Google Form Attendance Check

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Only An Example

MICHIGAN STATE UNIVERSITY

01/11,13: Capstone Overview

The Capstone Experience

Dr. Wayne Dyksen
James Mariani
Luke Sperling
Brenden Hein

Department of Computer Science and Engineering
Michigan State University

Spring 2022

From Students…
…to Professionals

CSE498, Collaborative Design

- "The Capstone Experience"
- Instructors
  - Dr. Wayne Dyksen ("Dr. D.")
  - James Mariani
- Teaching Assistants
  - Luke Sperling
  - Brenden Hein
- Class Meetings (aka All-Hands Meetings)
  - Tuesdays, Thursdays 10:20 – 11:40 a.m. Eastern Time
  - All-Hands: Microsoft Teams General Channel
  - Split-Hands: Brenden's Microsoft Teams Channel and Luke's Microsoft Teams Channel
- Website
  - capstone.cse.msu.edu
  - Check it often.
- Syllabus
  - www.capstone.cse.msu.edu/other-links/syllabus
  - Read it thoroughly and carefully.
- Email
  - Check your email often.
  - Read your email immediately, thoroughly and carefully.

Professional Meeting Expectations

- Starts at 10:20 a.m. ET (Eastern Time) Promptly
  - Joined the Microsoft Teams Meeting
  - Ready to Go
  - Microphone Muted
  - Video On
  - Looking Professional
- No…
  - Other Electronic Devices
  - Hats or Hoods
  - Coats
  - Eating
  - Sleeping
  - “Breaks”
- Questions? (How to…)

COVID Considerations [1 of 3]

- MSU On-Campus Requirements
  - Fully Vaccinated Including Booster
  - Indoors Wear Mask Covering Nose and Mouth
- Capstone Lab In-Person Use Requirements
  - Completed Vaccination Two Weeks Prior
  - Wear Mask Covering Nose and Mouth
  - Providing false information including about vaccination status will be considered a violation of MSU Integrity of Scholarship policy. See the syllabus for details.

COVID Considerations [2 of 3]

- Protect your health.
  - Get vaccinated and boosted.
  - Ensure social distancing.
  - Wash your hands frequently.
  - Carry and use hand sanitizer.
  - Avoid “social gatherings.”
    - Any and All
    - Even 25 or Less People and Even Outdoors
- Protect your teammates’ health.
  - Sanitize your team’s Capstone lab areas and devices before and after use.
  - Do NOT work with your teammates in person if you have ANY symptoms of ANY sickness.

COVID Considerations [3 of 3]

- It is not possible to receive a grade of “incomplete” in CSE498, Collaborative Design.
- Missing a significant amount of time during the semester for whatever reason will most likely result in the need to retake the course.

Capstone Overview

- Course Logistics

- Client Projects

- Course Logistics (Continued Next Meeting)

Meeting Attendance

- Significant Impact on Final Grade
- Microsoft Teams Attendees List
  - Who
  - When Joined /Left
- Google Form “Are you there?”
  - Random Times and At End
  - 1 Minute To Respond
  - No Response?
    - Left Meeting
    - Absent

Google Form Attendance Check

↑↑↑↑↑↑↑↑↑

Only An Example

Course Goals

[1 of 3]

- Give You Experience In
  - Real World
  - Corporate Setting
- Start Your Transition
  - From Student…
  - …To Professional
- Start Your Transition
  - From… “Make one of these.” –CSE Professor
  - …To “Solve my problem.” –Customer/Client

Course Goals

[2 of 3]

- Teams of Students
- Build Significant Software System
  - Design
  - Develop
  - Debug
  - Document
  - Deliver
- For Project Sponsor / Client
  (Note: We'll use "project sponsor" and "client" interchangeably.)
- In 15 (Short) Weeks

Course Goals

[3 of 3]

- Build a significant software system.
- Work in a team environment.
- Learn to work in a remote environment.
- Learn new tools and environments.
- Build and administer systems.
- Develop communication skills.
- Develop interview talking points.
- Learn to do stuff on your own.
- Etc…

Project Deliverables

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

See Major Milestones.

All-Hands Meetings

Presentations By

- Dr. D.
- James Mariani
- Teams
  - Status Reports
  - Formal Presentations (30% of Final Grade)
    - Project Plan
    - Alpha
    - Beta
  - Project Videos
- Guest Speaker(s)

All-Hands Meetings Agendas

- 01/11: Capstone Overview 1
- 01/13: Capstone Overview 2
- 01/18: Risks and Prototypes
- 01/20: Team Status Report Presentations
- 01/25: Project Plan
- 01/27: Schedule and Teamwork
- 02/01: Team Project Plan Presentations
- 02/03: Team Project Plan Presentations
- 02/08: Team Project Plan Presentations
- 02/10: Team Status Report Presentations
- 02/15: Design Day Booklet Process
- 02/17: Resume Writing and Interviewing
- 02/22: Creating and Giving Presentations
- 02/24: Team Alpha Presentations
- 03/01: Team Alpha Presentations
- 03/03: Team Alpha Presentations
- 03/08: (Spring Break, No Meeting)
- 03/10: (Spring Break, No Meeting)
- 03/15: Intellectual Property
- 03/17: Design Day and the Project Videos
- 03/22: Team Status Report Presentations
- 03/24: Ethics and Professionalism
- 03/29: Team Status Report Presentations
- 03/31: Team Status Report Presentations
- 04/05: Team Beta Presentations
- 04/07: Team Beta Presentations
- 04/12: Team Beta Presentations
- 04/14: Team Status Report Presentations
- 04/19: Team Status Report Presentations
- 04/21: Team Status Report Presentations
- 04/25: Project Videos Due
- 04/26: Project Videos
- 04/27: All Deliverables Due
- 04/28: Project Videos
- 04/28: Design Day Setup
- 04/29: Design Day
- 05/06: Capstone Wrap-Up
  7:45 a.m — 9:45 a.m. ET

The Capstone Labs

[1 of 2]

- ~~3322EB~~, 3340EB, 3352EB, 3358EB
- Door Lock
  - Electronic Keypad
  - Code = #########
  - Do Not Give Out to Other Students
- Systems
  - Up to Three per Team
    - Two 27” iMacs
    - One Dell Rack-Mounted Server (Optional)
  - Team 100% Responsible
    - Building
    - Maintaining
    - Securing
    - Backing Up
- WiFi
  - SSID: CSE498, CSE498 5MHz
  - Key: ???????

- ~~Conference Room (3322EB)~~
  - ~~Team Meetings~~
  - ~~Client Conference Calls~~
  - ~~Google Conference Calendar~~
- ~~Appliances~~
  - ~~Water Cooler/Heater~~
    ~~Nota Bene: The water cooler is not connected to a drain. Do not pour things into it, like rinsing out your water container.~~
  - ~~Whirlpool Refrigerator~~
    - ~~Cold Water From Bottled Water~~
    - ~~Ice From Bottled Water~~
  - ~~Microwave~~
  - ~~Keurig Coffee Maker~~
- Lockable Storage
  - One Drawer Per Team
  - As Needed
  - Assigned by Instructors
  - Obtain Keys from CSE Office

The Capstone Labs

[2 of 2]

- ~~3322EB~~, 3340EB, 3352EB, 3358EB
- Remote Access
  Instructions will be emailed.
- ~~In-Person Access~~
  - ~~Fully Vaccinated With Booster Two Weeks Prior~~
  - ~~Mask Covering Nose and Mouth~~
  - ~~Sanitizing Wipes~~
    - ~~Keyboard and Mouse~~
    - ~~Desktop~~
    - ~~Before and After Use~~
  - ~~Hand Sanitizer~~

In-Person Access Not Available

- **Until In-Person Classes**
- **Unless Needed by Project**

Scheduled Lab Times

- No Formal Lab Sessions
- “Credit” for Scheduled Weekly Meetings
  - Team Meetings
  - Client Conference Calls
  - Triage Meetings with Instructors
- Meeting Times TBA With
  - Team
  - Client
  - Instructors
- Students must be available to meet.
  - Team Meetings
  - Triage Meetings
  - Client Conference Calls

CSE498 Prerequisites

- Must Have Successfully Completed In Advance
  - CSE325 or CSE410
  - CSE335
  - At Least Two CSE Technical 400-Level Courses Chosen From CSE402, CSE404, CSE410, CSE415, CSE420, CSE422, CSE425, CSE431, CSE434, CSE435, CSE440, CSE450, CSE460, CSE471, CSE472, CSE476, CSE477, CSE480, and CSE482
  - WRA (Tier I Writing Requirement)
- Ability to Read Email
  - Immediately
  - Carefully
  - Completely

Integrity of Scholarship

- MSU's policies will be enforced.
- Individual and teamwork must be original.
- Providing false information to the professor, instructors or team members about matters related to the course will be considered academic dishonesty.
- Violators…
  - …will be referred to the appropriate deans.
  - …will receive a grade of F (0.0) in the course.

