The Capstone Experience

Dr. Wayne Dyksen
Department of Computer Science and Engineering
Michigan State University
Fall 2017
Course Goals

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

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

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

See Major Milestones.
All-Hands Meetings

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

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

Team Amazon

Department of Computer Science and Engineering
Michigan State University
Fall 2017
PLAY ALL OF YOUR MUSIC. JUST ASK.

Prime Music  Spotify  PANDORA  + tunein

echo  $179.99
Faia: Fashion Artificial Intelligence Assistant

• Functionalities
  ▪ Create Innovative Fashion Shopping Experience
  ▪ With Virtual Personal Stylist

• Features
  ▪ Create and Manage Shopper Profile
  ▪ Interact with Faia via Texting
  ▪ Give Personalized Fashion Recommendations
  ▪ Leverage AI to Learn and Adapt to Shopper Preferences
  ▪ Provide “Save for Later” and “Add to Cart”
  ▪ Integrate with Prime Wardrobe

• Technologies
  ▪ Amazon Web Services (AWS)
    o Compute Services
    o Database Services
    o Machine Learning
  ▪ Amazon Lex
  ▪ Amazon Product Advertising API
  ▪ Amazon Simple Notification Services (SNS)
  ▪ Twilio APIs
Team Amazon
Zizhen Wang, Nikhil Ramu, David He, Dominic Zottolo, Danielle Schugars
Team Amazon

Project Plan Presentation

Screen Mockup
Team Amazon Project Plan Presentation
Team Amazon
Project Plan Presentation

Architecture Diagram

The Capstone Experience
Hi I'm Faia, your own personal fashion assistant! I can help you find clothes that match or compliment styles that you already like.

Here something you might like.

What do you think of this item? 😊 or 😞

It's ugly

Oh... Ok, thanks for the feedback. I'll make a better suggestion next time!

Let me know if there's anything else I can do for you or anything in particular you're looking for.

Would you like something like this?

Yea thanks

Great! Here's where you would find it and items like it - Adidas Hat
Team Amazon Alpha Presentation
Team Amazon
Alpha Presentation
Web Form: Questionnaire (Women)
Team Amazon
Alpha Presentation

Web Form: Questionnaire (Men)
Team Amazon
Alpha Presentation

Texting Interaction

Mon, 10/09/2017

Hello Faia
4:27 PM

I would like to buy shoes.
4:27 PM

Is this what you're looking for?
4:27 PM MMS

What type of outfit do you want?

How much are you willing to spend?

Is this $50 shoes what you're looking for?

Casual

Expensive
The Capstone Experience

Team Auto- Owners

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Auto-Owners

INSURANCE

LIFE • HOME • CAR • BUSINESS
Team Auto-Owners
Project Overview

House of Hazards

• Functionalities
  ▪ Teach Homeowners About Home Safety
  ▪ With a Virtual Reality Game
  ▪ Using an Oculus Rift

• Features
  ▪ Design and Build Time-Based Virtual Reality Game
  ▪ Build Virtual Model of Single-Family Home
  ▪ Display Various Scenarios Inside and Outside
    o Hazardous
    o Safe
    o Innocuous
  ▪ Support Various Levels of Difficulty
  ▪ Provide Limited Hints
  ▪ Use Randomization for Varied Experiences
  ▪ Show Review Panel At Game End

• Technologies
  ▪ Unity Game Engine
  ▪ Oculus Rift
  ▪ Oculus Rift Touch Controllers
  ▪ Oculus Rift Sensor
Team Auto-Owners
Fred Lee, Matt Drazin, Kenneth Stewart, Kevin Nickolai, Brian Wong
Team Auto-Owners
Project Plan Presentation
Team Auto-Owners
Project Plan Presentation

Architecture Diagram

Oculus Rift Headset

Senses Motions

Renders Game

Oculus Rift Touch Controller

Transfer data

Oculus Sensors

Senses Motions/Controller input

Oculus Rift

Unity

Project Plan Presentation

Architecture Diagram
Team Auto-Owners
Project Plan Presentation

Score: 200
Time Remaining: 1:23
Hints: 3
Team Auto-Owners
Alpha Presentation

Scene View
Team Auto-Owners
Alpha Presentation

Gameplay

Score: 200
Time: 1:38
Hints: 2
Selection Mode: Hazard
Team Auto-Owners
Alpha Presentation

Gameplay

Score: 200
Time: 1:38
Hints: 2
Selection Mode: Hazard

The Capstone Experience
The Capstone Experience

Team Avata

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Advance Your Tomorrow with Data-Driven AI

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

Security Analytics Suite: Configuration Setup Tool

• Functionalities
  ▪ Transform and Ingest Various Data Formats
  ▪ Into Ava for Public Safety Solution
  ▪ To Reduce Customer Acquisition Cost and Time

• Features
  ▪ Design and Build Interactive User Interface
  ▪ Provide Way to Map User’s Taxonomy to Avata’s Taxonomy
  ▪ Use ReactJS for Mapping User Interface
    o Draw on Map
    o Capture Date and Time Ranges
    o Create Hierarchical Ontologies
  ▪ Support JSON, SQL and MySQL Configurations

• Technologies
  ▪ React JS
  ▪ Java 8
  ▪ Spring Boot framework
  ▪ Hibernate Framework
  ▪ JSON, SQL and MySQL
  ▪ ArcGIS Mapping Tools
  ▪ RESTful Web Services
Team Avata
Zack Lumley, Ashley Gagnon, Chantz Johnson, Meenu Sundararaju, Sean Edwards
Team Avata
Project Plan Presentation

Screen Mockup
Team Avata
Project Plan Presentation
Team Avata
Project Plan Presentation

Architecture Diagram
Team Avata
Project Plan Presentation
Team Avata
Project Plan Presentation

Screen Mockup

Client Configuration Tool

Client Geography Setup

Avata Intelligence

Sub-Beat
1. Campus 1
   1. Beat A
      1. Sub-beat A1
      2. Sub-beat A2
2. Beat B

Upload KML + Add Sub-Beat
2. Campus 2
   1. Beat C
   2. Beat D

Upload KML + Add Sub-Beat

MySQL MySQL

Export

http://website.com/clientGeography
Team Avata
Alpha Presentation
Team Avata
Alpha Presentation

Information Setup: Roles & Modules
Team Avata
Alpha Presentation

Information Setup: Shifts
What’s left to do?

