

09/01,09/06: Capstone Overview

The Capstone Experience

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James Mariani

Department of Computer Science and Engineering

Michigan State University

Fall 2022



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

CSE498, Collaborative Design

- “The Capstone Experience”
- Professors
 - Dr. Wayne Dyksen (“Dr. D.”)
 - Prof. James Mariani
- Teaching Assistants
 - Tommy Hojnicky (hoy-Nick-ee)
 - Griffin Klevering
 - Luke Sperling
- Class Meetings
 - Tu, Thu 3:00 – 4:20 p.m. Eastern Time
 - All-Hands:
 - STEM 1130
 - Microsoft Teams General Channel
 - Split-Hands:
 - Tommy: Anthony 1320 & Teams Channel
 - Griffin: Anthony 1279 & Teams Channel
 - Luke: STEM 1130 & 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.



Meeting Goals for 09/01 and 09/06

- 09/01
 - Intro to Capstone Logistics
 - Overview of Projects
 - Team Member Survey
- 09/06
 - Capstone Logistics
 - What's ahead?



Capstone Overview

➤ Course Logistics

- Client Projects
- Course Logistics (Continued Next Meeting)



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 5-6 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...



Professional Meeting Expectations

- Starts at 3:00 p.m. ET (Eastern Time) Promptly
- Meeting Ready
 - In Person: Seated
 - Microsoft Teams: Joined
 - Ready to Go
 - Looking Professional
- Not Meeting Ready Include But Not Limited To...
 - Entering a Room
 - Walking to a Seat
 - Being in the Process of Sitting Down
 - Joining a Meeting
- No...
 - Other Electronic Devices
 - Phones
 - Laptops
 - Etc.
 - Hats or Hoods
 - Coats
 - Eating
 - Sleeping
 - “Breaks”



Project Deliverables

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

See [Major Milestones](#).

All-Hands/Split-Hands Meetings

Presentations By

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



Weekly Schedule

- 09/01: Capstone Overview 1
- 09/06: Capstone Overview 2
- 09/08: Risks and Prototypes
- 09/13: Team [Status Report Presentations](#)
- 09/15: Project Plan
- 09/20: Schedule and Teamwork
- 09/22: Team [Project Plan Presentations](#)
- 09/27: Team [Project Plan Presentations](#)
- 09/29: Team [Project Plan Presentations](#)
- 10/04: Design Day Booklet Process
- 10/06: Creating and Giving Presentations
- 10/11: Resume Writing and Interviewing
- 10/13: Team [Alpha Presentations](#)
- 10/18: Team [Alpha Presentations](#)
- 10/20: Team [Alpha Presentations](#)
- 10/25: Break Day
- 10/27: Intellectual Property
- 11/01: Design Day and the Project Videos
- 11/03: Ethics and Professionalism
- 11/08: Team Status Report Presentations
- 11/10: Team Status Report Presentations
- 11/15: Team [Beta Presentations](#)
- 11/17: Team [Beta Presentations](#)
- 11/22: Team [Beta Presentations](#)
- 11/24: Thanksgiving
- 11/29: Team Status Report Presentations
- 12/01: Team Status Report Presentations
- 12/05: Project Videos Due
- 12/06: Project Videos
- 12/07: All Deliverables Due
- 12/08: Project Videos
- 12/08: Design Day Setup
- 12/09: Design Day
- 12/14: Capstone Wrap-Up
10:00 a.m. — 12:00 p.m. ET



The Capstone Labs

[1 of 2]

- [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: ???????
- 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
 - At Most One Drawer Per Team
 - Only As Needed
 - Assigned by Instructors
 - Obtain Keys from CSE Office



The Capstone Labs

[2 of 2]

- [3340EB](#), [3352EB](#), [3358EB](#)
- Remote Access
Instructions will be emailed.
- In-Person Access
 - Fully Vaccinated With Booster Two Weeks Prior
 - Sanitizing Wipes
 - Keyboard and Mouse
 - Desktop
 - Before and After Use
 - Hand Sanitizer



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
 - CSE300 (Can Be Waived)
 - CSE325
 - 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



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
 - Hardware
 - 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 to clients. See [Downloads](#).
- Contact Dr. D. or James For Questions.



Project Teams

1. Ally
2. Amazon
3. Anthropocene Institute
4. Atomic Object
5. Auto-Owners
6. CSAA Insurance
7. GM
8. Google
9. Kellogg's
10. Kohl's
11. Lockheed Martin Space
12. Magna
13. Meijer
14. Michigan State University Linguistics
15. Microsoft
16. MSUFCU
17. Roosevelt Innovations Data Science
18. Roosevelt Innovations Knowledge Science
19. RPM
20. Stryker
21. Targets' Tip
22. TechSmith
23. Union Pacific
24. United Airlines Airport Operations
25. United Airlines Quality Assurance
26. United Airlines Training
27. Urban Science
28. Vectorform
29. Volkswagen
30. Whirlpool