Capstone Overview

✓Course Logistics

➢Client Projects

- Course Logistics (Continued)

Team / Project Generalities [1 of 3]

- Clients
  - Vary in Size and Type
  - Client/mentor contacts are “volunteers.”
- Team Contact Person
  - Picked By Team
  - Main Point of Contact for Client

Team / Project Generalities [2 of 3]

- Project Types
  - All Significant Software Development
  - Vary in Specifics
- Project Level of Difficulty
  - Hard Enough
  - But Not too Hard
- Deliverable
  - To the Client
  - By the Due Date

Team / Project Generalities [3 of 3]

- Challenges
  - Very Short, Unforgiving Timeline
  - Client Contact
  - Team Dynamics
  - Project Plan (in ~3 Weeks)
  - Entirely New…
    - Languages
    - Environments
    - API's
    - SDK's
    - Processes
    - Protocols
    - Etc.
  - Project Management
  - Etc…

Project Specifics

- Vary
  - Type
  - Current State of Specificity
- Challenge
  - Connect with Client
  - “Nail Down” the Project
    - Hard Enough
    - Not too Hard
    - Avoid Feature Creep
  - Course Feature, Not Bug

Intellectual Property and Non-Disclosure Agreements

- Intellectual Property Agreement
  - You agree to assign ownership of intellectual property that may be created as a result of your project to your client.
    - Copyrightable Program Code
    - Patentable “Ideas”
  - Most clients will require an IP agreement.
- Non-Disclosure Agreement
  - You agree not to disclose client confidential information.
  - Most clients will require an NDA.
- To date…
  - Most code has not gone directly into production.
  - No patents have resulted.
- Use agreements provided by MSU.
- Always Contact Dr. D. or James Before Signing Anything

Project Teams

1. Ally
2. Amazon
3. Anthropocene Institute
4. Auto-Owners
5. Caxy Interactive
6. CSAA Insurance Innovation
7. Delta Dental Knowledge Science 1
8. Delta Dental Knowledge Science 2
9. Evolutio
10. GM
11. Kellogg's
12. Kohl's
13. Lockheed Martin Space
14. Malleable Minds
15. MaxCogito
16. Meijer
17. Michigan State University CSE
18. Michigan State University Linguistics
19. Mozilla
20. MSUFCU
21. Rocket Companies
22. Scout
23. TechSmith
24. Union Pacific
25. United Airlines Airport Operations
26. United Airlines Quality Assurance
27. United Airlines Training
28. Urban Science
29. Vectorform
30. Whirlpool

Team Ally

Project Overview

Ally P2P Lending Platform

- Functionalities
  - Facilitate Loans between Strangers
  - Without the Need for a Bank
  - In Near Real Time
- Features
  - Automatically Assign Risk Score to Each Request
  - Register Customers on Blockchain
  - Track Payment Schedules
- Technologies
  - React / Angular
  - Ethereum Private Blockchain Network

ally

Detroit, Michigan
Charlotte, North Carolina

Team Amazon

Project Overview

Amazon Shop Smart: Web Extension for Shopping

- Functionalities
  - Help Prime Members Maximize Benefits
  - And Track Product Information
  - With Browser-based Extension
- Features
  - Design Web Extension Built on AWS
  - Autonomously Track Product Prices
  - Notify Users of Ideal Time to Buy
  - Provide Product Recommendations
- Technologies
  - AWS Cloud Platform
  - JavaScript
  - Amazon QuickSight or Equivalent

amazon

Seattle, Washington
Detroit, Michigan

Team Anthropocene Institute

Project Overview

Wildfire Risks Forecasting Tool

- Functionalities
  - Forecast and Map Future Wildfire Risks
  - Predict Financial and Health Costs of Fires
  - With Robust ML Framework
- Features
  - Synthesis Data from Multiple Sources
  - Develop ML Model to Predict Fire Risks
  - Geographically Map Locations at Risk
- Technologies
  - HTML / CSS / JavaScript
  - Database Technologies
  - Machine Learning

Anthropocene Institute

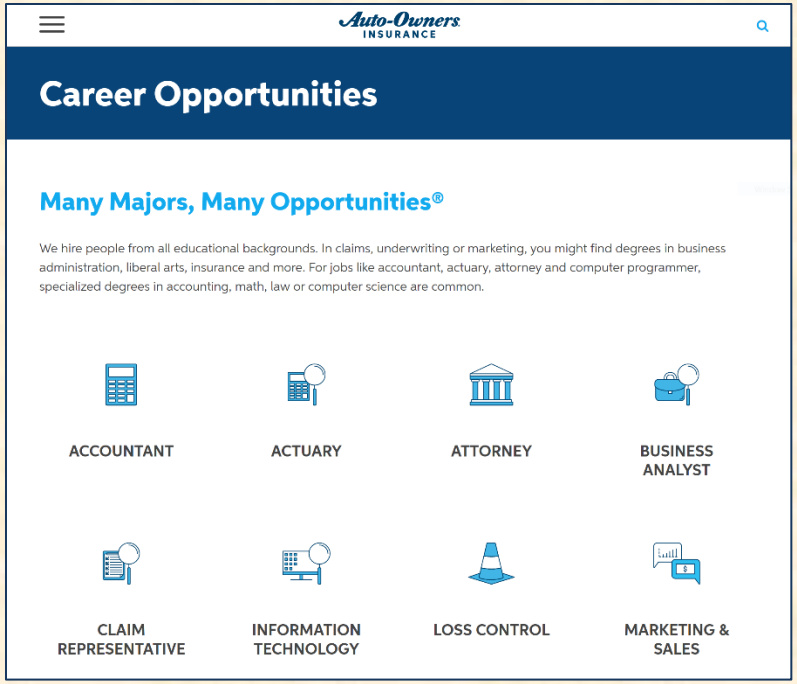
Palo Alto, California

Team Auto-Owners

Project Overview

RecruiTrack

- Functionalities
  - Improve Resource Management
  - For Auto-Owner's Recruiters
  - With Intuitive Web Application
- Features
  - Support the Ability to Insert and Change Data
  - Provide Current Data to Users
    - Specific Entries
    - Summary View
    - Calendar View,
  - Require User Authentication System
  - Display and Summarize Stored Data
- Technologies
  - Microsoft SQL Server
  - Java Spring Boot RESTful API
  - Angular 7+



Auto-Owners INSURANCE

Lansing, Michigan

Team Caxy Interactive

Project Overview

Remote Energy Distribution Payment Platform

- Functionalities
  - Help Manage Energy Dispersion
  - For Near and Off-Grid Households
  - With Online Marketplace
- Features
  - Facilitate the Sale of and Payment for Energy
    - Blockchain
    - Virtual Payment Structure
  - Encrypt All Communication in System
  - Implement Messaging for Customer Communication
- Technologies
  - Cloud Based Messaging Architecture
  - Cloud Based Payment System
  - Digital Currencies / African Preferred
  - Arduino Charging Platform

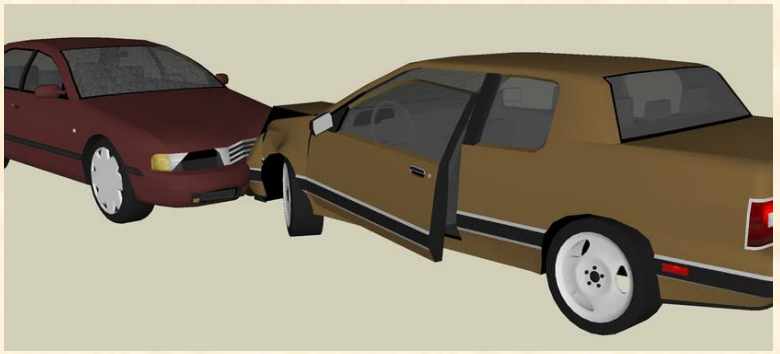
CAXY
Chicago, Illinois

Team CSAA Insurance Innovation

Project Overview

3D Scene Reconstruction of Vehicle Accidents

- Functionalities
  - Help Review Vehicular Accidents
  - Through Collision Simulations
  - For Damage Annotation and Analysis
- Features
  - Autonomously Ingest Images and Depth Maps
  - Generate Interactive 3D Environments
  - Provide the Ability to Annotate Vehicular Damage
- Technologies
  - GPU
  - Oculus Rift / Similar VR Headset



