MICHIGAN STATE UNIVERSITY

10/07: Design Day and the Design Day Booklet

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University

Fall 2019

From Students…
…to Professionals

Design Day Booklet

- Professional Publication
  - Corporate Relations
  - Alumni Relations
  - Recruiting
  - Keepsake for You
- Contents
  - Schedule of Events
  - Project Descriptions

Project Description Page

- Template Distributed by Dr. D.
  - Sponsor Name
  - Sponsor Logo
  - Project Title
  - MSU Team Photo
  - MSU Team Members' Names
  - Corporate Sponsors' Names
  - Headers and Footers
  - Posted On Downloads Page
- Template Completed by Team
  - Project Description
  - Artwork
  - Use Microsoft Windows Version of Word

Team's Job

- READ Instructions Carefully
- Check Everything
- MUST Use Microsoft Windows Version of Word
- READ Instructions Carefully
- Write Project Description
- READ Instructions Carefully
- Provide Artwork
- READ Instructions Carefully
- Check Everything 100 Times
- READ Instructions Carefully

Project Description

- READ Instructions Carefully
- Newspaper / Magazine Style
- Target General Public
- Do NOT Start “Our Project is…”
- Use present tense throughout.
- Write as though your project is complete.
- Fill the entire textbox.
- Technical Jargon
  - At End
  - At Least Two Lines
  - At Most Three Lines
- See Examples
  - The Capstone Experience Booklet
  - Previous Design Day Booklets (Design Day > Booklet)
  - MSU Men’s Basketball

Example Project Description: Spartan Basketball Player Timer

NCAA Division I basketball is very competitive. Although it may not be apparent to the casual observer, every detail of each game is carefully planned and scripted.

One aspect of a game plan is that of playing times. For each player, the coaches determine target times for how long he can play at a stretch, how long he needs to rest before playing again, and the total amount of time he should play in a game.

Developed with Coach Tom Izzo, our *Spartan Basketball Player Timer* is used by the basketball staff on the bench during the game.

When a player enters the game, his playing time is displayed with a solid green background. When his target playing time goes under two minutes, it is displayed in yellow. When the time goes below zero, it is displayed in red.

The color coding of times provides visual cues that can be seen by the coaches at a distance. If there are many yellow or red boxes, the coaches begin to plan substitutions.

A game summary for all the players can be displayed at any time whether the game clock is running or stopped.

Our software runs on a Microsoft Windows Tablet PC about the size of a traditional clipboard only slightly thicker. With no mouse or keyboard, all input is done with a pen.

Spartan Basketball Player Time is written in Visual Basic. The underlying database is Microsoft Access.

Artwork

- READ Instructions Carefully
- Screenshot(s) of Working Software
- Fill up the entire whitespace.
- Can Overlap
- Include “Framing”
  - Browser
  - iPhone, iPad
  - Android Phone or Tablet
  - NOT Laptop or Desktop
- Add Border
  - If Blends Into White Background
  - Create Single PNG Using PowerPoint
  - Read Instructions
- Very High Resolution
- Preserve Aspect Ratios
- Crop to Eliminate Transparent “Borders”
- Use paint.net
- See Examples
  - The Capstone Experience Booklets
  - Previous Design Day Booklets (Design Day > Booklet)
  - MSU Men’s Basketball

Artwork Example

[1 of 5]

CSE 498 / 7:30 a.m. Engineering Building, Room 3405 | Third Floor

Amazon
AVAST: Amazon Video And Shopping Technology

Founded in 1994 as an online bookstore, Amazon is the largest online retailer in the world. In addition to retail, Amazon offers services in cloud infrastructure through Amazon Web Services, and audio and video streaming through Amazon Music and Prime Video.

According to a recent study, 80% of internet usage will be people watching online videos by the year 2020. This presents a significant opportunity for all online retailers.

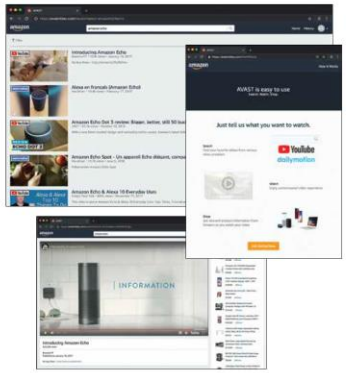
Our AVAST (Amazon Video And Shopping Technology) platform leverages the growth in online video streaming by providing users with an easy way to purchase products of interest that they see in the videos they are watching.

Using AVAST, an Amazon customer can stream videos from content providers such as YouTube and their favorite TV networks.

While a user is watching a video, AVAST analyzes it to find items of potential interest to the viewer. As the video plays, related Amazon products are displayed alongside the video as illustrated in the examples at the right.

For each item, AVAST displays a product description, pictures and ratings. A viewer can easily purchase any product simply by clicking on the conveniently provided link to Amazon.