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

Team Avata
Alpha Presentation
Team Avata
Alpha Presentation

Geography Setup
The Capstone Experience

Team Ford

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Team Ford
Project Overview

Ford Smart Parking

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

Screen Mockup

Project Plan Presentation

Team Ford

Project Plan Presentation

Screen Mockup

Team Ford

Project Plan Presentation

Screen Mockup

Team Ford

Project Plan Presentation

Screen Mockup
Screen Mockup: Google Tango Parking Spot Scanning
Team Ford
Project Plan Presentation
Team Ford Project Plan Presentation

Team Ford Project Plan Presentation

Screen Mockup
Team Ford
Alpha Presentation
Team Ford
Alpha Presentation

Main Menu
Team Ford
Alpha Presentation

Identify Spot

What is the status of the spot?
- Occupied
- Available

What is the size of the parking spot?
- Regular
- Compact

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

Feet: 
Inches: 

SUBMIT
See VB Module UTL_PresentationSlidesSend2FB.
The Capstone Experience

Team GM

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Unlocking the future.

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

READ MORE
Team GM
Project Overview

Automated Video Workplace Safety System

• Functionalities
  ▪ Alert Employees of Safety Issues and Situations
  ▪ Using Computer Analysis of Real-Time Camera Feeds

• Features
  ▪ Design and Build Web and Mobile Apps
  ▪ Utilize Camera to Watch Area of Concern
  ▪ Leverage Image Recognition and Machine Learning (ML)
  ▪ Identify People and Personal Protective Equipment (PPE)
    o Helmet
    o Eye Protection
    o Hearing Protection
    o Vest
  ▪ Determine Safety Alerts
    o Send to Mobile App
    o Record in Centralized Database
  ▪ Produce Summary Reports for Management

• Technologies
  ▪ CSS / HTML / JavaScript / PHP
  ▪ Google Android Tablets and Phones / Java
  ▪ nVidia Deep Learning SDK
  ▪ nVidia DGX-1 Deep Learning Hardware
  ▪ Image Recognition
  ▪ Machine Learning (ML)
  ▪ Mobile Push Notifications
Team GM
Michael Peng, Marc Bellemare, Steve Levesque, Ike Uchendu, Damien Hong
### Recent Notifications

<table>
<thead>
<tr>
<th>Camera</th>
<th>Area</th>
<th>Time</th>
<th>Date</th>
<th>Manager</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>D</td>
<td>10:41AM</td>
<td>9/25/17</td>
<td>Bob Smith</td>
<td>Eye Protection</td>
</tr>
<tr>
<td>8</td>
<td>A</td>
<td>12:11PM</td>
<td>9/25/17</td>
<td>Bob Smith</td>
<td>Headwear</td>
</tr>
<tr>
<td>5</td>
<td>C</td>
<td>1:23PM</td>
<td>9/25/17</td>
<td>Bob Smith</td>
<td>Gloves</td>
</tr>
<tr>
<td>14</td>
<td>E</td>
<td>3:35PM</td>
<td>9/25/17</td>
<td>Jay Jones</td>
<td>Headwear</td>
</tr>
<tr>
<td>7</td>
<td>B</td>
<td>4:03PM</td>
<td>9/25/17</td>
<td>Jay Jones</td>
<td>Eye Protection</td>
</tr>
<tr>
<td>1</td>
<td>F</td>
<td>5:57PM</td>
<td>9/25/17</td>
<td>Jay Jones</td>
<td>Gloves</td>
</tr>
</tbody>
</table>
Team GM
Project Plan Presentation
Team GM
Project Plan Presentation

Architecture Diagram

- NVIDIA DIGITS
- AWS
- NVIDIA JETSON

Project Plan Presentation
Architecture Diagram
Team GM
Project Plan Presentation
Hello, we have detected a PPE violation from camera 8 at 3:42PM on 9/20/17. To view more information, login to your manager account at gm.com/safetyportal/
Team GM
Alpha Presentation
# Team GM

Alpha Presentation

Web Portal

---

**General Motors**

<table>
<thead>
<tr>
<th>Camera</th>
<th>Area</th>
<th>Time</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>D</td>
<td>10:41 AM</td>
<td>9/25/2017</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
<td>10:41 AM</td>
<td>9/25/2017</td>
</tr>
</tbody>
</table>

© 2017 General Motors
Team GM
Alpha Presentation

Texting View
The Capstone Experience

Team Humana

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Humana
Now is the time to enroll in a 2017 Medicare plan

Shop now
Team Humana
Project Overview

MyHumanaBot
• Functionalities
  ▪ Provide Instant Information to Customers
  ▪ About Plans, Claims, Etc.
  ▪ Via a Chatbot
• Features
  ▪ Build and Design Two Web Apps
    o MyHumanaBot App
    o Humana Administrative App
  ▪ Supports
    o Customer or Non-Customer
    o Logged In or Not Logged In
  ▪ Handles Variety of Scenarios
    o Information About Plans
    o Claims Status
    o Humana Pharmacy Status
    o Finding a Doctor
    o Etc.
  ▪ Incorporate Context
  ▪ Maintain Conversation History
  ▪ Account for Security
• Technologies
  ▪ Microsoft C# / .NET
  ▪ SQL / MySQL / Mongo Database
  ▪ RESTful Web Services
Team Humana
Tony Dionise, Madeline Levinson, Jason Thompson, Sharon Shi, Tynan Ford
Team Humana
Project Plan Presentation