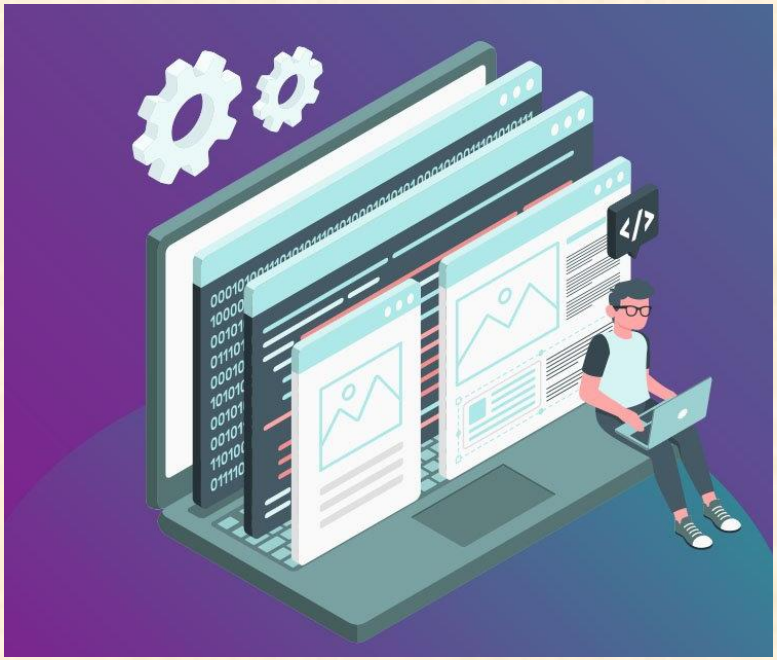
Walnut Creek, California

Team Delta Dental Knowledge Science 1

Project Overview

General RAte Calculation Environment IDE

- Functionalities
  - Aid Developers in Rate Calculations
  - For a Proprietary Programming Language
  - Through Development of an IDE
- Features
  - Include Standard IDE Features such as:
    - Syntax Validation
    - Error Highlighting
    - Intellisense Completions
  - Generalize to Other Languages
- Technologies
  - Angular
  - ANTLR
  - Git



DELTA DENTAL®

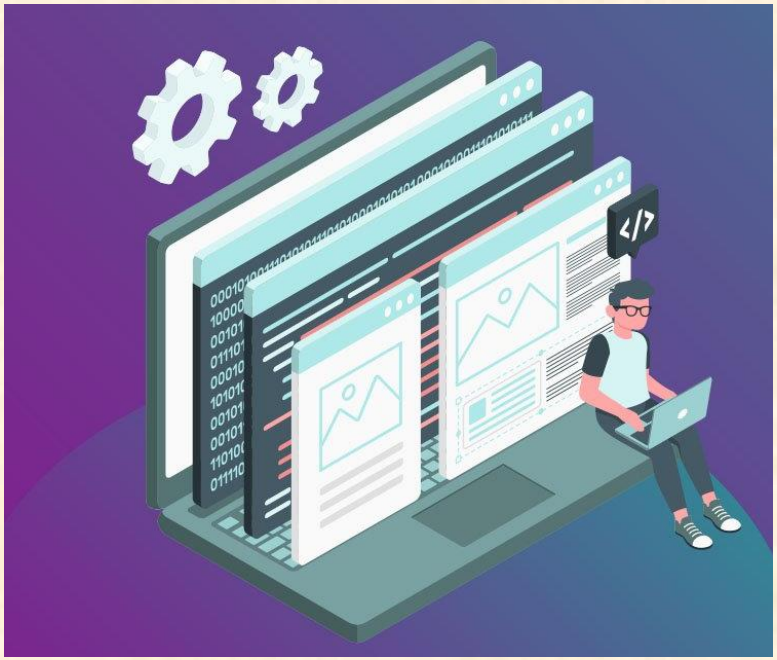
Okemos, Michigan

Team Delta Dental Knowledge Science 2

Project Overview

General RAte Calculation Environment Shell

- Functionalities
  - Aid Developers in Rate Calculations
  - For a Proprietary Programming Language
  - Through Development of Interactive Shell
- Features
  - Support Quick Deployment and Testing
  - Integrate Accessibility for the Non-Technical
- Technologies
  - Java Core
  - ANTLR
  - Git



DELTA DENTAL®

Okemos, Michigan

Team Evolutio

Project Overview

ERP Reserve Preservation Platform

- Functionalities
  - Protect African Rhinos and Elephants
  - By Aiding with Short-Term Alleviation Methods
  - Through an Intuitive Application
- Features
  - Implement Threat Detection
  - Implement an Alert Notification System
  - Provide the Ability to Manage Resources
  - Handle Data From Various Devices
    - Sensors
    - Cameras
  - Use GPS Tracking for Elephants and Rhinos
- Technologies
  - React
  - Python
  - Flask

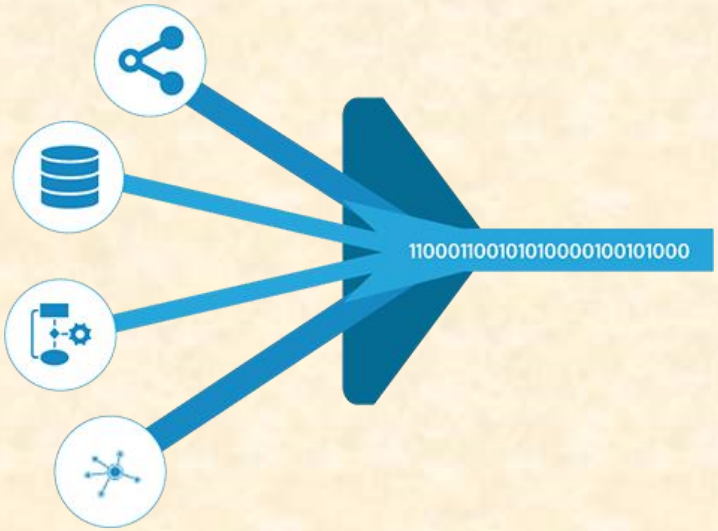
Chicago, Illinois

Team GM

Project Overview

High Frequency Data Ingestion

- Functionalities
  - Ingest Telemetry Data
  - At a Rate of Up to 1 Million Files per Minute
  - In an Efficient Manner
- Features
  - Generate New Log Files for Ingestion
  - Import Ingested Data into Existing Database
  - Visualize Statistics
- Technologies
  - SQL
  - Network File Share
  - Data Generator



Detroit, Michigan

Team Kellogg's

Project Overview

Global Business Services Customer Satisfaction

- Functionalities
  - Improve Kellogg's Customer Survey
  - By Improving UX and Dissemination
  - With Web-based Technologies
- Features
  - Redesign UI and UX of Current Survey
  - Explore and Analyze Dissemination Possibilities
  - Build User Behavior Collection Into Survey
  - Analyze User Behavior on Survey
    - Time Spent on Each Question
    - Questions Not Completed
    - Click Sequence Analysis
- Technologies
  - Tableau Visualization
  - R-Studio / R-Shiny
  - Amazon S3
  - Microsoft Suite of Tools

Battle Creek, Michigan

Team Kohl's

Project Overview

Athenaeum

- Functionalities
  - Create Collaboration Platform for Employees
  - That is Fun and Encourages Idea Sharing
  - With Robust Web Application
- Features
  - Design Platform to Replace Stack Overflow
  - Allow Users to Post Questions
  - Provide Upvoting of Questions & Answers
  - Track Users and Give Rewards
  - Easy Integration with Chat Bots
  - Create Easily-Shared Blogging Space
- Technologies
  - Micro Services
  - Cloud Native Technologies

KOHL'S

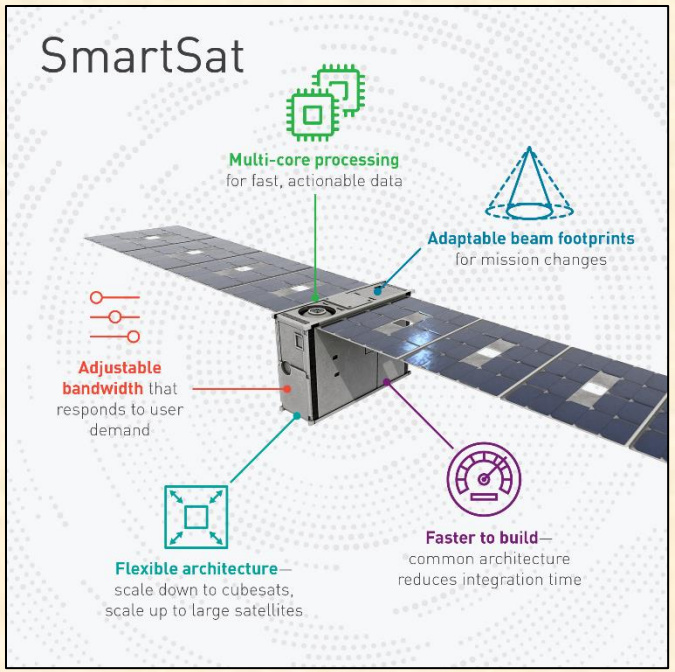
Menomonee Falls, Wisconsin

Team Lockheed Martin Space

Project Overview

SmartSat™ Satellite App Store

- Functionalities
  - Maintain Reliability of Satellite Software
  - On the SmartSat™ App Store
  - By Extending App Store Capabilities
- Features
  - Extend Automatic Testing Capabilities
  - Implement Profiling of Applications and SDKs
  - Properly Tracks and Deploys Dependencies
- Technologies
  - React / Flask Backend / PostgreSQL
  - Python
  - Docker Containerization
  - Jenkins Pipeline Continuous Integration
  - Nexus
  - Conan C++ Package Management
  - Embedded Development Exposure
    - Single Board Computers
    - Emulators
    - Yocto Linux
    - VxWorks