The frontend of AVAST (Amazon Video And Shopping Technology) is built using Angular 6, while the backend is implemented using PHP Laravel. In addition, several Amazon Web Services are used including Rekognition to analyze videos, and EC2 to host the AVAST website.



amazon

Michigan State University
Team Members (left to right)

Linshawn Fang
Wenzhou, Zhejiang, China

Ben Nwachukwu
Oak Park, Michigan

Patrick McCormick
Northville, Michigan

Ian McGregor
Clarkston, Michigan

Han Wang
Novi, Michigan

Amazon
Project Sponsors

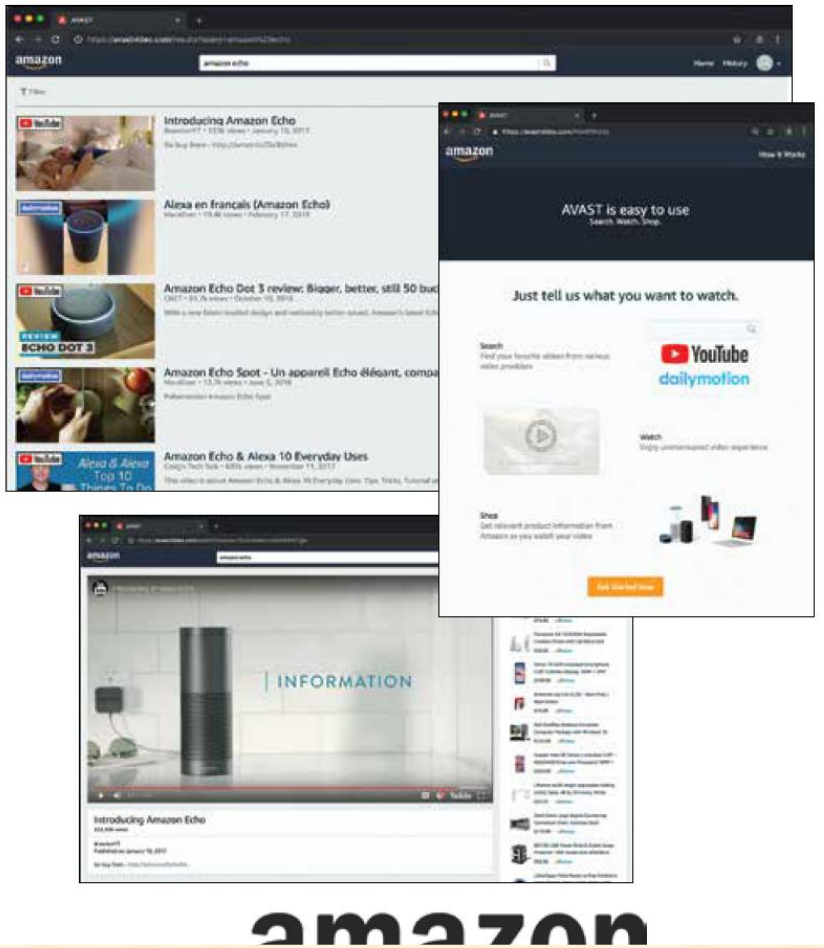
Garret Gaw
Detroit, Michigan

Derek Gebhard
Detroit, Michigan

Kyle Koss
Detroit, Michigan

Pete Pfeiffer
Detroit, Michigan

PAGE 26



amazon

Artwork Example

[2 of 5]

Engineering Building, Room 3405 | Third Floor **7:43 a.m. / CSE 498**

Aptiv
Autonomous Vehicle Fleet Connectivity App

Aptiv is a global technology company that is transforming mobility with its portfolio of safe, green, and connected solutions for its customers.

As a leader in autonomous vehicle development, Aptiv maintains an extensive test fleet of autonomous vehicles, which must be managed and monitored.

Our Autonomous Vehicle Fleet Connectivity App provides connectivity to Aptiv's autonomous test fleet, which operates across the US, Europe and Asia, and includes various vehicles with software for every level of autonomy.

Among other features, our system provides scheduling of test vehicles. After logging in, Aptiv engineers see a calendar view of the entire fleet from which they can select a particular day to obtain a list of available vehicles.

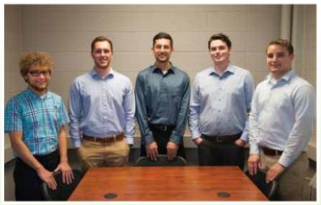
Once a vehicle is selected, our app displays a complete set of information about it including its past usage, reservations and diagnostic information.

In addition to checking availability of vehicles based on dates, our app provides for advanced search to narrow the scope based on things like type of vehicle, location of vehicle and level of autonomy.

The "My Reservations" tab shows a user's upcoming vehicle reservations as well as enabling them to make and cancel reservations.

Our Autonomous Vehicle Fleet Connectivity App is written using the Angular web framework, obtaining information from Aptiv's native servers. Communications are implemented using Microsoft Azure Services.

APTIV



Michigan State University
Team Members (left to right)

Alex Patton
Howell, Michigan

Drew Glapa
Dexter, Michigan

Emilio Castillo
Lansing, Michigan

Klint Kaercher
Lansing, Michigan

Chad Krause
Novi, Michigan

Aptiv
Project Sponsors

Chris Lussenhop
Troy, Michigan

Joe Lyon
Troy, Michigan

Ross Maguire
Troy, Michigan

Jim Quesenberry
Troy, Michigan

PAGE 27

APTIV

Artwork Example

[3 of 5]

CSE 498 / 7:56 a.m. Engineering Building, Room 3405 | Third Floor

Auto-Owners Insurance
Jeffrey: Virtual Insurance Claim Advisor

Auto-Owners Insurance is a Fortune 500 company that provides automotive, home, life and commercial insurance. Headquartered in Lansing, Michigan, Auto-Owners is represented by over 44,000 licensed insurance agents across 26 states, and provides insurance to nearly 3 million policyholders.