Screen Mockup
Team Humana
Project Plan Presentation
Team Humana
Project Plan Presentation

Architecture Diagram
### MyHumanaBot Chat Log

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>User ID</th>
<th>Conversation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep. 19, 2017</td>
<td>guest</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 19, 2017</td>
<td>hpotter7</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 19, 2017</td>
<td>guest</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 19, 2017</td>
<td>tford01</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 19, 2017</td>
<td>guest</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 18, 2017</td>
<td>sharonsh1</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 18, 2017</td>
<td>adlisonse</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 18, 2017</td>
<td>guest</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 18, 2017</td>
<td>thom1078</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 17, 2017</td>
<td>mlevinson</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 17, 2017</td>
<td>guest</td>
<td>download</td>
</tr>
<tr>
<td>Sep. 17, 2017</td>
<td>johnsmith1</td>
<td>download</td>
</tr>
</tbody>
</table>
Team Humana
Alpha Presentation
Hi, I am MyHumanaBot! Is there anything I can help you with today?

I'd like help understanding Medicare plans that Humana offers.

Sure. I can help understand Humana Medicare Plans. Which of the following are you looking to understand?

- Medicare Advantage Plans
- Prescription Drug Plans
- Medicare Supplement Plans
- Medicare Basics

What type of plan are you interested in?

- Human Gold Plus HMO

Ask me a question
Team Humana
Alpha Presentation
# The Capstone Experience

## Team Humana

### Alpha Presentation

![Admin Portal](humana施設管理画面.png)

**Admin Portal**

<table>
<thead>
<tr>
<th>Conversations</th>
<th>View Conversation Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pnavarro</strong></td>
<td>10/15/2017 5:58:16 PM</td>
</tr>
<tr>
<td><strong>tina</strong></td>
<td>10/15/2017 6:28:43 PM</td>
</tr>
<tr>
<td><strong>User</strong></td>
<td>10/15/2017 2:32:17 PM</td>
</tr>
<tr>
<td><strong>User</strong></td>
<td>10/15/2017 2:37:02 PM</td>
</tr>
<tr>
<td><strong>User</strong></td>
<td>10/15/2017 2:40:59 PM</td>
</tr>
<tr>
<td><strong>User</strong></td>
<td>10/15/2017 2:43:24 PM</td>
</tr>
<tr>
<td><strong>User</strong></td>
<td>10/15/2017 2:54:09 PM</td>
</tr>
<tr>
<td><strong>User</strong></td>
<td>10/15/2017 2:54:58 PM</td>
</tr>
<tr>
<td><strong>Pat</strong></td>
<td>10/15/2017 8:39:47 PM</td>
</tr>
<tr>
<td><strong>Pat</strong></td>
<td>10/15/2017 8:43:45 PM</td>
</tr>
<tr>
<td><strong>Pat</strong></td>
<td>10/16/2017 1:53:33 AM</td>
</tr>
<tr>
<td><strong>Pat</strong></td>
<td>10/16/2017 1:53:59 AM</td>
</tr>
<tr>
<td><strong>Guest</strong></td>
<td>10/16/2017 2:00:23 AM</td>
</tr>
</tbody>
</table>

© 2017 - Humana Capstone Project
The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Fall 2017
meijer
Rewards

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

Meijer Fresh-ipes

• Functionalities
  ▪ Streamline and Simplify Shopping
  ▪ By Providing Meal and Menu Planning
  ▪ Intelligently and Interactively

• Features
  ▪ Track Customer Shopping History
  ▪ Determine Likely Existing Household Ingredients
  ▪ Recommend Range of Recipes
    o Ingredient Availability
    o Food Preferences
  ▪ Create Shopping List for Missing Ingredients
  ▪ Integrate with mPerks

• Technologies
  ▪ Amazon Echo Show
  ▪ Microsoft .NET Framework, C#, ASP.NET
  ▪ Microsoft Azure Mobile Services
  ▪ Microsoft Visual Studio Team Server
  ▪ Xamarin
  ▪ Meijer Web Services
  ▪ Application Insights
  ▪ Hockey App
  ▪ SQL Server

Grand Rapids, Michigan
Team Meijer
Charles Heil, Dan Radler, Olive Miller, Justin Pearson, James Murray
Team Meijer
Project Plan Presentation

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

1. Chicken Pot Pie
75% ingredients in pantry

2. Hot Dogs
20% ingredients in pantry

3. Apple Pie
10%

Try "Alexa, show me more."
Team Meijer
Project Plan Presentation
Team Meijer
Project Plan Presentation

Architecture Diagram
Team Meijer
Project Plan Presentation

<table>
<thead>
<tr>
<th>M</th>
<th>My List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>=</td>
</tr>
<tr>
<td>Milk</td>
<td>=</td>
</tr>
<tr>
<td>Eggs</td>
<td>=</td>
</tr>
<tr>
<td>New Item</td>
<td>+</td>
</tr>
</tbody>
</table>

Recommended
- Kiwi
- Butternut Squash
- Star Fruit

<table>
<thead>
<tr>
<th>M</th>
<th>My Pantry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk (Vitamin D)</td>
<td>+</td>
</tr>
<tr>
<td>Beef</td>
<td>+</td>
</tr>
</tbody>
</table>

Screen Mockup
- My Pantry
- Recipes
- My Favorites
- My List
- My Account
Team Meijer
Alpha Presentation
Team Meijer
Alpha Presentation

Android Shopping List

- Butter
- Milk
- Eggs
- New Item
- Kiwi
- Buttermilk Squash
- Star Fruit
Team Meijer
Alpha Presentation

iOS Shopping List
Team Meijer
Alpha Presentation
Team Meijer
Alpha Presentation

Amazon Show Planned Meals

Planned Meals:
1. Chicken Pot Pie
2. Miso Soup
3. ...