LOCKHEED MARTIN

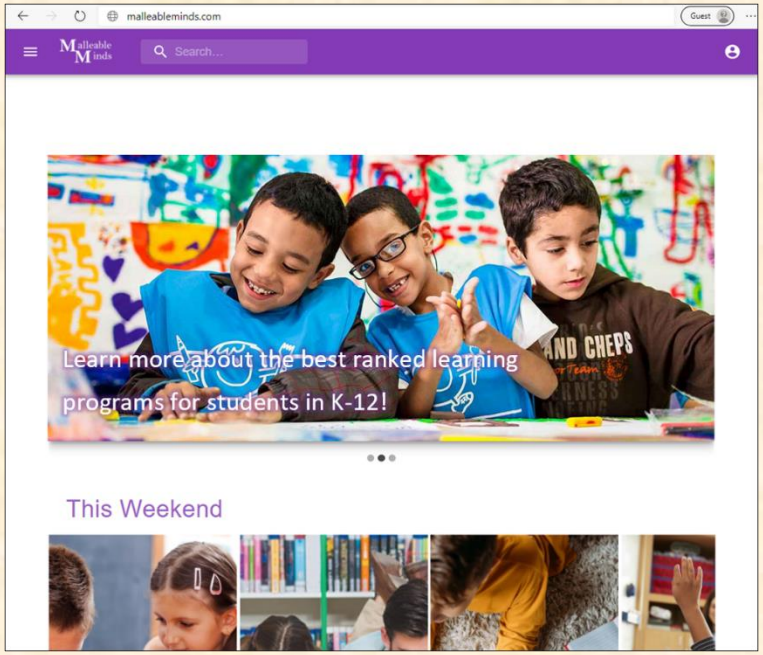
Littleton, Colorado

Team Malleable Minds

Project Overview

Advancing PreK-12 Educational Opportunities

- Functionalities
  - Improve User Experience of Clients
  - By Enhancing Existing Review Aggregator
  - Used by Educational Programs
- Features
  - Improve Site Performance
  - Perform Functionality and Integration Tests
  - Offer Additional Pages on the Site
- Technologies
  - React
  - Python
  - Flask
  - Amazon Web Services (AWS)



Malleable Minds

Frederick, Maryland

Team MaxCogito

Project Overview

Blockchain Based Vaccine Passport System

- Functionalities
  - Record Vaccine Status in a Blockchain
  - To Provide a Reliable and Trusted Source
  - Built on Ethereum
- Features
  - Design Java App to Interact with Ethereum
  - Built a Full Ethereum Wallet
  - Write Smart Contracts
  - Deploy Full REST Spring Boot Application
- Technologies
  - Remix IDE
  - Web3j
  - Truffle Blockchain
  - AWS Server
  - QuickNode.io

MaxCogito
The company with big ideas
Boston, Massachusetts

Team Meijer

Project Overview

Google Form Attendance Check

Meijer Smart Shopper

- Functionalities
  - Streamline and Simplify the Shopping Experience
  - By Integrating Smart Speaker Functionality
  - With the Meijer Website and Mobile App
- Features
  - Offer Shopping List Creation
  - Support Coupon Use While Shopping
  - Alert Users of Favorite Items on Sale
- Technologies
  - Android / Kotlin / Android Studio
  - iOS / Swift / Xcode
  - Microsoft Azure
  - Alexa Voice API

meijer®

Grand Rapids, Michigan

Team Michigan State University CSE

Project Overview

Data-Driven Mechanic: Applications and Infrastructure

- Functionalities
  - Diagnose Automobiles and Other Systems
  - Based on the Sounds they Emit
  - By Sending Data Signals to a Server for Classification
- Features
  - Streamline Data Capture and Transmission
  - Support Hand-Labeling to Improve Underlying Model
  - Visualize Diagnostics in an Easy-to-Interpret Manner
- Technologies
  - Android / Kotlin / Android Studio
  - iOS / Swift / Xcode

East Lansing, Michigan

Team Michigan State University Linguistics

Project Overview

On-Premises Automatic Speech Recognition Pipeline

- Functionalities
  - Automate the Transcription Process of Audio Logs
  - To Replace a Paid Cloud Service
  - To Save Time and Money, and Preserve Privacy
- Features
  - Offer Iterative Retraining
  - Support CPU and GPU Use
  - Develop Automatic Speaker Identification
- Technologies
  - Python
  - Machine Learning
  - Natural Language Processing

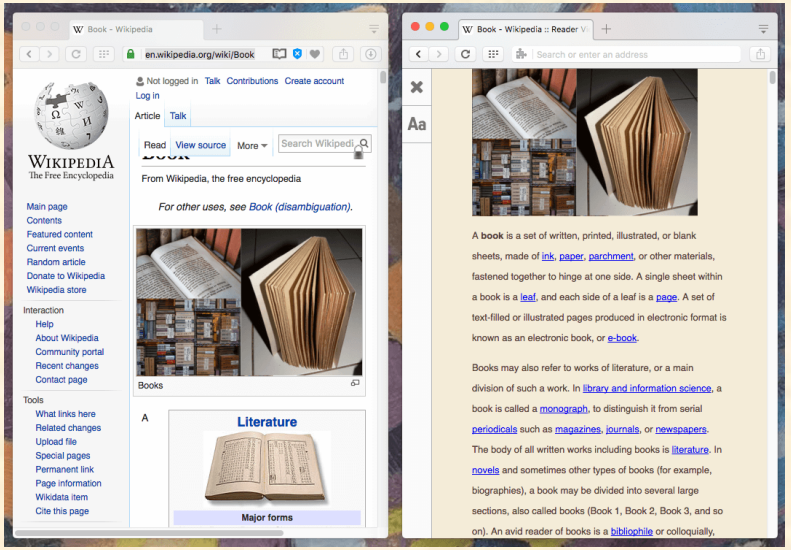
East Lansing, Michigan

Team Mozilla

Project Overview

Improve Firefox's Reader View

- Functionalities
  - Improve Reader Mode on Firefox Browser
  - By Discovering and Resolving Issues
  - With the Current Software
- Features
  - Determine Issues with Top Sites
  - Implement Solutions to Solve Discovered Problems
  - Fix Issues with the about:reader Page
- Technologies
  - CSS / HTML / JavaScript
  - Windows / OSX / Linux
  - Mercurial / Git / Other Version Control Systems



Firefox Browser

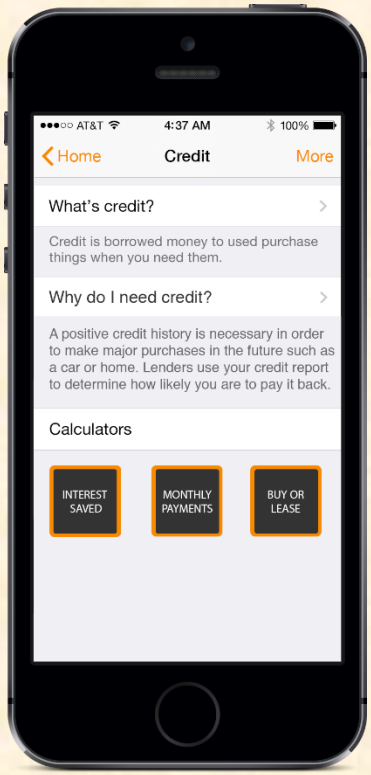
Mountain View, California

Team MSUFCU

Project Overview

Evergreen 3C: Financial Education Content Library

- Functionalities
  - Automatically Classify Financial Articles
  - For Use in an Educational Service
- Features
  - Identify Articles Based on Content
  - Support Labeling by Target Audience and by Topic
  - Support Complex Searches
- Technologies
  - Azure
  - MongoDB Atlas
  - Python
  - Machine Learning
  - Natural Language Processing



msufcu

East Lansing, Michigan

Team Rocket Companies

Project Overview

Team Member Mapping Application

- Functionalities
  - Facilitate In-Person Event Planning
  - To Promote Connectivity
  - With Intuitive Web Application
- Features
  - Provide Location Information of Team Members
  - Provide Distance Information Between Team Members
  - Support Queries to Filter Team Members by Attributes
- Technologies
  - CSS / HTML / JavaScript
  - Microsoft C#
  - ASP.NET
  - Python
  - Go
  - Sift API
  - Google Maps Platform