Team Ally

Project Overview

Ally Employee Recognition Platform

- Functionalities
 - Recognize Employees for Achievements
 - With a Progressive Web App
 - To Improve Company Morale
- Features
 - Offer a Dashboard for Progress Tracking
 - Implement Multiple Roles
 - Include Real-time Monitoring of Recognition
- Technologies
 - Microsoft Visual Studio
 - React
 - Microsoft SQL Server



ally

Detroit, Michigan
Charlotte, North Carolina



Team Amazon

Project Overview

Amazon Review Confidence Tool

- Functionalities
 - Increase Buyer Trust and Loyalty
 - By Highlighting Low Quality Reviews
 - Utilizing a Visually Intuitive Web App
- Features
 - Design Review Analysis Web App
 - Calculate Confidence Scores for Reviews
 - Detect Illegitimate or Low - Quality Reviews
 - Display Altered Scores Without Poor Reviews
- Technologies
 - AWS – Lambda, API Gateway, DynamoDB
 - Programming language with Data Science capability
 - Javascript Framework



Seattle, Washington
Detroit, Michigan

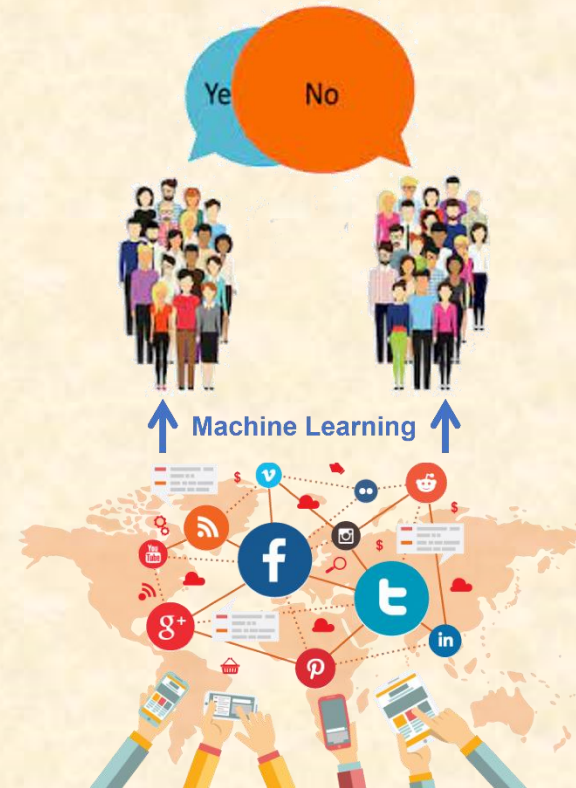


Team Anthropocene Institute

Project Overview

Public Opinions on Nuclear Energy from Social Media

- Functionalities
 - Determine Public Opinion on Nuclear Power
 - Utilizing Social Media Platforms
 - And Machine Learning
- Features
 - Highlight Public Opinion on Social Media
 - Integrate Data from Multiple Platforms
 - Apply Machine Learning Analysis to Data
 - Provide Methods to Spread Correct Data
- Technologies
 - Sprout Social
 - Hootsuite
 - Machine Learning

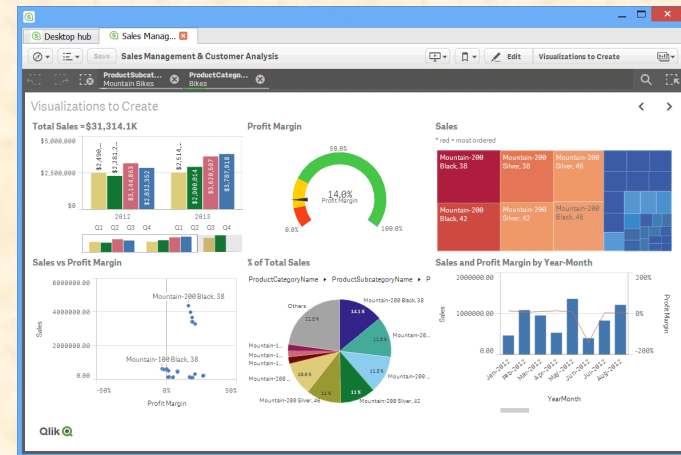


Team Atomic Object

Project Overview

Custom Data Visualization Dashboard

- Functionalities
 - Make Tracking Client Projects Easy
 - By Visualizing Data From Multiple Data Sources
 - With a Customizable Dashboard
- Features
 - Create a Customizable Dashboard
 - Design Functionality on Multiple Platforms
 - Draw Data from many Data Sources and APIs
 - Conduct User Interviews for Preferences
- Technologies
 - Web-based data visualization library
 - Database Technologies



Team Auto-Owners

Project Overview

A-O Merch Search

- Functionalities
 - Modernize Internal Merch Ordering Process
 - For Auto-Owners Employees
 - With Secure Ordering Website
- Features
 - Secure Log-In Screen
 - Virtual Shopping Experience
 - Item Browsing, Searching, and Adding to Cart
 - Cart Review and Order Completion
 - Gather Purchase Analytics
 - Item Data and Demographic Information
- Technologies
 - Microsoft SQL Server
 - Java Spring Boot RESTful API
 - React JS