The Capstone Experience
The Capstone Experience

Team Michigan State University

Department of Computer Science and Engineering
Michigan State University
Fall 2017
SEA: Spartan Experience App

- **Functionalities**
  - Enhance Student Experience
  - By Providing Information to Students
  - With Easy-to-Use Mobile App

- **Features**
  - Support Android and iPhone Natively
  - Utilize Amazon Web Services (AWS)
  - Any and All Of...
    - Provide Directions to Parking and Buildings
    - Show Cafeteria Menus
    - Display Campus Activities and Events
    - Show Emergency Phone Numbers
    - Provide News Feed and Twitter Feed
    - Create and Manage a Student Planner
    - Handle Course Search and Schedule Planner
    - Implement a Degree Navigator
  - Incorporate Existing CATA Bus Tracker

- **Technologies**
  - Apple iPads and iPhones (iOS) / Swift
  - Google Android Tablets and Phones / Java
  - RSS News Feeds
Team Michigan State University
Scott Swarthout, Ryan Johnson, Nayana Kodur, Patrick Pale, Roy Perryman
Team Michigan State University
Project Plan Presentation

Screen Mockup
Screen Mockups: Social & Campus Tabs

Social Tab:
- MSU Twitter Feed

Campus Tab:
- Buildings
- Parking lots
- Dining halls
- Sparty's
Team Michigan State University
Project Plan Presentation

Architecture Diagram

External Data Feeds
- Maps/Places API
- Web Scraping
- JSON
- iCal File

Back End
- PostgreSQL
  - Buildings
  - Parking Lots
  - Schedules
  - Classes
  - Cafeteria Menus

Front End
- MSU News
- Events
- Python
- Amazon AWS
- REST API
Team Michigan State University
Project Plan Presentation

Screen Mockup
Team Michigan State University
Alpha Presentation

Home View: Nearby Information
Team Michigan State University
Alpha Presentation

Navigation Menu
The Capstone Experience

Team Microsoft

Department of Computer Science and Engineering
Michigan State University
Fall 2017
The new Surface family
To do great things, you need powerful devices.

LEARN MORE ›  SHOP NOW ›
Enhanced Company Portal with Graph

• Functionalities
  § Enhance Android Company App
  § By Leveraging Microsoft Graph API
  § Making Customers More Productive

• Features
  § Use Only Microsoft Graph
    o For All Data
    o To Add Functionality Beyond Device Management
  § Provide Social Interaction
    o Organize Team Documents
    o Create Team Channels
    o Track Recently Used Files
  § Increase Usefulness Beyond Existing Portal
  § Refresh User Interface

• Technologies
  § Microsoft Intune
  § Microsoft Graph
  § Microsoft Windows / C#
  § Google Android Tablets and Phones / Java
  § Apple iPads and iPhones (iOS) / Swift
  § RESTful Web Services
Team Microsoft
Jordan Green, Jason Yin, Matt Pasco, Mike Xiao, Mo Wang
Team Microsoft
Project Plan Presentation

Screen Mockup
Team Microsoft Project Plan Presentation
Team Microsoft
Project Plan Presentation

Architecture Diagram

Microsoft Graph API

Microsoft Azure

Microsoft Teams

Authenticated Action

COMPANY PORTAL
Team Microsoft
Alpha Presentation
Team Microsoft
Alpha Presentation

Company Portal

Work or school, or personal Microsoft account

Email or phone
Password

Sign In  Cancel

Can't access your account?
Other sign in options

© 2017 Microsoft
Terms of use  Privacy & cookies
Across the Great Wall we can reach every corner in the world.

Good words

Enter message

Send
The Capstone Experience

Team Mozilla

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Taking Firefox Screenshots Testing Suite to 11

- Functionalities
  - Improve Firefox Screenshots Testing Suit
  - So Results Are More Readily Available
  - For Firefox Development Community at Large

- Features
  - Move Testing Suite from Tier 2 to Tier 3
  - Support Cropping Rules
  - Reduce Intermittent Failures and Difference Alerts
  - Produce Easily Consumable and Interpretable Test Results
  - Add New Testing States

- Technologies
  - CSS
  - JavaScript
  - Python
  - XUL / XBL
  - Mercurial
  - IRCCloud
  - Bugzilla
  - Review Board
  - Windows
  - OS X
  - Linux
Team Mozilla
Mike Williams, Robin Miller, Chris Cho, Rand Mustafa
Team Mozilla
Project Plan Presentation
Team Mozilla
Project Plan Presentation

Architecture Diagram

Command line

Legacy Firefox Extension

Configurations

Try server

Mochitest

Test Runner

Crop Screenshots

Compare Screenshots Locally
System Architecture

Team Mozilla
Project Plan Presentation
Team Mozilla
Alpha Presentation

Automated Cropping Region

Cropped Region

New to Firefox? Let’s get started.

Pick up where you left off.

Still sending yourself links to save or read on your phone? Do it the easy way: get Sync and have the things you save here show up on all of your devices.
Team Mozilla
Alpha Presentation

Major Difference Detected
Team Mozilla
Alpha Presentation
Subtle Difference Detected

Before Change

After Change

Difference
The Capstone Experience

Team MSUFCU

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Building Dreams Together
Digital Banking with Chatbots

- **Functionalities**
  - Provide Virtual Banking Assistance
  - Using a Chatbot

- **Features**
  - Handles Same Services As Live Chat Service
  - Leverage Natural Language Processing
    - Emulate Human-to-Human Interaction
    - Redirect Complex Requests to Customer Service Reps
  - Support Short Message Service (SMS) and iMessage
  - Integrate with Other MSUFCU Services
    - Website
    - Mobile App
    - Amazon’s Alexa
  - Provide Web-Based Content Management System

- **Technologies**
  - Amazon Echo
  - Alexa Skills Kit
  - CSS / HTML5 / PHP / JavaScript
  - Google Android Tablets and Phones / Java
  - Apple iPads and iPhones (iOS) / Swift or Objective-C
  - MySQL
  - Short Message Service (SMS) and Apple’s iMessage
  - Encryption based on SQL standards
  - Natural Language Processing (NLP)
Team MSUFCU
Chuanyun Xiao, Josh Benner, Gus Fernandes, Cori Tymoszek, Syed Naqvi
"Alexa, what's my account balance?"