ROCKET Companies
Detroit, Michigan

Team Scout

Project Overview

Smart Little Hunter of Fakes

- Functionalities
  - Mitigate Risk of Purchasing Knockoff products
  - Purchased Through Online Retail
  - By Recognizing Fake Products
- Features
  - Discover Listings Based on Copyrighted Images / Text
  - Compare Results to Official Copyrighted Images / Text
  - Provide the Ability to Flag Listing as Fake
  - Allow System to Learn from Responses
- Technologies
  - Microsoft C#
  - ASP.NET
  - Microsoft Azure SQL
  - Microsoft Azure Cognitive Services
  - ML.NET Model Builder

scout
Royal Oak, Michigan

Team TechSmith

Project Overview

ViSUI : Video Simplified User Interface

- Functionalities
  - Simplify Software Videos
  - By Blocking Text and Simplifying UI
  - To Make Content More Accessible
- Features
  - Suggest Areas of Simplification
  - Support Blocking, Replacing, Blurring
  - Offer Playback Preview
- Technologies
  - Visual Studio Code
  - React
  - Microsoft C# / .Net

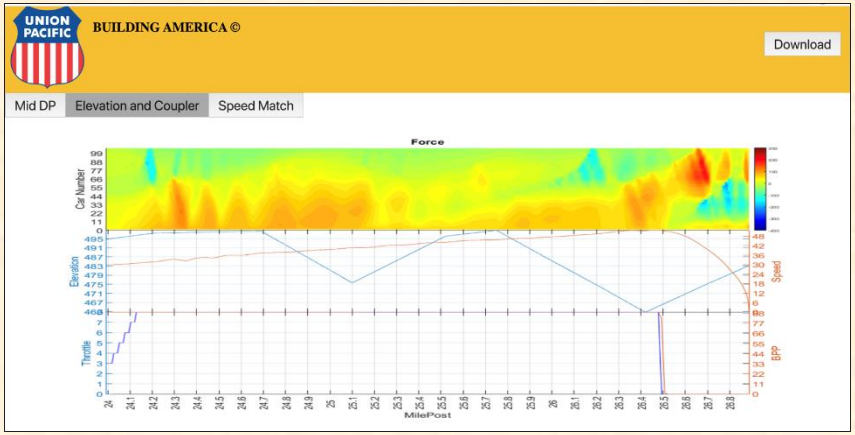
TechSmith®
Okemos, Michigan

Team Union Pacific

Project Overview

Railroad Data Visualization

- Functionalities
  - Improve Analysis of Train Data
  - On the Buff and Draft Between Train Cars
  - With Easy-To-Understand Visualizations
- Features
  - Build a Website for Inputting and Displaying Data
  - Visualize Input Data on Website
  - Implement Saving of Past Data
  - Implement Dashboard for Viewing Historical Data
- Technologies
  - Java
  - SQL
  - Angular
  - Nebular
  - Additional Web UI Libraries



BUILDING AMERICA®
Louisville, Colorado
Omaha, Nebraska

Team United Airlines Airport Operations

Project Overview

Performance Scorecard Automation

- Functionalities
  - Streamline Process of Analyzing Airport Safety
  - Remove Human Error from Process
  - With Autonomous Tool
- Features
  - Create Safety Scorecard that…
    - Synthesizes Data from Many Sources
    - Provides Weighting for Different Values
    - Allows for Bulk Upload of Historical Data
  - Autonomously Produce PPTs and PDFs
- Technologies
  - MS SQL
  - TIBCO Spotfire

UNITED

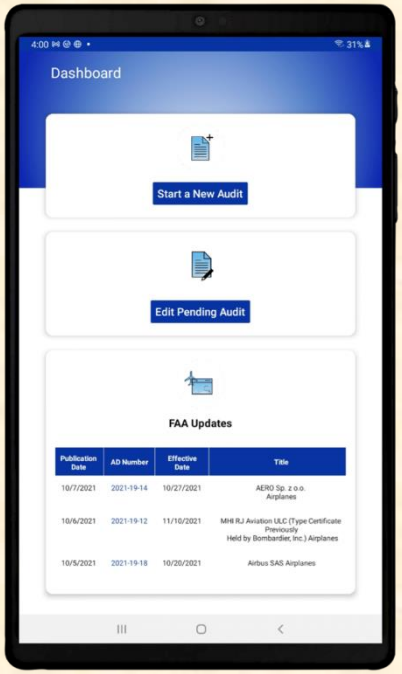
Chicago, Illinois

Team United Airlines Quality Assurance

Project Overview

Audit Management System

- Functionalities
  - Simplify and Optimize the Auditing Process
  - For Quality Assurance Employees
  - Through an iOS Application
- Features
  - Provide the Ability to Create / Delete / Manage Audits
  - Implement Checklists for Audits
  - Provide the Ability to Take Pictures for Objective Evidence
  - Implement Scraping of the FAA Website
  - Integrate Database Functionality
- Technologies
  - SQL Database
  - iOS



UNITED

Chicago, Illinois

Team United Airlines Training

Project Overview

Training Forecast Model

- Functionalities
  - Improve Training Resource Usage
  - By Determining what Training Resources are Needed
  - With a Web Application
- Features
  - Forecasting Training Needs for United Airlines Stations
  - Model Where Support Needs to be Provided
  - Ensure the Results Can be Specific to Individual Stations
- Technologies
  - Microsoft SQL Server
  - ASP.NET

UNITED

Chicago, Illinois

Team Urban Science

Project Overview

Customer Insights Dashboard

- Functionalities
  - Provide Insights into Areas of Opportunity
  - For Automobile Dealers
  - By Leveraging Different Kinds of Customer Data
- Features
  - Visualize Insights on a Dashboard
  - Leverage Multiple Kinds of Data
  - Adhere to Urban Science Style Guide
- Technologies
  - Microsoft C# / .NET
  - Angular
  - HTML / CSS

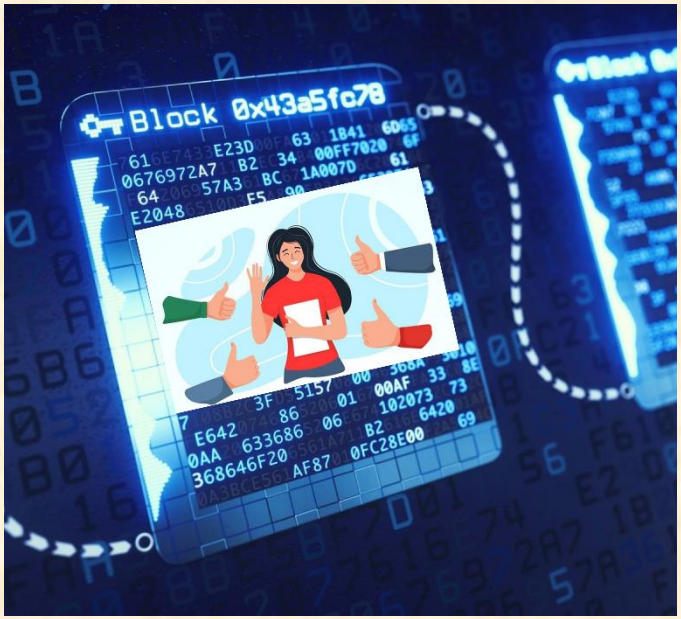
URBAN SCIENCE
Detroit, Michigan

Team Vectorform

Project Overview

Employee Recognition on Blockchain

- Functionalities
  - Recognize Employees for their Achievements
  - By Recording them on a Public Blockchain
  - To Improve Morale and Company Culture
- Features
  - Integrate a Leaderboard to Show Top Employees
  - Show Past History of Kudos for Each Employee
  - Automatically Summarize Kudos into Short Description
- Technologies
  - OpenAI
  - Blockchain
  - SQL



Vectorform
Royal Oak, Michigan

Team Whirlpool

Project Overview

Recipe Progression Tracking

- Functionalities
  - Help Guide Users When Cooking
  - By Providing Feedback and Advice
  - On How the User is Following Instructions
- Features
  - Gather Motion Data from Sensors
  - Determine If the User Completed a Step
  - Provide Suggestions on How to Improve on a Step
  - Store Failed Attempts
  - Provide Future Recommendations and Advice
- Technologies
  - Sensor Data Collection / Preprocessing / Cycle Extraction / Labeling
  - IMU-Based Gait Recognition
  - Decision Making (DCNN)
  - TinyML
  - Embedded / Mobile Application Software Development

Whirlpool

Benton Harbor, Michigan

Team Member Survey

- Open Browser
- Go to www.capstone.cse.msu.edu
- Click on…
  - + Other Links
  - > Downloads
  - Team Member Survey: Google Form

First Assignments

- Read the Syllabus.
- Check out the Website.
- ~~Check out the Lab If So Desired~~ (~~3322EB~~, 3340EB, 3352EB, 3358EB).
  - ~~See if you can find it.~~
  - ~~See if you can get in.~~

What's Next?