Auto-Owners
INSURANCE

Lansing, Michigan

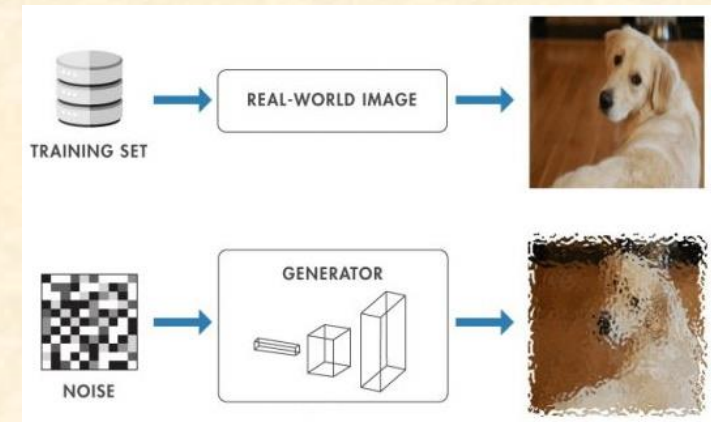


Team CSAA Insurance

Project Overview

Synthetic Image Generation via Random Noise

- Functionalities
 - Build Models for Different Vehicle Types
 - With Synthetic Crash Images
 - For Improved Digital Reconstruction of Crashes
- Features
 - Build a Model Trained on Real Images
 - Produce Novel Images From Model
 - Build Dataset Consisting of Real and Synthetic Images
 - Request Synthetic Images on Website
 - Create Model Trained on New Dataset
 - Analyze Image Generation Across Vehicle Types
- Technologies
 - Pytorch
 - GPU or Google Colab
 - Microsoft SQL Server
 - React JS



Team GM

Project Overview

Augmented Reality Utilizing IoT Technology

- Functionalities
 - Integrate Hardware with Augmented Reality
 - As a Proof-of-Concept for Future Projects
 - Using IoT Devices
- Features
 - Integrate Actions in AR with a Physical Actuator
 - Support Eye-Tracking and Voice Commands
 - Interface between Hardware and Software
- Technologies
 - Microsoft HoloLens 2
 - Raspberry Pi
 - Actuator / Robotic Arm
 - Flask
 - Unreal Engine



Detroit, Michigan



Team Google

Project Overview

Android Exploit Fuzzing Analysis

- Functionalities
 - Determine Vulnerabilities within Linux
 - To Secure Android Devices
 - Utilizing Fuzzing Bug Detecting Methods
- Features
 - Develop Fuzzers for the Linux Kernel
 - Execute Fuzzers Across Linux Systems
 - Analyze Vulnerabilities within Android OS
 - Create a Fuzzer Dashboard
- Technologies
 - Syzkaller
 - Golang
 - C
 - Angular
 - MySQL
 - GKE



Kirkland, Washington
Mountain View, California



Team Kellogg's

Project Overview

Templatize R Development via Design Thinking

- Functionalities
 - Improve Sales Experience of Kellogg's Products
 - By Redesigning GBS Applications
 - For ADA and Corporate Image Compliance
- Features
 - Examine Kellogg App Catalog
 - Identify Business Context and Intended Users
 - Provide Standardized App Layout
 - Guided by Business Analytics and Sustainment
 - Offer Standard Functionalities Across Apps
 - Implement New Layout to Existing Apps
- Technologies
 - R Studio / R Shiny
 - CSS / HTML / JavaScript
 - Amazon Redshift / S3
 - Tableau