"Alexa, what time does MSUFCU open today?"

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

"Alexa, show me my last 5 transactions."
Do not delete this textbox. It's used as a marker in VB code. See VB Module UTL_PresentationSlidesSend2FB.
Hey, what’s my checking account balance?

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

It’s 6781.

Thanks. Your balance is $3,498.63.
Team MSUFCU
Alpha Presentation

• Convenient
• Easy and fast
• 24/7 support

Facebook Messenger
Team MSUFCU
Alpha Presentation
Good day! I am the MSUFCU Chatbot.

Which share would you like to check? You can say Checkings, Savings, or the name of another share.

Your account balance is 35000
The Capstone Experience

Team Phoenix Group

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Team Phoenix Group
Project Overview

OPEN v2.0: Smart Order Picking

- Functionalities
  - Enhance Warehouse Order Picking Process
  - Using Bluetooth Low-Energy Devices

- Features
  - Create Windows Tablet-Based Pick Ticket
  - Display Geolocation-Based Warehouse Map
  - Provide Bin Locations and Route Planning
  - Support Real-Time Shelf Counts
  - Handle Bar Codes

- Technologies
  - Microsoft Windows Presentation Foundation (WPF)
  - Microsoft .NET Framework
  - Microsoft C#
  - Microsoft Visual Studio 2015
  - Bluetooth Low Energy Devices
  - MySQL Server
  - Bar Code Scanning Technologies
Team Phoenix Group
Charlie Deneau, Evan Brazen, Bryce Corey, Austin Rix, Austin Littley
Team Phoenix Group

Project Plan Presentation

Screen Mockup
Team Phoenix Group
Project Plan Presentation
Team Phoenix Group
Project Plan Presentation

Screen Mockup
Team Phoenix Group
Alpha Presentation
Team Phoenix Group
Alpha Presentation

Map Order Fulfillment
Team Phoenix Group
Alpha Presentation
Team Phoenix Group

Alpha Presentation

Inventory Map
The Capstone Experience

Team Rook

Department of Computer Science and Engineering
Michigan State University
Fall 2017
WAR ROOM™
THE ONE-CLICK FORCE MULTIPLIER

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

Download on the App Store
Team Rook
Project Overview

Cloud Security Event Processing and Alerting Platform

• Functionalities
  ▪ Analyze Cyber Security Events
  ▪ Using a Serverless Architecture
  ▪ That Scales to Millions of Events Per Day

• Features
  ▪ Design and Build a Web App
  ▪ Support Management of Correlation Rules
    o Edit Exiting Rules
    o Examine Performance of New Rules
  ▪ Detect and Notify When Alerts or Rules Triggered
  ▪ Accommodate Increasing Scale Using Amazon Cloud
  ▪ Integrate with Rook’s Force Platform

• Technologies
  ▪ Amazon Athena
  ▪ Amazon Simple Email Services (SES)
  ▪ Amazon Lambda
  ▪ Amazon S3
  ▪ Elasticsearch
  ▪ Ubuntu 16.04
  ▪ Python / Django
  ▪ CSS / HTML / JavaScript / JSON
  ▪ RESTful Web Services
Team Rook
Jake Fenton, Brian Jones, Alex Fall, Kaushik Sridasyam, Bradley Baker
Team Rook
Project Plan Presentation

Screen Mockup

Update Rule

Rule name: 

Architecture: Palo Alto

Occurrences until alert: 12px

Rule specification json

Submit  Cancel
Team Rook
Project Plan Presentation
Team Rook
Project Plan Presentation
Architecture Diagram

Backend
- django
  - children
    - Email alerts
    - Master
      - Rule Bucket
    - ElasticSearch
      - The Internet
        - Filtering
  - archive
    - Existing

Frontend
- Stretch Goal

The Capstone Experience
Team Rook
Project Plan Presentation
Screen Mockup

Client Profile

Current Rules For Client

- Malicious Event: bobbyD@gmail.com, 20:00 DEC 2016
- Bad Smelling Packet: support@rook.com, 14:30 Nov 2007
- Too many Requests: stan@theman.com, 22:30 Apr 2022

Client Contacts
Team Rook
Alpha Presentation
Team Rook
Alpha Presentation

User Interface – Client Profile View

![User Interface - Client Profile View](image-url)
Team Rook
Alpha Presentation

User Interface – Rule View
Do not delete this textbox. It's used as a marker in VB code. See VB Module UTL_PresentationSlidesSend2FB.
The Capstone Experience

Team Spectrum Health

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Team Spectrum Health
Project Overview

Spectrum Health Symptom Checker

• Functionalities
  ▪ Recommend Spectrum Health Services to Patients
  ▪ Based on Symptoms They Provide

• Features
  ▪ Design and Build Web and Mobile Apps
  ▪ Match Keywords with Symptoms
  ▪ Recommend Health Service
    o eVisit
    o Urgent Care
    o Emergency Room
  ▪ Enable Urgent Care Visit
    o Give Nearest Location
    o Reserve Place in Line
  ▪ Leverage Machine Learning
  ▪ Provide Administrative App

• Technologies
  ▪ CSS / HTML / JavaScript / PHP
  ▪ Apple iPads and iPhones (iOS) / Swift
  ▪ Google Android Tablets and Phones / Java
  ▪ Microsoft C# / .NET
  ▪ Entity Framework Core
  ▪ Microsoft SQL Server
Team Spectrum Health
Silas Brumwell, Jose Hernandez, Morgan Muyskens, Josh Miles, Chris McGrath
Team Spectrum Health
Project Plan Presentation

Screen Mockup

Flu (Influenza)
Influenza, commonly known as "the flu", is an infectious disease caused by an influenza virus. Symptoms can be mild to severe. The most common symptoms include a high fever, runny nose, sore throat, muscle pains, headache, coughing, and feeling tired. These symptoms typically begin two days after exposure to the virus and most last less than a week. The cough, however, may last for more than two weeks.

