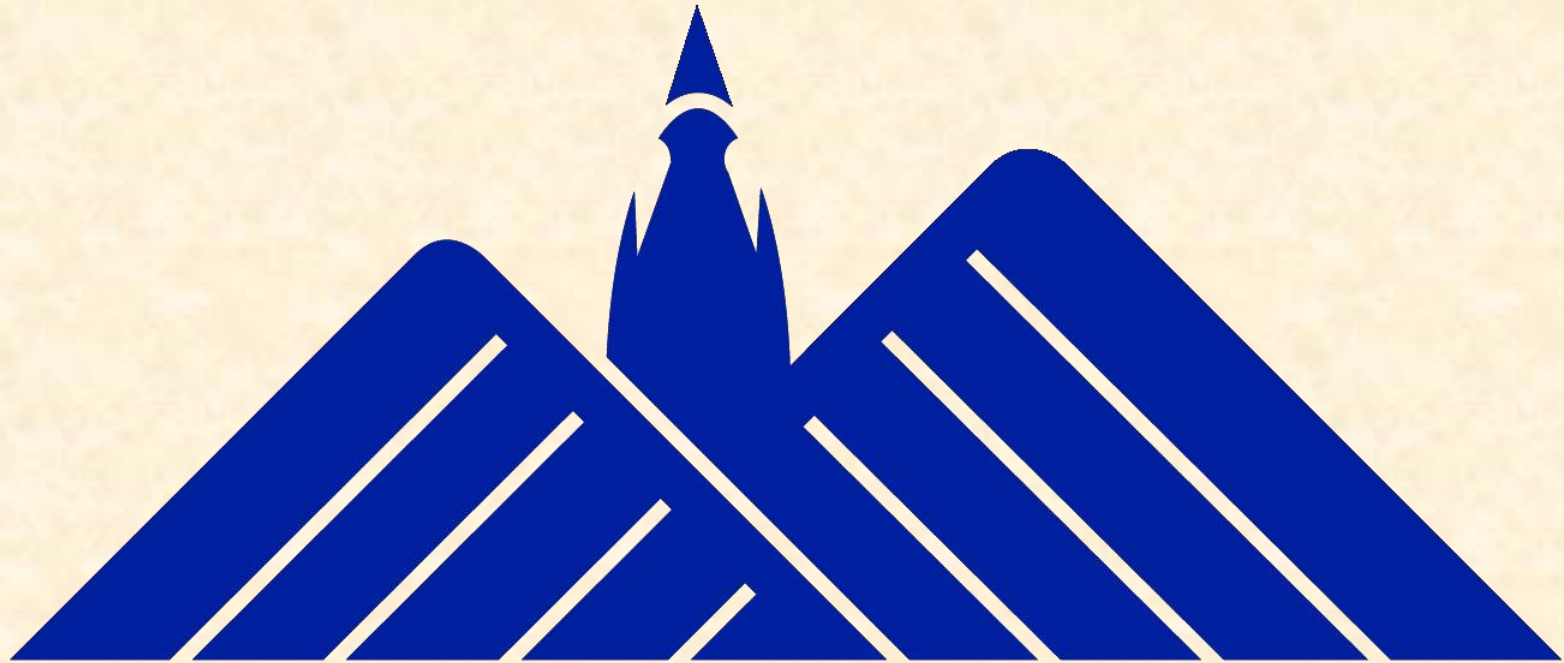


Firefox®



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

Building Dreams *Together*



THE PHOENIX GROUP

proofpoint™

Quicken® Loans®

Engineered to **AmazeSM**



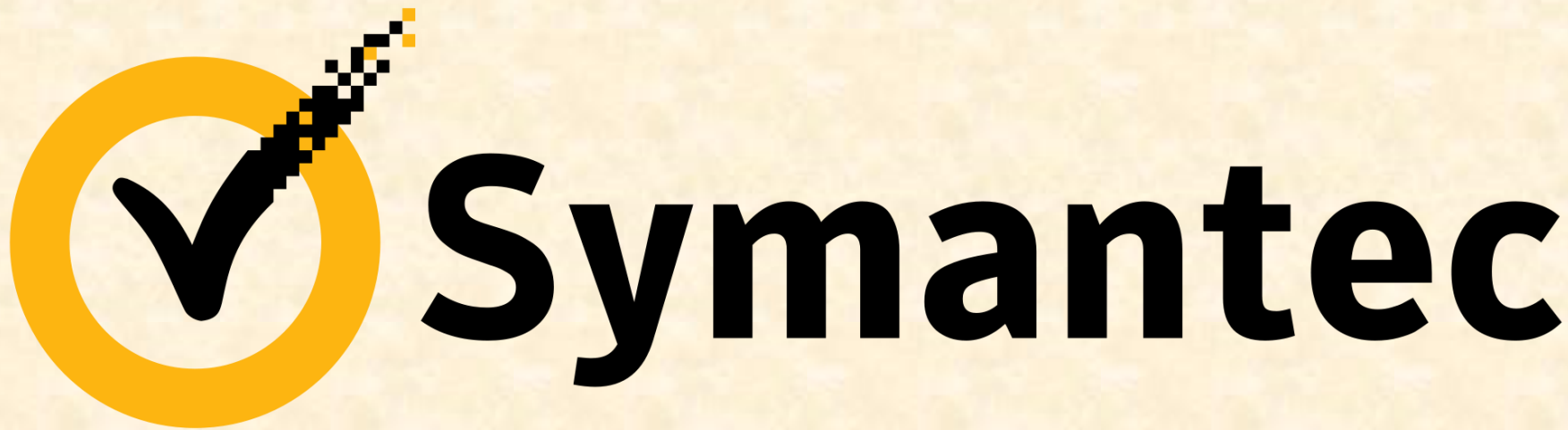
ROOK SECURITY



SpartanNash®

SPECTRUM HEALTH



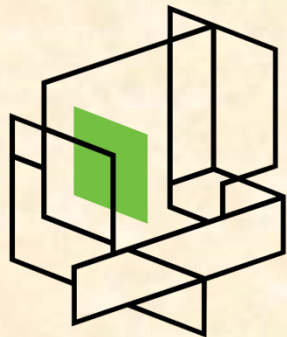




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BUILDING AMERICA[®]



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yello