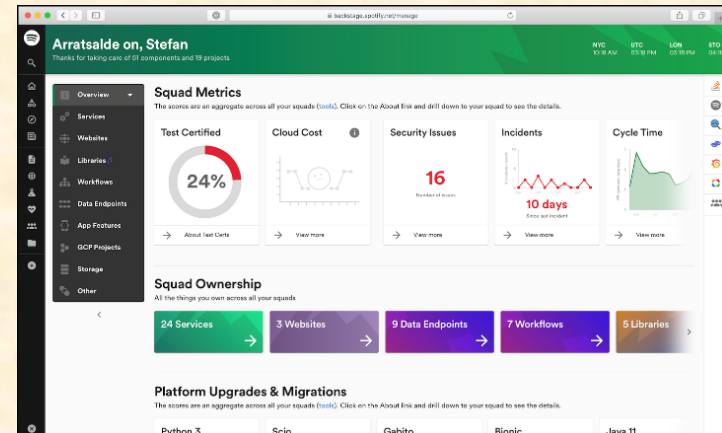


Team Kohl's

Project Overview

Backstage's Back Alright

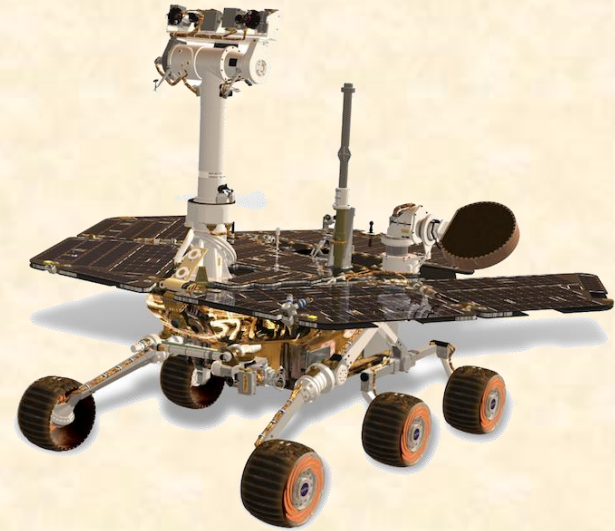
- Functionalities
 - Improve Efficiency and Organization
 - Of Software Products in Development
 - With Internal Developer Portal
- Features
 - Build Developer Portal Website
 - Support Product Development
 - Execute Product Deployment
 - Integrate Project Resource Setup
 - Git Creation
 - Platform Resources
 - Establish Development Pipeline
- Technologies
 - Microservices
 - Cloud Native Technologies
 - JavaScript / TypeScript
 - React



Team Lockheed Martin Space Project Overview

LiDAR and Image Fusion for Autonomous Navigation

- Functionalities
 - Implement Navigation
 - On Lunar Mobility Vehicle
 - With Lightweight Obstacle Detection
- Features
 - Ingest and Process Images From Sensors
 - LiDAR Point Clouds
 - Stereo Images
 - Create Reproducible Tests on Data
 - Live and Synthetic
 - Deploy App on SmartSat™ Framework
- Technologies
 - Simultaneous Localization and Mapping (SLAM)
 - Robotic Operating System (ROS)
 - Embedded Software Exposure
 - Yocto Linux, VxWorks, Single Board Computers, and Emulators

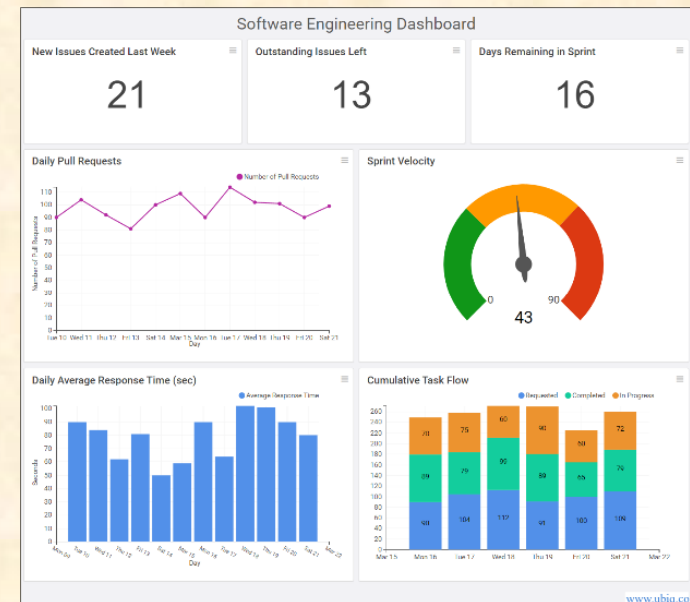


Team Magna

Project Overview

Dashboard for Data Visualization

- Functionalities
 - Automate the Data Visualization Process
 - With a Flexible Solution
 - Designed for an Existing Data Platform
- Features
 - Visualize Metrics and Data
 - Display Long-term and Short-term Information
 - Implement Robust Data Filtering and Sorting
- Technologies
 - Microsoft Power BI
 - QuickSight
 - Amazon Web Service



Tory, Michigan
Aurora, Ontario, Canada



Team Meijer

Project Overview

Meijer Simply Give Automation

- Functionalities
 - Provide Larger Support to Food Pantries
 - By Expanding Simply Give Program
 - Through Standalone Digital Platform
- Features
 - Design and Build Simply Give Page
 - mPerks App
 - Meijer Website
 - Accept and Process Payment Securely
 - Display Local Area Benefitted by Contributions
- Technologies
 - Swift or React Native
 - ReactJS or Blazor WebAssembly
 - Microsoft Azure Web API / SQL / DevOps
 - Microsoft Power BI



Team Michigan State University Linguistics

Project Overview

Mobile App for Remote Recording

- Functionalities
 - Facilitate Sound Recording for Research Projects
 - With a User-Friendly Sound Recording Mobile App
 - Offer a Non-Coder-Friendly Experience
- Features
 - Support High-Quality Recordings Tied to User Accounts
 - Integrate Gamification to Incentivize Engagement
 - Provide Extensive Documentation and User Guide
- Technologies
 - iOS / Swift
 - Android Studio



Team Microsoft

Project Overview

Making STEM Papers Accessible to ASL Users

- Functionalities
 - Aid ASL Users in Reading STEM Papers
 - By Providing Translations of Words and Phrases
 - With Machine Learning
- Features
 - Include Both a 1-to-1 Mapper and a Robust Model
 - Use Cross-Lingual Entity Linking for Translation
 - Automatically Identify Concepts to Translate
- Technologies
 - Python
 - Machine Learning