E-visit
E-visits let you video chat now with a Spectrum Health doctor

Schedule an Appointment
Want to see a doctor in person? Tap here to schedule an appointment

MedNow
Fill out a simple questionnaire and a doctor will respond in less than 24 hours
Team Spectrum Health
Project Plan Presentation
Team Spectrum Health
Project Plan Presentation

Architecture Diagram

[Diagram showing integration of .NET Core, Azure, SQL Server, and API AI with mobile applications and an admin portal.]
Team Spectrum Health
Project Plan Presentation

Screen Mockup

Enter what symptoms you’re experiencing:

I have a cough and a runny nose

Based on your symptoms, we suggest:

Visiting a nearby Spectrum Health Urgent Care facility.

Nearby Locations

Hold my place in line

Based on your symptoms, we suggest:

Visiting a nearby Spectrum Health Urgent Care facility.

Nearby Locations

SHMG Urgent Care - Alpine. 5 min - .9 miles.

SHMG Urgent Care - Beltline Avenue. 14 min - 9.0 miles.

SHMG Orthopedic Urgent Care - Lake Drive. 13 min - 9.3 miles.
# Team Spectrum Health

## Alpha Presentation

![Image of Diagnosis Routing Admin interface](image)

### Conditions

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

© 2017 - DiagnosisRouting.Admin
Team Spectrum Health
Alpha Presentation

iPhone App
Team Spectrum Health
Alpha Presentation
Team Spectrum Health

Alpha Presentation

Android Application
The Capstone Experience

Team Symantec

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Symantec gives you deep visibility and a single point of control for accessing data through a comprehensive solution that provides advanced information protection.

**Passwordless Authentication**
For network, online, or mobile apps

**Extend Passwordless Authentication**
To all cloud-based apps

Eliminate the Password
Improve ease of use without sacrificing security

Request a Call
Secure Application Layer API Proxy

• Functionalities
  ▪ Provide RESTful API to Symantec’s Multi-Factor System VIP
  ▪ Via a Proxy Layer in Front of Native SOAP Layer
  ▪ So Any RESTful Framework Can Integrate with VIP

• Features
  ▪ Focus on User Centric Services
    o Management APIs
    o Authentication APIs
    o Query APIs
  ▪ Preserve Parity Between SOAP and REST APIs
  ▪ Implement a Versioning Scheme
  ▪ Include “Jurisdiction Hash” (JHASH) as Path Parameter
  ▪ Deliver Integration Tests

• Technologies
  ▪ Symantec VIP and VIP Access Manager.
  ▪ Simple Object Access Protocol (SOAP) Web Services
  ▪ Representational State Transfer (REST) Web Services
  ▪ StrongLoop / Node.js
Team Symantec
Steven Kneiser, Yili Luo, Jacob Carl, Lauren Allswede, TJ Kelly
Team Symantec
Project Plan Presentation
Team Symantec
Project Plan Presentation

Architecture Diagram

Client → Proxy

REST API Request ➔ Proxy Certificate ➔ REST API Response

SOAP API Request ➔ Proxy Certificate ➔ SOAP API Response

VIP

REST (Proxy) ➔ VIP

SOAP (VIP) ➔ Proxy

SOAP API Response ➔ Client

REST API Response ➔ Client
Team Symantec
Project Plan Presentation

Screen Mockup

![Diagram showing SOAP and REST responses]

- Returning SOAP Response
- Returning REST Response
Team Symantec
Alpha Presentation
Team Symantec
Alpha Presentation

Entering One-Time Password (OTP)

Security Code Verification

Please enter Security Code from your VIP credential.

Security Code: 645943

Don’t have VIP two-factor authentication? Download the app.
Translation Process

Security Code Verification

Please enter Security Code from your VIP credential.

Don’t have VIP two-factor authentication? Download the app.

Converting to SOAP...
Team Symantec
Alpha Presentation
Team Symantec
Alpha Presentation

Final JSON Body

```
1. {
2.   "credentialIdField": "SYMZ86142563",
3.   "credentialTypeField": 0,
4.   "credentialTypeFieldSpecified": true,
5.   "transactionIdField": null,
6.   "pushDetailField": null,
7.   "authContextField": null,
8.   "requestIdField": "1234567890",
9.   "statusField": "AAA",
10.  "statusMessageField": "Success",
11.  "detailField": null,
12.  "detailMessageField": null
13. }
```
The Capstone Experience

Team TechSmith

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Camtasia takes you from screen recording to finished video

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

TechSmith Director

• Functionalities
  ▪ Explore Creating Video Scenes
  ▪ With a User Friendly Voice Input Interface
  ▪ Using Newer Cloud-Bases APIs

• Features
  ▪ Design and Build a Web App
  ▪ Support Natural Language Voice Input
    □ “I’d like a beach background for my video.”
    □ “Let’s place a man on the beach.”
    □ “I’d like the man to walk along the beach.”
  ▪ Leverage Microsoft Azure Cloud Computing
    □ Store User and Project Information
    □ Process Utterances (Voice Input)
    □ Implement Speech to Text
    □ Apply Natural Language Processing
  ▪ Send Projects to Other Users for Feedback

• Technologies
  ▪ Microsoft Azure Cloud Computing
  ▪ Bing Image Search
  ▪ SoundCloud API (For Music)
  ▪ CSS / HTML / JavaScript
  ▪ ASP.Net MVC or Node.js
  ▪ Natural Language Processing (NLP)
  ▪ SQL Database