- Teams
  - Receive assignments later today. (Keep checking your email.)
  - Meet initially later today or by tomorrow afternoon at the latest using Microsoft Teams private team channel.
  - Start researching technologies.
  - Start configuring lab machines.
    - Team assignments given in emailed project proposals.
    - Instructors will email remote access instructions.
- Project Sponsor / Client Contact
  - Contact by email ASAP and by tomorrow COB (Close of Business).
  - Complete conference call or online meeting by Friday.
  - Review project proposal.

Questions?

Capstone Overview

✓Course Logistics

✓Client Projects

➢Course Logistics (Continued)

Where are we?

- Teams/Projects
  - Assigned
  - Met and Working
- Sponsors/Clients
  - Contacted
  - Met and Scheduled Weekly Meeting
- James, Luke and Brenden
  - Heard From
  - Met and Scheduled Weekly Triage Meeting
- Capstone Lab
  - Successfully Connected Remotely
  - Began Configuring Systems
- Projects
  - Read Project Description
  - Discussed with Client
  - Began Exploring and Configuring Technologies
  - Began Exploring and Configuring Systems

About Us

- Dr. D.
  - Title: Professor
  - Hometown: North Haledon, New Jersey
  - Education: Calvin College (BS), Purdue University (MS, PhD)
  - Experience: Professor @ Calvin, Purdue, Nebraska, MSU
- James Mariani
  - Title: Academic Teaching Specialist
  - Hometown: Sterling Heights, Michigan
  - Education: MSU (BS, MS, PhD Candidate)
  - Experience: Teaching Assistant, Instructor @ MSU
- Luke Sperling
  - Title: Graduate Teaching Assistant
  - Hometown: Birmingham, Michigan
  - Education: MSU (BS, MS, PhD Candidate)
  - Experience: Teaching Assistant @ MSU
- Brenden Hein
  - Title: Graduate Teaching Assistant
  - Hometown: Novi, Michigan
  - Education: MSU (BS, MS Candidate)
  - Experience: Teaching Assistant @ MSU

Capstone Lab Machines

- Depends on Team Needs
  - Two 27” iMacs
  - Dell Rack-Mounted Server (Optional)
    - Connected to Outside World
    - Keep Secure
  - PC (Optional)
- Operating Systems on iMacs
  - Run Latest macOS
  - Install VMware Fusion (from OnTheHub.com)
  - Create Virtual Machines
    - Windows 10 VM from Instructors
    - Allocate Sufficient Cores and Memory
    - Others as Needed
  - Don’t use Apple Boot Camp
- Not Required to Use Capstone Lab Machines

The Capstone Labs

[1 of 3]

- ~~3322EB~~, 3340EB, 3352EB, 3358EB
- Remote Access
  Instructions will be emailed.
- ~~In-Person Access~~
  - ~~Fully Vaccinated With Booster~~
  - ~~Mask Covering Nose and Mouth~~
  - ~~Sanitizing Wipes~~
    - ~~Keyboard and Mouse~~
    - ~~Desktop~~
    - ~~Before and After Use~~
  - ~~Hand Sanitizer~~

In-Person Access Not Available

- **Until In-Person Classes**
- **Unless Needed by Project**

The Capstone Labs

[2 of 3]

- Security
  - Keep lab doors closed.
  - Do not open doors for strangers
  - Do not give out door key code to others.
  - Do not invite non-capstone students to work in the lab with you.
  - Email Dr. D. and Instructors if door becomes unlocked.
- Wireless
  - SSID: CSE498
  - Key: ??????
  - Intended for Devices Requiring Lab Subnet
- ~~Coffee~~
  - ~~Some Provided~~
  - ~~Bed, Bath & Beyond (Get 20% Off Coupon)~~
- Game Playing / Video Watching
  - Not On Monitors Facing Hallway
  - Not If Other Team Members Need Machine

The Capstone Labs

[3 of 3]

- Do not “maniac” the wires and cables.
- Keep the lab neat and clean.
  - Lived In, Okay.
  - Messy, Not Okay.
- Respect…
  - …other teams’ spaces.
  - …shared spaces.
- Garbage Containers
  - Empty the small one by the coffee maker into a larger one.
  - Put larger ones out in the hall at night if near full.
  - Put back in the lab in the morning if empty.
- Turn the lights out if you’re the last one out.
- Close the windows if you open them.
- Be careful with cabinet drawers; don’t “maniac” them.
- ~~Water Dispensers (Cooler and Fridge) are not connected to a drain.~~

Devices Available From MSU

- For Capstone Project Use
- By Team for the Semester
- Includes “General Purpose” Devices
  - iOS
    - iPads
    - iPhones
  - Android
    - Tablet
    - Phone
  - Surface Pro 3
  - Oculus Rift
  - Something Else
- How do you get them?
  - Pick Them Up from Instructors
  - Ship Them to You

If you need something, ask.

We’ll figure out how to get it to you.

For starters, use emulators.

Devices From Project Sponsors

- Special Purpose Devices
  - NVIDIA Jetson
  - Drone
  - Raspberry Pi
  - Etc…
- How do we/you get the devices?
  - Ship to Dr. D.'s House?
  - Pickup from Dr. D. and/or Instructors?
- Where do we keep the devices?
  - In Capstone Lab in Locked Cabinet?
  - One of Your Apartments/Homes?
- Who gets the devices if they are not a lab?
  - One or All of You?
  - Most Hardware-Smart Team Member?
- How do we return the devices?
  - Drop Off in Capstone Lab
  - Ship via UPS, USPS,…

Expectations & Workload

- Extremely High For Both
- Your MSU Career Capstone
- Addition to Your Personal Portfolio
- Experience Viewed Like an Internship
- Interview Talking Points
- Leverage Into a Job Offer

Schedules

- Schedules > All-Hands Meeting
- Schedules > Major Milestones
  - 01/20: Status Report Presentations
  - 02/01: Project Plan Presentations
  - 02/24: Alpha Presentations
  - 04/05: Beta Presentations
  - 04/25: Project Videos
  - 04/27: All Deliverables
  - 04/29: Design Day
  - 05/??: Capstone Wrap Up
    (During Scheduled Final Exam Time)

- Attendance is required.
- No excuses are accepted.
- Do not schedule anything during these times including interviews, travel home, etc.
- Will coordinate with your interviews.
- Do NOT buy plane tickets to go home.

Meeting Attendance and Preparation [1 of 2]

- Required and On Time
  - All-Hands (Class) Meetings
  - Team Triage Meetings
  - Team Meetings
  - Team Conference Call Meetings
- Attendance How
  - Microsoft Teams
    - Who
    - When Joined/Left the Meeting
  - Google Forms
    - One ore More at Random Time During Meeting
    - One at End of Meeting
    - 60 Seconds to Complete
- Attendance Categories
  - Join Time ≤ 10:20:00 a.m. ⇒ Present
  - 10:20:01 a.m. ≤ Join Time ≤ 10:25:00 a.m. ⇒ Late
  - Join Time > 10:25:00 a.m. ⇒ Absent
  - Miss Google Form (During or At End) ⇒ Left Meeting ⇒ Absent

Google Form Attendance Check

↑↑↑↑↑↑↑↑↑

Only An Example

Meeting Attendance and Preparation [2 of 2]

- Point Deductions
  - Absent ⇒ -1.0 Point
  - Late ⇒ -0.5 Points
  - Missed Triage Google Form or Slides ⇒ -0.5 Points
- Final Grade
  - Start with +5.0
  - 1.0 Point == 1.0% of Final Grade
  - Can Go Negative ← **Note**
- Almost No Excuses Accepted
  - One or Two Excused Possible for Interviews (No Travel Should Mean No Conflicts)
  - Must Provide Information
    - Date, Company, Recruiter Name & Contact Info
    - In Advance
    - To Instructors
- See Syllabus
  - All-Hands Meeting Attendance
  - Grading
- Must Attend (No Excuses Accepted)
  - Your Team Presentations
  - All Project Video Viewing
  - Design Day

Do NOT schedule interviews.
Do NOT schedule ANYTHING.
Do NOT buy plane tickets.