Every day, hundreds of insurance claims are filed with Auto-Owners through its independent agents. This process can be tedious for both policyholders and agents.

Our Jeffrey Virtual Insurance Claim Advisor system is a virtual claim assistant that automates the entire claim reporting process. Our mobile app, shown at the right, enables both agents and policyholders to file a claim easily and efficiently.

Jeffrey engages in a dialogue with policyholders and agents to gather information required to file their claim through natural conversation. If necessary, Jeffrey prompts users to take photos, record videos or attach documents relevant to a claim.

After completing a dialogue with a user, Jeffrey automatically gathers the appropriate claim information and submits it to Auto-Owners.

Our companion web app enables agents and Auto-Owners associates to find and review claim information that is submitted through the mobile application.

Our Jeffrey Virtual Insurance Claim Advisor system features natural language processing, which is implemented using Google's Dialogflow. A custom REST API, written in Kotlin, handles interactions between the applications and our MySQL database. Our web application is built using the React JavaScript framework.

Auto-Owners INSURANCE
LIFE · HOME · CAR · BUSINESS

Michigan State University
Team Members (left to right)

Alex Klingel
Marshall, Michigan

Connor Stabnick
Rochester, Michigan

Nabiha Bivji
Novi, Michigan

Michael Dickmann
Novi, Michigan

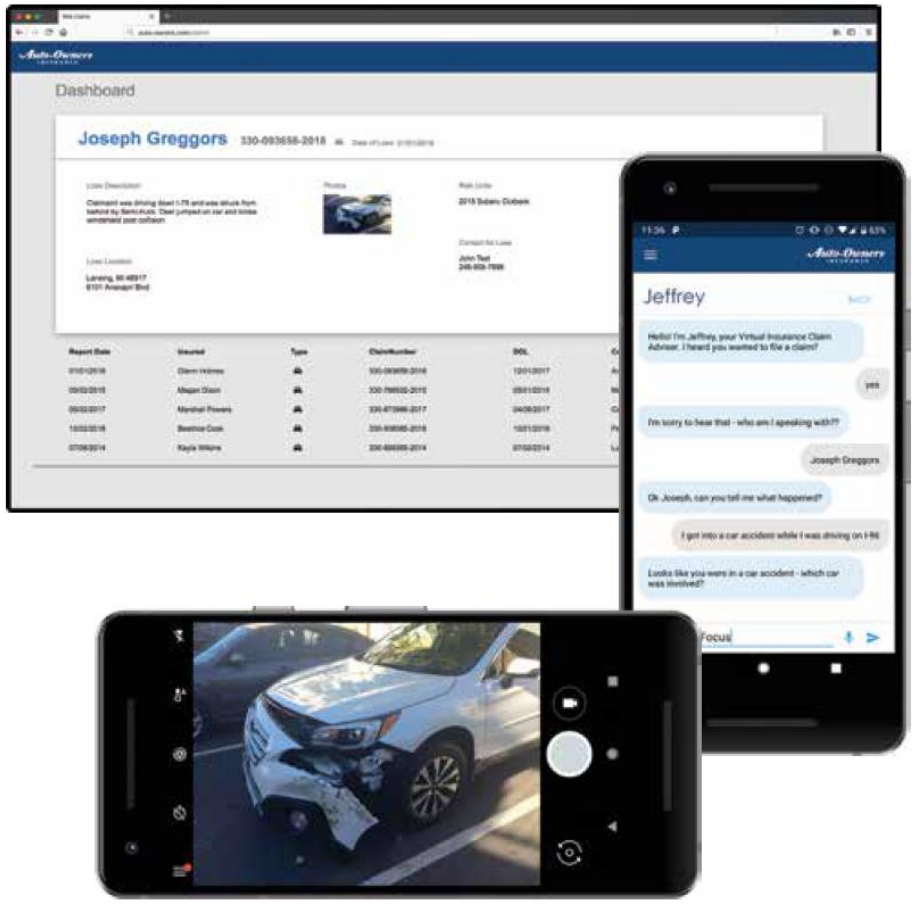
Auto-Owners
Project Sponsors

Ross Hacker
Lansing, Michigan

Scott Lake
Lansing, Michigan

Jim Schumacher
Lansing, Michigan

PAGE 28

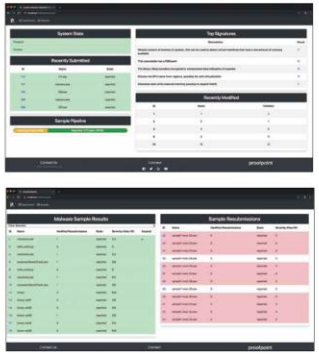


Artwork Example

[4 of 5]

Engineering Building, Room 3405 | Third Floor **9:53 a.m. / CSE 498**

Proofpoint
Improved Detonation of Evasive Malware



Headquartered in Sunnyvale, California, Proofpoint provides cybersecurity to many organizations, including Fortune 100 companies and educational institutions such as Michigan State University.