TechSmith
Okemos, Michigan
Team TechSmith
Jared Ballance, Joe Freedman, Kevin Ahn, Jake Heisey, Pranay Kandru
Team TechSmith
Project Plan Presentation

Architecture Diagram

Bing Image Search API
Microsoft Cognitive Services API
Soundcloud API

TechSmith Director Web Application

SQL Server

ASP.NET

Microsoft Azure
Team TechSmith
Project Plan Presentation

Screen Mockup
Team TechSmith
Alpha Presentation

Login Page
Projects Page

Create Project

- Graduation
- Man on a Beach
- Football
- Solar Eclipse
Team TechSmith
Alpha Presentation
The Capstone Experience

Team TWO MEN AND A TRUCK

Department of Computer Science and Engineering
Michigan State University
Fall 2017
TWO MEN AND A TRUCK®

“Movers Who Care®”
We've changed our colors to honor those who have served our country this Veterans Day.

We're the professionals you can trust.
Online Moving Estimator

• Functionalities
  ▪ Provide In-Home Moving Estimate
  ▪ Online Using Web App

• Features
  ▪ Design and Build Web App
  ▪ Provide Chat and Video Conference
  ▪ Determine Room Inventory
    ▪ From Video
    ▪ Automatically
  ▪ Estimate Moving Cost
    ▪ Compute Load / Weight / Space on Truck
    ▪ Use TMaaT Existing Algorithm
  ▪ Integrate with Existing Quick Estimate Module

• Technologies
  ▪ CSS / HTML / JavaScript / PHP
  ▪ Video Conferencing
  ▪ Image Processing and Pattern Recognition
Team TWO MEN AND A TRUCK
Leon Ye, Clay Wilson, Daria Tarasova, James Williams, Kevin Dittman
Team TWO MEN AND A TRUCK
Project Plan Presentation

Screen Mockup
Screen Mockup: Phone Interface

Plumbing
Chairs
Keywords
Musical

Total: $80

Team TWO MEN AND A TRUCK
Project Plan Presentation
Team TWO MEN AND A TRUCK
Project Plan Presentation

Architecture Diagram
Team TWO MEN AND A TRUCK
Project Plan Presentation
Team TWO MEN AND A TRUCK
Project Plan Presentation

Screen Mockup

- Monitors: 3
- Chairs: 3
- Keyboards: 2
- Mouses: 2

Total: $80

Retry
Web Video Chat

Team TWO MEN AND A TRUCK
Alpha Presentation
Team TWO MEN AND A TRUCK
Alpha Presentation

Android Mobile App
Team TWO MEN AND A TRUCK
Alpha Presentation
Your Items:

- LivingRoom
  - chair x7
- Office
  - tvmonitor x2
- Patio
  - chair x5
The Capstone Experience

Team Union Pacific

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Union Pacific bridges are safe for the freight traffic they carry, as well as motorists and pedestrians. Our safety focus starts with more than 38,000 inspections annually to ensure the structural integrity for each bridge. For our employees, these inspections are more than just a job. Learn more about UP’s detailed inspection process.
Team Union Pacific
Project Overview

RailBuilder: The Great Race to Promontory

• Functionalities
  ▪ Create Railroad Building Game
  ▪ In 3D Representation of the World

• Features
  ▪ Support Creation of Game Levels
    o Deploy as Microsoft Windows App
    o Include Topology and Land Classification
    o Place Scenery in Realistic Fashion
    o Use Terrain Grade and Elevation
  ▪ Create Railroad Building Game
    o Between Two Locations in 3D
    o Using Limited Budget
    o Factoring Topology and Land Classification
    o Removing Scenery Where Rail is Laid

• Technologies
  ▪ Unity Game Engine
  ▪ Microsoft Windows
  ▪ Microsoft C# / .NET
  ▪ Apple iPads and iPhones (iOS) / Swift
  ▪ Google Android Tablets and Phones / Java
  ▪ ArcGIS Mapping Tools
Team Union Pacific
Trever Daniels, Declan McClintock, Jacob Young, Kyle Bush, Zachary Brenz
Team Union Pacific
Project Plan Presentation

Building Worlds On Rails
Team Union Pacific
Project Plan Presentation
Team Union Pacific
Project Plan Presentation

Screen Mockup
Team Union Pacific
Alpha Presentation

Map Creator
Team Union Pacific
Alpha Presentation

Map Editor

Map Editor

Cleveland
Detroit
East Lansing
New Map
Team Union Pacific
Alpha Presentation
Team Union Pacific
Alpha Presentation

Map Viewer
The Capstone Experience

Team Urban Science

Department of Computer Science and Engineering
Michigan State University
Fall 2017
Automotive News interviewed Jim Anderson to better understand both sales effectiveness ratings and Urban Science.

LEARN MORE

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

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

VDA: Virtual Dealership Advisor

• Functionalities
  ▪ Answer User Free-Form Speech Input Question
  ▪ By Correlating Question with Key Performance Indicators (KPIs)

• Features
  ▪ Design and Build Mobile App
  ▪ Visualize Selected KPIs
  ▪ Show Actions Associated with Each KPI
  ▪ Evaluate All Possible KPIs and Actions
  ▪ Determine Best Answer to Question

• Technologies
  ▪ Apple iPads and iPhones (iOS) / Swift
  ▪ Google Android Tablets and Phones / Java
  ▪ Microsoft .NET Core 1.0
  ▪ Microsoft Cognitive Services
    o Speech
    o Language
    o Knowledge
    o Search
Team Urban Science
Will Renius, James Grenfell, Daniel Oforidankwa, Eric Zhou, Harry Singh
Team Urban Science
Project Plan Presentation

Screen Mockup

- Login
- Home
- Confirm

Welcome to the Urban Science dealership improvement analyzer!

You asked me...

How can I improve my mid-size sedan sales in the Detroit area?