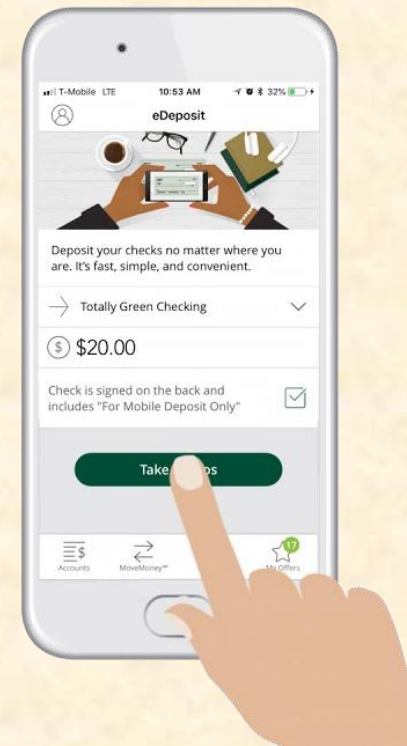


Team MSUFCU

Project Overview

Digital Transformation of Member Data

- Functionalities
 - Enhance Customers' Banking Experience
 - With Personalized Spending Analysis
 - Offering Local Alternatives with Discounts
- Features
 - Categorize Expenditures
 - Extract Spending Habits and Offer Analysis
 - Provide Alternate Options
 - Within Local Loyalty Program
- Technologies
 - HTML5/HTML/CSS
 - JavaScript or related frameworks
 - Android Development (Java/Kotlin)
 - iOS Development (Objective-C/Swift)
 - MySQL
 - PHP
 - NFT Reader

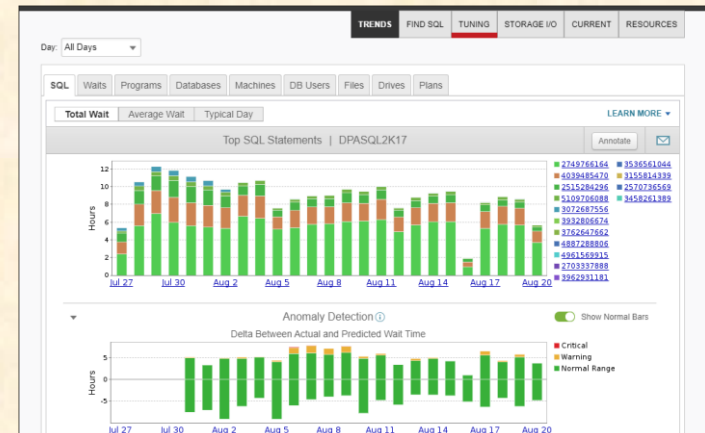


Team Roosevelt Innovations Data Science

Project Overview

Provider Anomaly Analytics Toolkit

- Functionalities
 - Provide Risk Scores and Recommendations
 - For Insurance Providers
 - Based on Data from Multiple Sources
- Features
 - Leverage Machine Learning to Automate Process
 - Visualize Suggestions with Web Components
 - Aggregate and Store Relevant Data
- Technologies
 - Streamlit
 - Snowflake
 - Docker
 - CSS / HTML / Javascript / Angular



- Functionalities
 - Enhance an Existing Rate Calculation IDE
 - With More Features
 - And Quality-of-Life Improvements
- Features
 - Offer a Java-based Microservice to Perform Rate Calculations
 - Integrate Easy Testing into Front End
 - Automatically Import Data from Outside Sources
- Technologies
 - Angular
 - ANTLR
 - Git
 - Quarkus

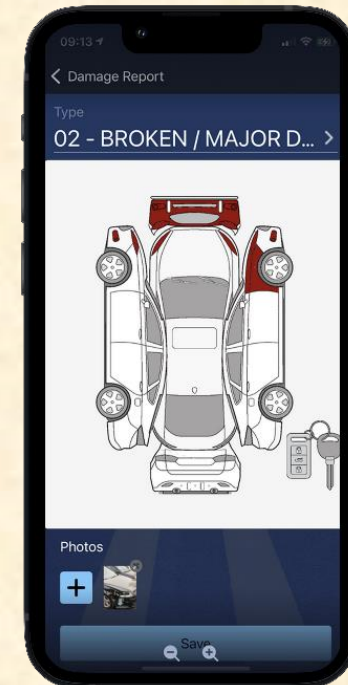


Team RPM

Project Overview

RPM Drive™ Mobile App Extension and Enhancements

- Functionalities
 - Increase Use of Mobile App
 - For Discovering, Booking, and Tracking Shipments
 - Through New Features and Loyalty Rewards
- Features
 - Provide Manual Search Shipments By Trip Details
 - Implement Automatic Smart Shipment Suggestions
 - Show Shipment Catalog for User to Browse
 - Handle Bidding and Accepting Tenders in App
- Technologies
 - Xamarin
 - Tensorflow / Pytorch
 - SciKit