Analyzing malware is challenging. Viruses, spyware, ransomware and other malicious programs come in many complex forms. To protect its customers, Proofpoint uses tools called sandboxes, which are restricted computing environments where potentially harmful malware can be tested and analyzed safely.

Unfortunately, a new class of malware called "evasive malware" is rapidly emerging, thereby presenting a new, more dangerous class of cybersecurity threats.

Evasive malware has the ability to detect the presence of the sandbox environment. After doing so, it changes what it does, thereby evading analysis.

Our Improved Detonation of Evasive Malware system modifies evasive malware to block its ability to detect the sandbox environment, which causes it to execute. When the evasive malware does execute, its behavior is analyzed to determine precisely what it does so that Proofpoint can design countermeasures to protect against it.

Our web app, shown at the right, displays the results of processed malware. Users can check the status of the malware samples being tested as well as see the top evasive techniques being used. Both harmless and harmful evasive results are presented.

Our Improved Detonation of Evasive Malware system is implemented in Python, using the Cuckoo sandboxing framework and Suricata network monitor. Our web app is implemented using Python and Flask with the interface framed in Bootstrap and jQuery.

proofpoint.

Michigan State University
Team Members (left to right)

Jack Mansueti
Beverly Hills, Michigan

Tae Park
Canton, Michigan

Sean Joseph
Grand Ledge, Michigan

Ryan Gallant
Midland, Michigan

Ian Murray
Midland, Michigan

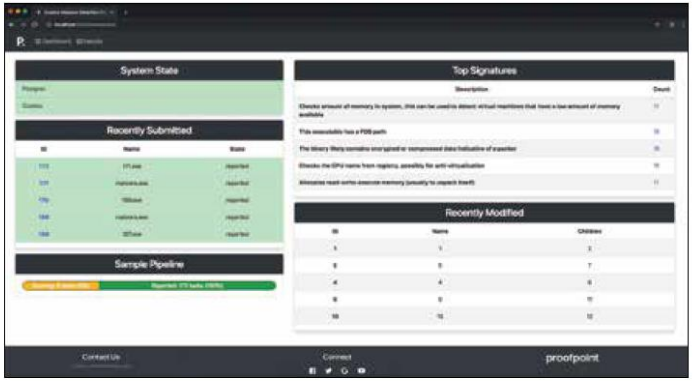
Proofpoint
Project Sponsors

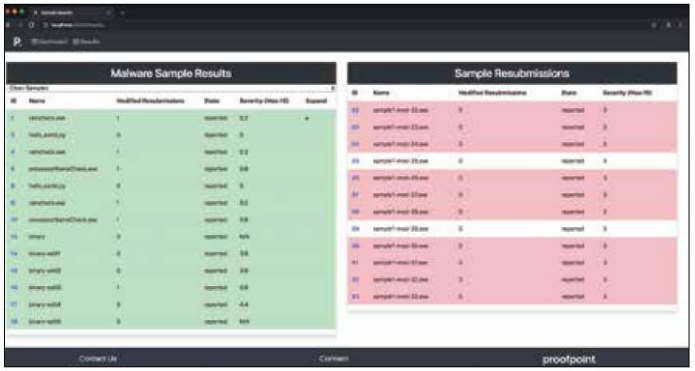
Leilani Alejo
Sunnyvale, California

Kristi Gee
Sunnyvale, California

Brad Woodberg
Troy, Michigan

PAGE 37





proofpoint™

Artwork Example

[5 of 5]

The Capstone Experience

MSU Federal Credit Union

Banking with Amazon's Alexa and Apple's Siri

Founded in 1937, Michigan State University Federal Credit Union offers financial services to Michigan State University and Oakland University faculty, staff, students, alumni association members and their families. With 230,000 members and over $3.3 billion in assets, MSUFCU is the largest university-based credit union in the world.

MSUFCU currently offers mobile banking apps on both Apple (iOS) and Google Android devices for members to access their funds and perform banking transactions at any time.

Our Banking with Amazon's Alexa and Apple's Siri systems maintain MSUFCU's technological edge by expanding their banking offerings to voice-controlled smart devices such as Amazon Alexa-enabled devices, Apple Watch and Android Wear.

Voice-controlled technologies give MSUFCU members new ways to interact with their accounts, including accessing their account balance, transferring money and obtaining information about recent transactions. Members can request other information about MSUFCU such as branch hours, current loan rates and the location of the nearest ATM or Branch.

Our companion administrative web portal enables MSUFCU staff to manage the available information and services offered by these voice technologies. Frequently asked questions can be added to the apps in minutes to improve the user experience.

The Alexa skill is written in Python, Apple Watch in Swift and Android Wear in Java. All three contact a MySQL database through JSON. The administrative web portal is written in PHP.

MICHIGAN STATE UNIVERSITY
FEDERAL CREDIT UNION
Building Dreams Together

Michigan State University
Team Members (left to right)

Steven Jorgensen
Saranac, Michigan

Kieran Hall
Traverse City, Michigan

Will Rudnick
Chicago, Illinois

Ethan Boyd
Saline, Michigan

Qiuning Ren
Beijing, China

MSUFCU
Project Sponsors

Samantha Amburgey
East Lansing, Michigan

April Clobes
East Lansing, Michigan

Emily Fesler
East Lansing, Michigan

Collin Lochinski
East Lansing, Michigan

Judy Lynch
East Lansing, Michigan

Ben Maxim
East Lansing, Michigan

Andy Wardell
East Lansing, Michigan

PAGE 34

Example Spartan Basketball Player Timer

CSE498 / 7:00 a.m. Engineering Building, Room 3405 | Third Floor

Michigan State University Men's Basketball

Spartan Basketball Player Timer

NCAA Division I basketball is very competitive. Although it may not be apparent to the casual observer, every detail of each game is carefully planned and scripted.