Is this correct?
Team Urban Science
Project Plan Presentation
Team Urban Science
Project Plan Presentation

Architecture Diagram

- Xamarin Framework
- ASP.NET MVC
- AWS Servers
- ASP.NET Web API
- Controller
- Virtual Dealership Adviser API
- Read Requests
- HTTP Request/Response
- GET/POST
- Microsoft Cognitive Services
  - Text Analytics API
  - Bing Speech API
Team Urban Science
Project Plan Presentation

Screen Mockup

KPI Results

Select a potential area for improvement:

- Sedan Sales: 30%
- Other KPI: 60%
- Other KPI: 80%

Recommended Actions

Your full-size truck sales in the Detroit area are 30% above expected!

We recommend increasing inventory.

- Ignore
- Take Action

You may also want to try...

Other KPI: 60%

Start over
Here is what we've found for: "how do i improve my car sales"

Car Dealer Sales

252
kpi percentile 59.2%
You are performing above average in this measurement. However, you can always find ways to improve. Click the button below to view actions you can take to improve your Dealer Sales

View Actions

Look below to see your most needed areas of improvement

Honda Truck Dealer Effectiveness

83
kpi percentile 4.0%
You are performing far below average on this measurement. Click the button below to view actions you can take to

Honda Total Insell

687
kpi percentile 4.1%
You are performing far below average on this measurement. Click the button below to view actions you can take to

Honda Car Dealer Effectiveness

428
kpi percentile 5.1%
You are performing far below average on this measurement. Click the button below to view actions you can take to
Team Urban Science
Alpha Presentation

KPI Page (iOS)
Here are your Action Items.

Your Dealer Score has a value of 1:00. Use Premium MDR to take a look at your sales effectiveness to determine the level of additional opportunity.

Your Dealer Score has a value of 1:00. Use Premium MDR to take a look at your sales effectiveness to determine the level of additional opportunity.

Your Dealer Score has a value of 1:00. Use Premium MDR to take a look at your sales effectiveness to determine the level of additional opportunity.

Your Dealer Score has a value of 1:00. Use Premium MDR to take a look at your sales effectiveness to determine the level of additional opportunity.
Team Urban Science
Alpha Presentation

Action Page (Android)
The Capstone Experience

Team Yello

Department of Computer Science and Engineering
Michigan State University
Fall 2017
yello
Campus Recruiting

Complete solution for robust campus recruiting teams

REQUEST A DEMO

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

• Functionalities
  ▪ Verify Resume Information
  ▪ Automatically and Instantly

• Features
  ▪ Design and Build Two Web Apps
    o For Universities and Workplaces to Upload Credentials
    o For Candidates to Upload Resumes
  ▪ Ensure Security and Privacy
    o Proof of Source
    o Proof of Existence / Timestamp
    o Proof of Work / Education / Military Service
  ▪ Store and Access Credentials Using a Blockchain
  ▪ Notify Candidates When Credentials Uploaded
  ▪ Verify Resume Information Upon Uploading
  ▪ Inform Recruiters re Resume Accuracy

• Technologies
  ▪ Ruby on Rails
  ▪ Blockchain
  ▪ Transactional APIs
Team Yello
Wan Kim, Nathaniel Hagan, Giorgio Maroki, Brandon Burt, Ryan Nagy
Team Yello
Project Plan Presentation

University Credential Upload

Welcome, university/workplace!
Please Upload Credentials

Add Field
First Name: John
Last Name: Doe
e.g. GPA: e.g. 3.65

Upload

Screen Mockup
Team Yello
Project Plan Presentation
Team Yello
Project Plan Presentation

Architecture Diagram

Users → Web Application → Institutions

Web Application → Database

Users → Master Node

Master Node → Blockchain

Blockchain → Database

Amazon Web Services

Institutions
Team Yello
Project Plan Presentation
Team Yello
Project Plan Presentation

Screen Mockup

Job Postings

http://application.yello.co/postings

Dearborn, MI  Apply
Chicago, IL  Apply
Seattle, WA  Apply
New York, NY  Apply
East Lansing, MI  Apply
Detroit, MI  Apply
Team Yello
Alpha Presentation
Candidate Settings
Resume Upload
The Capstone Experience

Dr. Wayne Dyksen
Department of Computer Science and Engineering
Michigan State University
Fall 2017
The Capstone Experience Lab
The Capstone Experience Lab
The Capstone Experience Lab
The Capstone Experience Lab
The Capstone Experience Lab
View of Spartan Stadium
The Capstone Experience

Design Day Award Winners

December 9, 2016
All-Hands
Design Day, December 9, 2016
Auto-Owners Exhibition Award
Team Whirlpool, Fall 2016

Mooch
Adam Schoonmaker, Noah Hines, Daniel Jiang, Laura Robb, Caleb Swanson
Presented by Scott Lake and Ross Hacker of Auto-Owners Insurance
MSU Federal Credit Union Praxis Award
Team Rook, Fall 2016
Anomaly Detection Suite v2.0
Zach Rosenthal, Grant Levene, Brian Harazim, Cam Gibson, Andrew Werner
Presented by Samantha Amburgey of MSU Federal Credit Union
TechSmith Screencast Award
Team Ford, Fall 2016
SYNC Calendar
Avery Yue, Brett Durlock, Jack Zaidel, Eric Pressey, Cam Rooks
Presented by Wendy Hamilton and Dean Craven of TechSmith
Urban Science Sigma Award
Team Amazon, Fall 2016
Asa: Your Amazon Shopping Assistant
Sam Chung, Yiming Li, Aaron Beckett, Renee Dennis, Evan Moran
Presented by Linda Koepppe and Elizabeth Klee of Urban Science
The Capstone Experience

Design Day Award Winners

April 28, 2017
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 Koepppe and Luke Mercier of Urban Science
The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2017
ROOK SECURITY
SPECTRUM HEALTH
TWO MEN AND A TRUCK®

“Movers Who Care®”
yello