Team Stryker

Project Overview

Technology Driven Inventory Optimization

- Functionalities
 - Develop a Suite of Tools Using Blockchain
 - To Handle Supply of Surgical Kits
 - That Simplifies and Streamlines the Process
- Features
 - Provide Transparency on all Operations
 - Offer a Simple User Interface
 - Support Web and Mobile Apps for Different Roles
- Technologies
 - Blockchain
 - IoT
 - Microsoft Power BI



stryker

Kalamazoo, Michigan

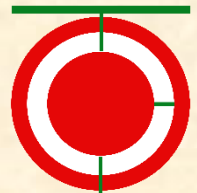


Team Targets' Tip

Project Overview

Sharing Advice on Academic Harassment

- Functionalities
 - Support Survivors of Academic Harassment
 - By Connecting Them with Peers
 - Utilizing Robust Phone and Web Applications
- Features
 - Design Phone and Web Applications
 - Gather, Store, and Categorize User Data
 - Create User Connections Based on Preferences
 - Facilitate Communication Between Users
- Technologies
 - IOS
 - Android / Android Studio
 - Database Technologies
 - Modern Web Framework

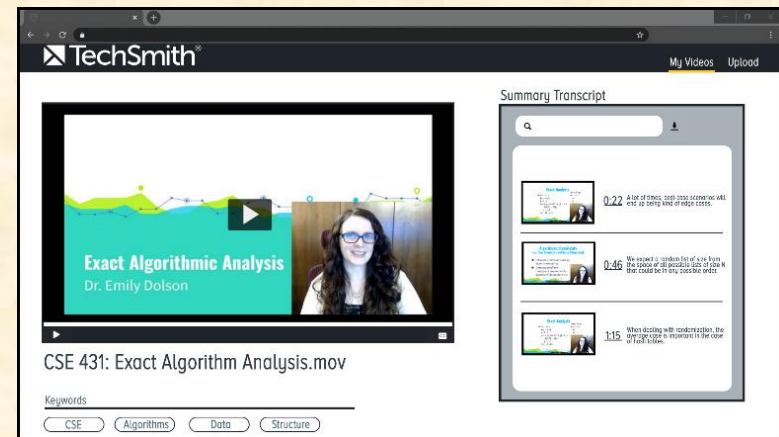


Team TechSmith

Project Overview

TARA: TechSmith Asset Recommendation Assistant

- Functionalities
 - Support Users in Creating Engaging Videos
 - By Analyzing Video and Audio
 - And Recommending Assets for Inclusion
- Features
 - Leverage Computer Vision to Analyze Video
 - Suggest Content for Specific Portions of Video
 - Identify Text and Objects to Improve Search
- Technologies
 - Machine Learning
 - Microsoft Visual Studio
 - React
 - FFMpeg
 - Microsoft C# / .NET

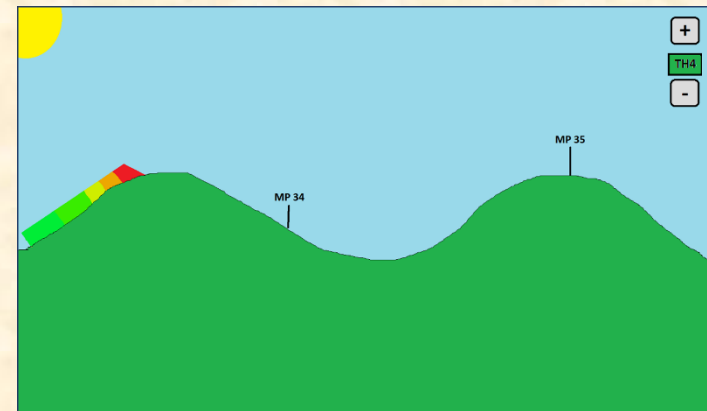


Team Union Pacific

Project Overview

Mobile Train Handling Simulator

- Functionalities
 - Offer Accessible Locomotive Engineer Training
 - For Handling Buff and Draft Forces in Distributed Power
 - Through Mobile Simulation Application
- Features
 - Build Mobile Simulation Application
 - Implement Power, Braking, and Direction Controls
 - Design Virtual Terrain and Trains
 - Build Scaled Models
 - Simulate All Forces Present Proportional to Scale
 - Visualize Forces on Individual Train Cars
- Technologies
 - Unity
 - Android
 - iOS
 - WebGL



BUILDING AMERICA®

Louisville, Colorado
Omaha, Nebraska



Team United Airlines Airport Operations

Project Overview

Injury and Damage Data Quick Access App

- Functionalities
 - Increase Airport Safety Measures
 - By Quickly Viewing Airport Incident Data
 - Utilizing an Intuitive Mobile Application
- Features
 - Search For Incident Data From Many Airports
 - Display High Level or Specific Incident Data
 - Build a Mobile Application on Multiple Oss
 - Design Email Sharing Functionality
- Technologies
 - SQL Server
 - AO Metrics Dashboard
 - ARB SharePoint Data
 - Apple iPhones (IOS)
 - Google Android Phones