One aspect of a game plan is that of playing times. For each player, the coaches determine target times for how long he can play at a stretch, how long he needs to rest before playing again, and the total amount of time he should play in a game.

Developed with Coach Tom Izzo, our Spartan Basketball Player Timer is used by the basketball staff on the bench during the game.

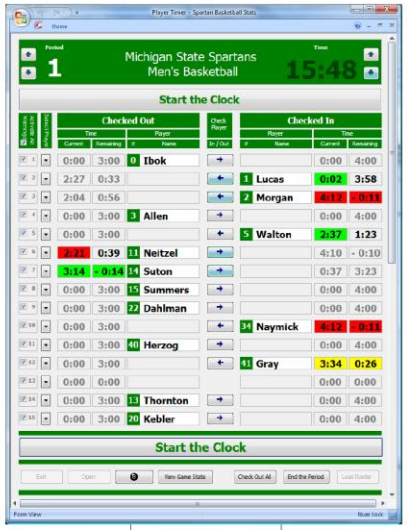
When a player enters the game, his playing time is displayed with a solid green background. When his target playing time goes under two minutes, it is displayed in yellow. When the time goes below zero, it is displayed in red.

The color coding provides visual cues that can be seen by coaches at a distance. If there are many yellow or red boxes, coaches begin to plan substitutions.

A game summary for all the players can be displayed at any time whether the game clock is running or stopped.

Our software runs on a Microsoft Windows Tablet PC about the size of a traditional clipboard only slightly thicker. With no mouse or keyboard, all input is done with a pen.

Spartan Basketball Player Timer is written in Visual Basic. The underlying database is Microsoft Access.



Michigan State University
Team Members

Wayne Dyksen
North Haledon, New Jersey

Wayne Dyksen
Grand Rapids, Michigan

Wayne Dyksen
West Lafayette, Indiana

Wayne Dyksen
East Lansing, Michigan

Team Michigan State University
Project Sponsors

Richard Bader
East Lansing, Michigan

Jim Boylen
East Lansing, Michigan

Tom Izzo
East Lansing, Michigan

Mark Montgomery
East Lansing, Michigan

Dwayne Stephens
East Lansing, Michigan

PAGE N + 0

1 Template From Dr. D. To Team

N.B. The format of the template has changed.

Dow Chemical Company
Assist IT: Mobile IT Help Assistant

Insert your project description here. Read the Design Day Booklet Page Instructions thoroughly, over and over and over and over and over.

Lorem ipsum dolor sit amet, adipiscing vitae maecenas, ante ornare luctus. Scelerisque vivamus orci, vestibulum velit lorem, placerat suscipit viverra. Eleifend felis velit, leo est, bibendum ac quam. Quis dolor, nascetur malesuada, nec sed nullam. Ultricies amet turpis. Arcu amet sit, consectetuer suspendisse a, bibendum cursus.

Nec turpis. Non justo elit. Vulputate tortor. Libero vestibulum mauris, libero libero. Donec morbi proin, ut nulla, sociis dictum odio.

Ultrices interdum facilisi, ante phasellus, donec sem. Convallis ut wisi, tristique imperdiet laoreet. Nulla sem, a at, sodales convallis lacus. Dui suscipit, vulputate amet. Quam neque, dui mauris.

Nullam aliquam, vitae aliquam. Semper a. Lacinia porttitor, eget molestie velit, nunc non elit. Libero et scelerisque, quam eu. Vulputate molestie.

Lorem ipsum dolor sit amet, adipiscing vitae maecenas, ante ornare luctus. Scelerisque vivamus orci, vestibulum velit lorem, placerat suscipit viverra. Eleifend felis velit, leo est, bibendum ac quam. Quis dolor, nascetur malesuada, nec sed nullam. Ultricies amet turpis. Arcu amet sit, consectetuer suspendisse a, bibendum cursus.

Nec turpis. Non justo elit. Vulputate tortor. Libero vestibulum mauris, libero libero. Donec morbi proin, ut nulla, sociis dictum odio.

Nullam aliquam, vitae aliquam. Semper a. Lacinia porttitor, eget molestie velit, nunc non elit. Libero et scelerisque, quam eu. Vulputate molestie.

- To insert your artwork, right mouse click on this artwork and select "Change Picture…"
- Put each piece of artwork in a separate textbox.
- Do not change the textbox's black external border and white internal border. Think of them as handles. The black borders can overlap anything in your layout since the black borders will be deleted before your template is submitted to our graphic designer.

- To insert your artwork, right mouse click on this artwork and select "Change Picture…"
- Put each piece of artwork in a separate textbox.
- Do not change the textbox's black external border and white internal border. Think of them as handles. The black borders can overlap anything in your layout since the black borders will be deleted before your template is submitted to our graphic designer.