Team Organization

- Up to Each Team
- Organize into Roles
  - Sponsor/Client Contact
  - Program Manager
  - Developer
    - Web
    - Mobile
    - Back End
    - Front End
    - Etc.
  - Tester
  - Systems Administrator
  - Etc…
- Everyone must make significant technical contributions, including significant software contributions. ← **Fair Warning**

Team Dynamics

- Key to Success
- Significant Component of Course Grade
- Address Problems Immediately
  - Within Team
  - With Dr. D., James, Luke or Brenden
- Be Ready to Discuss During Interviews

Grading

- Team (70%)
  - Project Plan Document & Presentation 10
  - Alpha Presentation 10
  - Beta Presentation 10
  - Project Video 10
  - Project Software & Documentation 25
  - Design Day 05
  - Total 70
- Individual (30%)
  - Technical Contribution 10
  - Team Contribution 10
  - Team Evaluation 05
  - Meeting Attendance & Preparation 05 ← Can Be Negative
  - Total 30

Grading

- Final Grade Sum Of…
  - Individual Total
  - % of Team Total Based on Team Contribution
- Grand Total =

  (Individual Total)

  +

  (Team Total) * (Team Contribution) / 10.0
- *Nota Bene*: Your Team Contribution will have a very significant effect on your final grade.

Grading

[3 of 7]

Effect of Team Contribution					
Technical Contribution	Team Contribution	Team Evaluation	Meeting Attendance	Team Total	Grand Total
10	10	5	5	70	100
10	9	5	5	70	92
10	8	5	5	70	84
10	7	5	5	70	76
10	6	5	5	70	68
10	5	5	5	70	60
10	4	5	5	70	52
10	3	5	5	70	44
10	2	5	5	70	36
10	1	5	5	70	28
10	0	5	5	70	20
Nota Bene: Assumes Perfect Score In Every Other Category					

Grading

[4 of 7]

- In order to be eligible to earn a non-zero final course grade, you must earn at least 50% in every one of the grading categories given above. That is, in order to be eligible to earn a non-zero final course grade, you must earn at least the minimal grades given below.
- Minimal Team Grade Requirements
  - Project Plan Document & Presentation 5.0 / 10.0
  - Alpha Presentation 5.0 / 10.0
  - Beta Presentation 5.0 / 10.0
  - Project Video 5.0 / 10.0
  - Project Software & Documentation 12.5 / 25.0
  - Design Day 2.5 / 05.0
- Minimal Individual Grade Requirements
  - Technical Contribution 5.0 / 10.0
  - Team Contribution 5.0 / 10.0
  - Team Evaluation 2.5 / 05.0
  - Meeting Attendance & Preparation 2.5 / 05.0

Grading

[5 of 7]

- In the capstone course, absence does not make your teammates' hearts grow fonder.
  - Nonresponsive
    - Email
    - Slack
    - Microsoft Teams Messages
    - Etc.
  - Miss Meetings
    - All-Hands
    - Triage
    - Client
    - Team
  - Miss Work ← **Key**
    - In Lab and/or Online with Teammates
    - During Sprints
    - Before Major Milestones

Grading

Unacceptable Excuses for Not Contributing

- They never asked me to do anything.
- They never let me do anything.
- I wrote 1000's of lines of code, but they weren't included in the project.
- My features were not included in the project.
- I work 40 hours per week at my job.
- I live 60 minutes from MSU.
- I didn't want to work on this project team.
- I ranked this project last.
- I did a lot of research about stuff that we never used.
- I was busy interviewing.
- Etc…

Grading

[7 of 7]

- We reserve the right to make changes with sufficient notice.
- No special consideration will be given for final grades, including but not limited to
  - effect on GPA,
  - status in any academic program including CSE,
  - financial aid,
  - rank in the armed forces,
  - job while a student at MSU,
  - job after anticipated graduation from MSU,
  - graduation,
  - mortgage,
  - wedding,
  - visa status,
  - effect on graduate school application,
  - or anything else.

Using Resources

- Ok For “Help”
  - People
    - Past Capstone Teams
    - Other Capstone Teams
    - Faculty Members
  - Articles
  - Sample Code
  - Etc…
- Not Ok For “Entire” Project
- If Unsure, Ask Instructors

Using Existing Code

- Ok
  - Examples
  - Prototypes
  - Open-Source Code
    - Fragments
    - Libraries
    - Utilities
- Not Ok
  - Copy-and-Paste
  - Vast Amounts of Your Project
  - Not Open Source
- Ask client in advance.
- Document and report all existing code used.
- Be Careful!
- If unsure, ask Instructors and/or your client.

Travel to Client

- Reimburse for Mileage for Personal Car
- Travel Within Michigan (Outside of Lansing)
  - Grand Rapids
  - Midland
  - Metro Detroit
  - Zeeland
- From East Lansing to Client and Back
- One Car Per Team Per Trip
- See Brenda in the CSE office in advance.

VISA

- Verified Individualized Services and Accommodations
- Let us know immediately.
- We will work with you.

Integrity of Scholarship

- MSU's policies will be enforced.
- Individual and teamwork must be original.
- Providing false information to the professor, instructors or fellow team members about matters related to the course will be considered academic dishonesty.
- Violators…
  - …will be referred to the appropriate deans.
  - …will receive a grade of F (0.0) in the course.

Office Hours

- Any Time…
  - Visit: 3149 EB
    - If and Only If…
      - ❖ Fully Vaccinated Including Booster
      - ❖ Masked
    - Call In Advance
  - Call: 353-5573
  - Email: (dyksen@msu.edu)
  - Message Using Microsoft Teams
- Make Appointment
  - Call Using Microsoft Teams
  - Meet Using Microsoft Teams

Google Form Attendance Check

COVID Considerations [1 of 4]

- MSU In-Person Requirements
  - Fully Vaccinated Including Booster
  - Indoors Wear Mask Covering Nose and Mouth
- Capstone Lab In-Person Use Requirements
  - Completed Vaccination Two Weeks Prior
  - Wear Mask Covering Nose and Mouth
  - Providing false information will be considered a violation of MSU Integrity of Scholarship policy. See the syllabus for details.

COVID Considerations

[2 of 4]

- Protect your health.
  - Get vaccinated.
  - Ensure social distancing.
  - Wash your hands frequently.
  - Carry and use hand sanitizer.
  - Avoid “social gatherings.”
    - Any and All
    - Even 25 or Less People
- Protect your teammates’ health.
  - Sanitize lab areas and devices before and after use.
  - Sanitize your hands before and after use.
  - Do NOT work with your teammates in person if you have ANY symptoms of sickness.

COVID Considerations

[3 of 4]

- COVID Test ≠ Excused Absence
- It is not possible to receive a grade of "incomplete" in CSE498, Collaborative Design.
- Missing a significant amount of time during the semester for whatever reason will most likely result in the need to retake the course.

COVID Considerations

[3 of 4]

- Capstone Lab Lockdown
  - For First Three Weeks
  - After First Three Weeks Highly Likely
  - Plan for it on a moment's notice.
  - Learn to work on the lab computers remotely.
  - Make a plan for specialized hardware distribution.
    - Where will you house it?
    - How will others get access to it?

Problems

- Address As Soon As Possible
  - Respectfully
  - Within Team
  - With Instructors

We don’t have one of these.

Capstone Overview

✓Course Logistics

✓Client Projects

✓Course Logistics (Continued)

Questions?

Team Photos

[1 of 9]

- Used
  - On Capstone Website
  - In Design Day Booklet
  - In The Capstone Experience Booklet
  - In Project Videos
- May Elect Not to Be in Team Photo
  - Religious Reasons
  - Cultural Reasons

Team Photos

- Everyone Submits Individual Photos
- Photographer Photoshops Into Team Photo

Team Photos

Team Volkswagen Individual Photos

Team Photos

[4 of 9]

Team Volkswagen Team Photo

Team Photos

Team TechSmith Individual Photos

Team Photos

[6 of 9]

Team Volkswagen Team Photo

Team Photos

- Individual Photos Requirements
  - Dress
    - ❖ Business
    - ❖ Very Nice Business Casual
  - Front Facing
  - Hands down to the sides
  - Hands out of pockets
  - ¾ Length, Just Below Knees (Including Hands)
  - High Resolution as Possible
  - Solid Background
  - Good Lighting
  - Relaxed
  - jpeg

Team Photos

- Photo Release Form
  - Required by MSU
  - Standard
- Submission
  - Use Google Form (Link Emailed to You)
  - File Naming Convention
    - team-[normalized-team-name]-[last-name]-[first-name].jpg
    - team-kelloggs-dyksen-wayne.jpg
    - team-delta-dental-knowledge-science-1-mariani-james.jpg
  - Due by 11:59 p.m. ET, Sunday, January 23
  - Failure to Submit
    - Not in Team Photo
    - Points Deducted from Team Contribution
  - Photographer May Require You to Resubmit

Team Photos

- Examples of Required Resubmits

Bad Angle

Out of Focus

Not to Knees

What's ahead?