Team United Airlines Quality Assurance

Project Overview

Audit Management System

- Functionalities
 - Create a Safer Airline
 - By Improving the Airplane Inspection Process
 - Utilizing an intuitive IOS App
- Features
 - Integrate Data into Databases
 - View and Manage Audits
 - Develop Customizable Reports
 - Visualize Important Historical Data
 - Create External Email Functionality
 - Build an intuitive Mobile Phone App
- Technologies
 - IOS
 - AWS

QA 4-1 R34 50CT2021

Employee Name/ID	Part Number	Serial Number	Nomenclature
Jeff Johnson 10 years	V2342-A5	V3524	V2500

Task: Install T1 and T2 onto engine

Technical Specifications: EM V2500-A1/-A5

Tooling: Torque Wrench 3123445 Due 6/12

Shelf Life: Hylomar LM124 Exp 12/12

Traceability: Packing

Required Training: V2500 IAPLB

Date Qualified: 9/24/06

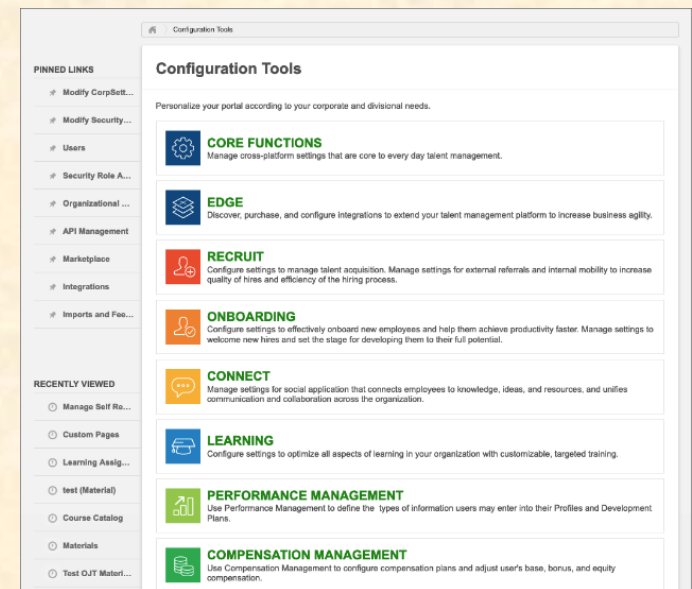


Team United Airlines Training

Project Overview

Efficacy Testing within United's Cornerstone LMS

- Functionalities
 - Increase Instructor Efficiency and Quality
 - By Locating Patterns in Coursework
 - Through an Electronic Exam Application
- Features
 - Design an Electronic Exam Application
 - Analyze Student Answers in Coursework
 - Identify Patterns in Instructor Instruction
 - Detect Instructor Quality and Efficiency
- Technologies
 - TakeOff – Cornerstone LMS



Team Urban Science

Project Overview

Dealership Parts and Service Telematic Insights

- Functionalities
 - Increase Customer Retention and Increase Profits
 - By Visualizing Vehicle Telematic Information
 - Utilizing a Secure Web App
- Features
 - Develop Role Based Authorization Login
 - Integrate Data into Existing Database
 - Visualize Diagnostic Data
 - Highlight Patterns and Summarize Statistics
- Technologies
 - Windows
 - Visual Studio
 - SQL Server
 - C# .NET
 - Angular
 - Typescript
 - GIT
 - Node.js

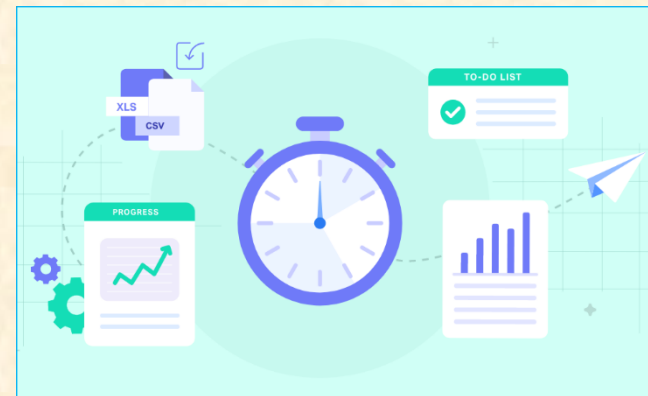


Team Vectorform

Project Overview

Time Cube

- Functionalities
 - Track Time Spent on Billable Projects
 - Using a Desktop Device Monitoring Workstation
 - To Provide Automatic Time Tracking
- Features
 - Interface Physical Device with Computer
 - Automatically Recognize Different Projects
 - Provide a Low-interaction Method of Tracking Time
- Technologies
 - React
 - Bluetooth
 - Arduino
 - C++
 - Node.js



Team Volkswagen

Project Overview

Volkswagen Electric Vehicle Recommender App

- Functionalities
 - Match Drivers with their Ideal Electric Vehicle
 - According to their Driving History
 - Utilizing an Easy to Use Mobile and Web App
- Features
 - Identify Relevant Capabilities of Electric Cars
 - Capture Data from Volkswagen and Other Users
 - Integrate Algorithms to Match Users with Ideal Car
 - Create an Intuitive Web and Mobile App
- Technologies
 - IOS / Android SDK
 - AWS (EC2 / Lambda, RDS)
 - Angular / React