DOW®

Michigan State University
Team Members (left to right)

Brandon Brooks
Clinton Township, Michigan

Keaton Coffman
Jackson, Michigan

Cassie Thompson
Kalamazoo, Michigan

Charlie Benson
Lansing, Michigan

Dow
Project Sponsors

Kyle Alexander
Midland, Michigan

Marc Habermann
Midland, Michigan

Fareed Mohammed
Midland, Michigan

Matt Olmsted
Midland, Michigan

2
Draft
From Team
To Dr. D.

1st Draft

Dow Chemical Company
Assist IT: Mobile IT Help Assistant

Around for over 110 years, Dow Chemical Company is a company focused on innovation and providing solutions. This focus on innovation leads Dow to the commitment of improving products and methods as well as breaking the mold for years on end.

Dow consists of over 70,000 employees worldwide with approximately 30,000 of these employees being contractors. With almost half of their employees being contractors, a lot of the employees do not have the knowledge to know where to look for help with their IT problems. Dow wished to come up with a solution that is a one-stop-shop that would allow for their employees to easily access or find the IT information that they need to continue working.

Dow IT Assistant is a web based chatbot that brings all of the IT knowledge to one place in an intuitive way. The chatbot greets the user upon visiting the page and sees if it can assist you with your IT problems or needs. The IT assistant can be used either via a desktop or mobile web browser. For Dow employees whom have visual impairment, they are able to take full advantage of the chatbot by vocalizing to it about their problem and having it respond over the voice service.

Dow IT Assistant uses Microsoft Azure Services including LUIS, QnA Maker, Voice Services, and knowledge bases. The chatbot learns the service request information from interfacing with Dow's large IT database. Hosted on Azure, the web application uses Microsoft .Net and Node.js.

Michigan State University
Team Members (left to right)

Brandon Brooks
Clinton Township, Michigan

Keaton Coffman
Jackson, Michigan

Cassie Thompson
Kalamazoo, Michigan

Charlie Benson
Lansing, Michigan

Dow
Project Sponsors

Kyle Alexander
Midland, Michigan

Marc Habermann
Midland, Michigan

Fareed Mohammed
Midland, Michigan

Matt Olmsted
Midland, Michigan

3
Draft
From Writer
To Team

Writers' Edits

Dow Chemical Company
Assist IT: Mobile IT Help Assistant

With over a century of experience, Dow Chemical Company is changing the world through innovation by providing advancements like more drinkable water, more clean and affordable energy, and increasing food production.

Dow employs over 70,000 people worldwide, including some 30,000 of which are contractors. For many of them, information technology (IT) is central to their work. Providing IT support is crucial, but to do so for so many people in so many locations is a challenge.

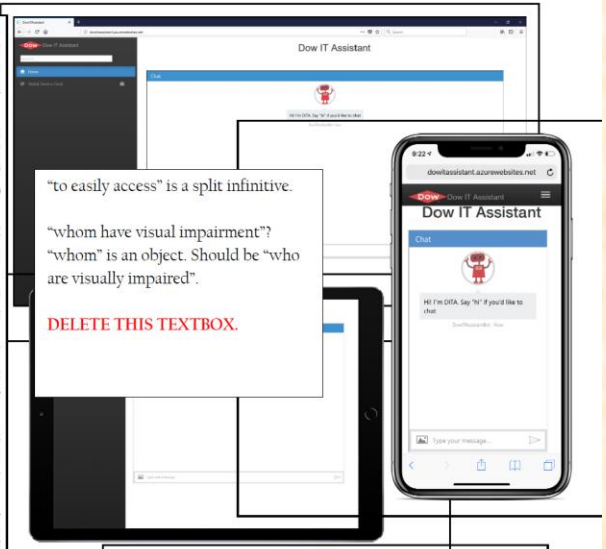
Our Assist IT Mobile IT Help Assistant is a chatbot that brings all of Dow's IT knowledge to one place, providing a one-stop shop for resolving IT issues.

Our chatbot leverages natural language processing to engage with a Dow employee in a natural and intuitive way, handling both text and voice input.

When a user describes their IT problem, Assist IT either provides a solution by searching Dow's vast knowledge base of issues and solutions or it asks the user for more information.

Assist IT is a responsive web app so it can be used with any web browser on a desktop or on any mobile device. And, since it's web-based, it provides IT support at any time, from anywhere.

Our Assist IT Mobile IT Help Assistant uses a variety of Microsoft Azure Cloud Services including LUIS, QnA Maker and Voice Services. Our chatbot leverages Dow's extensive IT knowledgebase of issues and solutions. Hosted on Azure, Assist IT is implanted using Microsoft .Net and Node.js.



"to easily access" is a split infinitive.

"whom have visual impairment"? "whom" is an object. Should be "who are visually impaired".

DELETE THIS TEXTBOX.

Michigan State University
Team Members (left to right)

Brandon Brooks
Clinton Township, Michigan

Keaton Coffman
Jackson, Michigan

Cassie Thompson
Kalamazoo, Michigan

Charlie Benson
Lansing, Michigan

Dow
Project Sponsors

Kyle Alexander
Midland, Michigan

Marc Habermann
Midland, Michigan

Fareed Mohammed
Midland, Michigan

Matt Olmsted
Midland, Michigan

4
Template From Team To Dr. D.

Team's 2nd Draft

Changes Highlighted in Yellow

Dow Chemical Company
IT Assistant

With over a century of experience, Dow Chemical Company is changing the world through innovation by providing advancements like more drinkable water, more clean and affordable energy, and increasing food production.