[1 of 4]

- Upcoming Meetings
  - 01/18: Risks and Prototypes
  - 01/20: Team Status Report Presentations
  - 01/25: Project Plan
  - 01/27: Schedule and Teamwork
  - 02/01: Team Project Plan Presentations
  - 02/03: Team Project Plan Presentations
  - 02/08: Team Project Plan Presentations

10% of Team Grade

What's ahead?

[2 of 4]

- Split-Hands Meetings
  - Used On Presentation Days
    - 01/20: Team Status Report Presentations
    - 02/01-02/08: Team Project Plan Presentations
  - Two Microsoft Teams Channels
    - Brenden's Channel
      - ❖ Brenden's Teams
      - ❖ Teams Amazon, Anthropocene Institute, Kellogg's
    - Luke's Channel
      - ❖ Luke's Teams
      - ❖ Teams Kohl's, MaxCogito, United Airlines Airport Operations
  - Attendance Taken As Usual

What's ahead? [4 of 4]

- Website, Email and Team's Messages
  - Check Constantly
  - Read Carefully
  - Not Seeing and/or Reading Email ≠ Valid Excuse
- Triage Meetings
  - Scheduled
  - Attendance & Preparation
- 02/01-02/08: Team Project Plan Presentations
  - Slide Deck Posted Online
  - Read and Review
  - Discuss in Triage Meetings

What's ahead? [4 of 4]

- 01/20: Team Status Report Presentations
  - One Week From Today
  - Split-Hands Meeting
  - Slide Deck Template Posted on Downloads Page
  - Must Use Windows Version of Office 365 ← ***Nota Bene***
  - Read Submission Instructions Carefully
  - Due by 11:59 p.m., Wednesday, 01/19
  - Upload Two Times to Microsoft Teams
    - To General Channel File Space
      Folder "Team Status Report Presentation Slide Decks"
    - To Capstone Team's Private Channel
  - Aggregated Slide Decks
    - By Instructor
    - Instructors will "drive" during split-hands presentations.
    - Presenters will say "Next slide please."

Aside: Filenames

- Convention
  - Use all lowercase.
  - Delete non-numeric and non-alphabetic characters.
  - Replace blanks by dashes.
- Examples
  - team-amazon-status-report-presentation.pptx
  - team-kelloggs-status-report-presentation.pptx
  - team-delta-dental-knowledge-science-1-status-report-presentation.pptx

Delete this slide.

Read Me

[1 of 2]

- Presenting
  - The Status Report Presentations will be given on Thursday, January 20.
  - The purpose of your Status Report Presentation is for your team to demonstrate that you have made significant progress on your project. In particular, you will give status reports on a variety of things including the status of project sponsor contact, project sponsor meeting schedules, team meeting schedules, team organization, server systems and software, development systems and software, a brief description of the project, the status of your project plan and the initial identification of risks.
  - The time limit for your presentation is 4.5 minutes, which will be strictly enforced. Practice your presentation to ensure that your team will finish within the allotted time of 4.5 minutes.
  - We will meet in “split-hands” meetings with one Microsoft Teams channel hosted by Brenden and a second Microsoft Teams channel hosted by Luke. Brenden’s channel will include his teams along with Teams Amazon, Anthropocene Institute and Kellogg’s. Luke’s channel will include his teams along with Teams Kohl’s, MaxCogito and United Airlines Airport Operations.
  - Dr. D. will combine the teams’ slide decks into two slide decks, one for Brenden’s channel and one for Luke’s channel.
  - Brenden and Luke will share their screen and “drive” the slide deck for their teams.
  - Your team may have one or more presenters. All team members should turn their cameras on during their presentation.
  - The order in which the teams will present will be random.

Delete this slide.

READ ME

[2 of 2]

- Creating and Editing
  - Use only the Windows version of Office 365.
  - You must use this PowerPoint slide deck template as is. Do not change the number of slides unless the instructions explicitly allow you to duplicate slides. Do not change the order of the slides. Do not change the styles. Do not edit the master slides.
  - Throughout the template, replace placeholders […] with the appropriate information.
  - Edit the center footer by clicking the Header & Footer button on the Insert ribbon. Change [Team Name] in the footer to your company name as in "Team TechSmith Status Report Presentation". If necessary, extend the width of the center footer textbox on the master slide, making sure that you re-center the enlarged textbox.
  - Do not include any company confidential information in your presentation.
  - Delete every textbox that includes "Delete this textbox" and every slide that includes "Delete this slide."
- Submitting
  - All presentations must be submitted to us and to your client by 11:59 p.m., Wednesday, January 19.
  - Name your PowerPoint slide deck file as "team-[team-name]-status-report-presentation.pptx" replacing "[team-name]" with your team's name normalized by using all lower case, deleting non-numeric and non-alphabetic characters, and replacing blanks by dashes. Examples include "team-kelloggs-status-report-presentation.pptx" and "team-delta-dental-knowledge-science-1-status-report-presentation.pptx" .
  - Upload your PowerPoint slide deck to the folder "Status Report Presentation Slide Decks" in our Microsoft Teams General Channel file space by 11:59 p.m., Wednesday, January 19. In addition, upload your slide deck to your team's private channel file space in case your slide deck is deleted by accident from the General Channel file space, and you need to prove that you did indeed upload your slide deck by the due date and time.
  - Email a copy of your slide deck to your client as well by 11:59 p.m., Wednesday, January 19. Do not cc us on that email. Include some professional text in the body of your email to practice being a professional and to avoid having your email sent to your project sponsor's junk folder.

MICHIGAN STATE UNIVERSITY

Status Report Presentation

[Project Title 36pt]

The Capstone Experience

Team [Team Name 24pt]

[Team Member 1 16pt]
[Team Member 2 16pt]
[Team Member 3 16pt]
[Team Member 4 16pt]
[Team Member 5 16pt]
[Team Member 6 16pt]

Department of Computer Science and Engineering
Michigan State University

Spring 2022

From Students…
…to Professionals

Team [Team Name]

Status Report

[1 of 4]

[Project Title]

- Project Overview
  - Description Point 1
  - Description Point 2
  - Description Point 3
  - Description Point 4
- Project Plan Document
  - Status Point 1
  - Status Point 2
  - Status Point 3
  - Status Point 4

Status Information:
Think clicking "Status" on an Amazon order.

- You bought this on Monday, January 10. Helpful?
- We're going to send this to you. Satisfied?
- People who bought this also bought…. We good?

Where the $*(%($* is my order?

Delete this textbox.

Include status information.
What's the status of your project plan document?
Have you started it?
How much have you written?
What percentage complete is it?
Delete this textbox and the brace to the left.

Team [Team Name]

Status Report

[2 of 4]

[Project Title]

- Server Systems / Software
  - Description &/or Status Point 1
  - Description &/or Status Point 2
  - Description &/or Status Point 3
- Development Systems / Software
  - Description &/or Status Point 1
  - Description &/or Status Point 2
  - Description &/or Status Point 3

Include status information.

Are all systems up and running?

Have you tested everything?

Delete this textbox and the brace to the left.

Team [Team Name]

Status Report

[3 of 4]

[Project Title]

- Client Contact
  - Status Point 1
  - Status Point 2
- Team Meetings
  - Status Point 1
  - Status Point 2
- Team Organization
  - Description Point 1
  - Description Point 2

Include status information.
Have you talked with/met with your client?
Have you scheduled a weekly conference call? When?
Have you scheduled an in-person meeting? When?
How many times has your team met so far?
Have you scheduled team meetings? How often?
Delete this textbox and the brace to the left.

Include status information.

Who's doing what?

Delete this textbox and the brace to the left.

Team [Team Name]

Status Report

[Project Title]

Risks

- Risk 1
  - Description
  - Mitigation
- Risk 2
  - Description
  - Mitigation
- Risk 3
  - Description
  - Mitigation
- Risk 4
  - Description
  - Mitigation

A "Risk" is a significant task that you need to accomplish that you currently do not know how to do. Usually, a risk is a "showstopper," meaning if you cannot complete the task, you cannot complete your project.

"Mitigation" for a particular risk is your plan for eliminating that risk; that is, your plan for figuring out how to accomplish the task.

List only "real" risks. For example, learning new computer languages is **not** a risk for an MSU CSE student.

Give "useful" explanations of how you are going to mitigate each risk. For example, "we will learn how to do it" is **not** a useful explanation.

Delete this textbox.