Dow employs over 70,000 people worldwide, including some 30,000 of which are contractors. For many of them, information technology (IT) is central to their work. Providing IT support is crucial, but to do so for so many people in so many locations is a challenge.

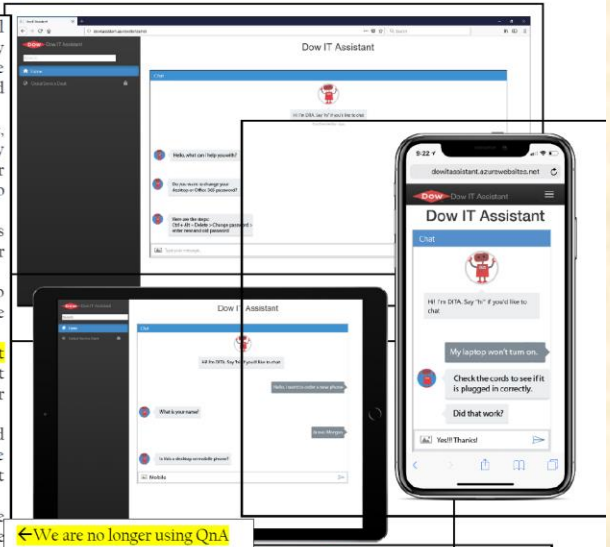
Our IT Assistant is a chatbot that brings all of Dow's IT knowledge to one place, providing a one-stop shop for resolving IT issues.

Our chatbot leverages natural language processing to engage with a Dow employee in a natural and intuitive way, handling both text and voice input.

When a user describes their IT problem, IT Assistant either provides a solution by searching Dow's vast knowledge base of issues and solutions or it asks the user for more information.

IT Assistant is a responsive web app so it can be used with any web browser on a desktop or on any mobile device. And, since it's web-based, it provides IT support at any time, from anywhere.

Our IT Assistant uses a variety of Microsoft Azure Cloud Services including LUIS, ~~QnA Maker~~ and Voice Services. Our chatbot leverages Dow's extensive IT knowledge base of issues and solutions. Hosted on Azure, IT Assistant is implemented using Microsoft .Net and Node.js.



←We are no longer using QnA

Michigan State University
Team Members (left to right)

Brandon Brooks
Clinton Township, Michigan

Keaton Coffman
Jackson, Michigan

Cassie Thompson
Kalamazoo, Michigan

Charlie Benson
Lansing, Michigan

Dow
Project Sponsors

Kyle Alexander
Midland, Michigan

Marc Habermann
Midland, Michigan

Fareed Mohammed
Midland, Michigan

Matt Olmsted
Midland, Michigan

5
Final Draft
From Dr. D.
To Designer

Dow Chemical Company
IT Assistant

With over a century of experience, Dow Chemical Company is changing the world through innovation by providing advancements like more drinkable water, more clean and affordable energy, and increasing food production.

Dow employs over 70,000 people worldwide, including some 30,000 of which are contractors. For many of them, information technology (IT) is central to their work. Providing IT support is crucial, but to do so for so many people in so many locations is a challenge.

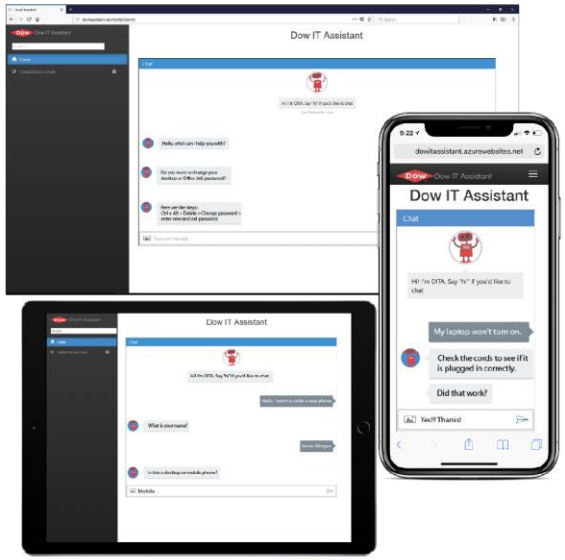
Our IT Assistant is a chatbot that brings all of Dow's IT knowledge to one place, providing a one-stop shop for resolving IT issues.

Our chatbot leverages natural language processing to engage with a Dow employee in a natural and intuitive way, handling both text and voice input.

When a user describes their IT problem, IT Assistant either provides a solution by searching Dow's vast knowledge base of issues and solutions or it asks the user for more information.

IT Assistant is a responsive web app so it can be used with any web browser on a desktop or on any mobile device. And, since it's web-based, it provides IT support at any time, from anywhere.

Our IT Assistant uses a variety of Microsoft Azure Cloud Services including LUIS and Voice Services. Our chatbot leverages Dow's extensive IT knowledge base of issues and solutions. Hosted on Azure, IT Assistant is implemented using React.js and C#.



DOW®

Michigan State University
Team Members (left to right)

Brandon Brooks
Clinton Township, Michigan

Keaton Coffman
Jackson, Michigan

Cassie Thompson
Kalamazoo, Michigan

Charlie Benson
Lansing, Michigan

Dow
Project Sponsors

Kyle Alexander
Midland, Michigan

Marc Habermann
Midland, Michigan

Fareed Mohammed
Midland, Michigan

Matt Olmsted
Midland, Michigan

Design Day Booklet Page

Engineering Building, Room 3405 | Third Floor **8:09 a.m. / CSE 498**

Dow Chemical Company
IT Assistant

With over a century of experience, Dow Chemical Company is changing the world through innovation by providing advancements like more drinkable water, more clean and affordable energy, and increasing food production.

Dow employs over 70,000 people worldwide, including some 30,000 of which are contractors. For many of them, information technology (IT) is central to their work. Providing IT support is crucial, but to do so for so many people in so many locations is a challenge.

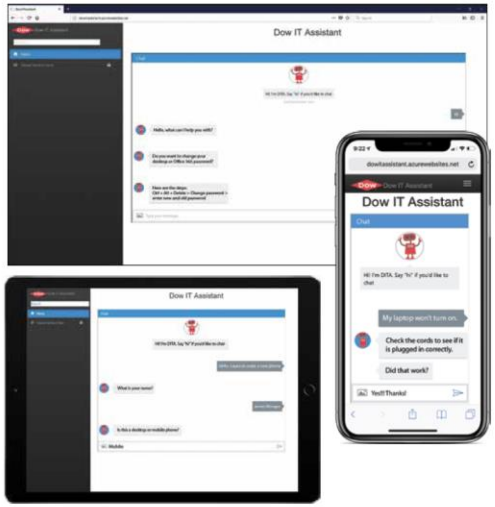
Our IT Assistant is a chatbot that brings all of Dow's IT knowledge to one place, providing a one-stop shop for resolving IT issues.

Our chatbot leverages natural language processing to engage with a Dow employee in a natural and intuitive way, handling both text and voice input.

When a user describes their IT problem, IT Assistant either provides a solution by searching Dow's vast knowledge base of issues and solutions or it asks the user for more information.

IT Assistant is a responsive web app so it can be used with any web browser on a desktop or on any mobile device. And, since it's web-based, it provides IT support at any time, from anywhere.

Our IT Assistant uses a variety of Microsoft Azure Cloud Services including LUIS and Voice Services. Our chatbot leverages Dow's extensive IT knowledge base of issues and solutions. Hosted on Azure, IT Assistant is implemented using React.js and C#.



Michigan State University
Team Members (left to right)

Brandon Brooks
Clinton Township, Michigan

Keaton Coffman
Jackson, Michigan

Cassie Thompson
Kalamazoo, Michigan

Charlie Benson
Lansing, Michigan

Dow
Project Sponsors

Kyle Alexander
Midland, Michigan

Marc Habermann
Midland, Michigan

Fareed Mohammed
Midland, Michigan

Matt Olmsted
Midland, Michigan

PAGE 29

Design Day Writing Schedule

Step	Weekday	Date	Task	Elapsed Days
1	Monday	September 30	Dr. D. sends templates to teams.	
2	Sunday	October 6	Dr. D. receives first draft from teams by 11:59 p.m.	6
3	Monday	October 7	Dr. D. sends first draft by teams to TAs.	1
4	Monday	October 7	Dr. D. reviews artwork and sends artwork feedback to teams.	0
5	Monday	October 7	We review artwork during our all-hands meeting.	0
6	Tuesday	October 8	Dr. D. recieves updated artwork from teams by 11:59 p.m.	1
7	Tuesday	October 8	Dr.D. receive drafts from TAs by 11:59 p.m.	0
8	Wednesday	October 9	Dr.D. sends TAs' drafts to writer at 8:00 a.m.	1
9	Wednesday	October 9	We review drafts during our all-hands meeting.	0
10	Friday	October 11	Dr. D. receives draft from our writer by 8:00 a.m.	2
11	Friday	October 11	Dr. D. sends writer's drafts to TAs.	0
12	Sunday	October 13	Dr. D. receives TAs' drafts by 11:59 p.m.	2
13	Monday	October 14	Dr. D. sends drafts to teams.	1
14	Monday	October 14	We review drafts during our all-hands meeting.	0
15	Tuesday	October 15	Dr. D. recives final drafts from teams by 11:59 p.m.	1
16	Wednesday	October 16	We review final drafts during our all-hands meeting.	1
17	Thursday	October 17	TAs review final drafts.	1
18	Friday	October 18	Dr. D. submits assets to our graphic designer.	1

Submission

- READ Instructions Carefully
- Assets Folder
  - Name: team-urban-science-design-day-booklet-page
  - Contents
    - team-urban-science-design-day-booklet-page.docx
    - team-urban-science-artwork-1.png (Very High Resolution)
    - team-urban-science-artwork-2.png (Very High Resolution)
    - team-urban-science-artwork-3.png (Very High Resolution)
  - Zipped
- Email
  - Subject: Team Urban Science Design Day Booklet Project Page
  - Body
    - Not Blank
    - Something Professional
  - Attachment
    - Zipped Assets Folder
    - team-urban-science-design-day-booklet-page.zip
  - Due 11:59 p.m., Sunday, October 6.