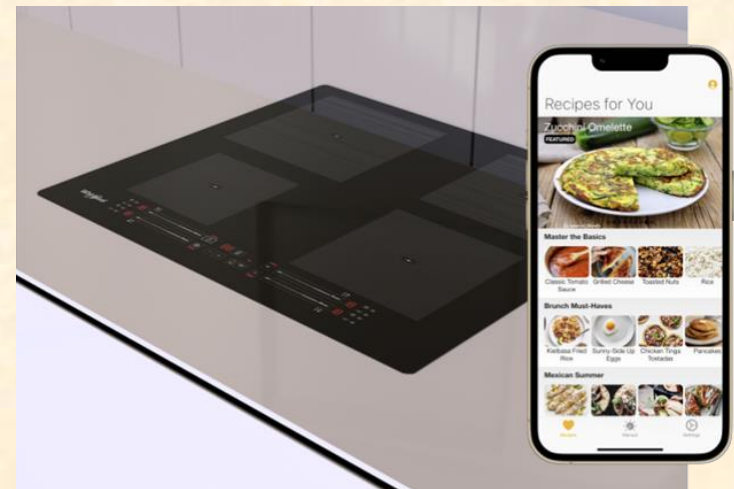


Team Whirlpool

Project Overview

Guided Recipe Augmentation

- Functionalities
 - Provide a Technology Based Recipe Cooking Option
 - With Streamlined and Easier to Follow Experience
 - Through User Centered Controls
- Features
 - Display a Recipe for User to Follow
 - Collect and Process Data
 - Motion Data
 - Voice Data
 - NFC Tags
 - Appliance Data
 - Develop Gesture and Voice Recognition Models
- Technologies
 - Flutter
 - Python
 - Pytorch / Tensorflow
 - Apaia / Speech Recognition
 - OpenCV



Whirlpool

Benton Harbor, Michigan



Team Member Survey

[1 of 2]

- Check Student ID
- Use Upper and Lower Case
 - Yes: Dyksen, Michigan
 - No: DYKSEN, MICHIGAN
- Hometown Country, NOT County
 - Yes: USA, China
 - No: Ingham, Wayne
- Use Floating-Point Number Only For GPA
 - Yes: 3.7, 2.8
 - No: 3.5-3.7, ~3.5, About 3.5



Team Member Survey

[2 of 2]

- Get out your laptops.
- Open browser.
- Log into Google with MSU credentials.
- 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.
([3340EB](#), [3352EB](#), [3358EB](#))
 - See if you can find it.
 - See if you can get in.
- Find the meeting slides.
capstone.cse.msu.edu/schedules/weekly-schedule



What's ahead?

- Teams

- Receive team assignments later today.
(Keep checking your email.)
- Meet initially later today or by tomorrow morning at the latest in person or via 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 certainl by tomorrow COB.
(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)

New Nomenclature

In the spirit of running like a business...

- ~~Teaching Assistant or TA~~
- Team Manager or TM
 - Not Traditional TA Role
 - Luke, Griffin, Tommy == TM
- Dr. D. and James
 - TMs' Manager
 - Your...
 - Manager's Manager
 - "Skip-Level" Manager



Where are we?

- Teams/Projects
 - Assigned
 - Met and Working
- Sponsors/Clients
 - Contacted
 - Scheduled Weekly Meeting
 - Met With Once?
- Luke, Griffin and Tommy
 - Heard From
 - Scheduled Weekly Triage Meeting
 - Met With Once?
- Capstone Lab
 - Found It
 - Successfully Logged into Systems
 - Began Configuring Systems
- Projects
 - Read Project Description
 - Discussed with Client
 - Began Exploring and Configuring Technologies
 - Began Exploring and Configuring Systems



About Us

[1 of 2]

- Dr. D.
 - Title: Professor of Computer Science and Engineering
 - Hometown: North Haledon, New Jersey



- Education: Calvin College (BS), Purdue University (MS, PhD)
 - Experience: Professor @ Calvin, Purdue, Nebraska, MSU
- James Mariani
 - Title: Professor of Instruction
 - Hometown: Sterling Heights, Michigan
 - Education: MSU (BS, MS, PhD Candidate)
 - Experience: CSE498 Grad, Teaching Assistant, Instructor @ MSU



About Us

[2 of 2]

- Luke Sperling
 - Title: Graduate Teaching Assistant
 - Hometown: Birmingham, Michigan
 - Education: MSU (BS, MS, PhD Candidate)
 - Experience: CSE498 Grad, Teaching Assistant @ MSU
- Griffin Klevering
 - Title: Graduate Teaching Assistant
 - Hometown: South Lyon, Michigan
 - Education: MSU (BS, MS & PhD Candidate)
 - Experience: CSE498 Grad, Teaching Assistant @ MSU
- Tommy Hojnicky (hoy-Nick-ee)
 - Title: Graduate Teaching Assistant
 - Hometown: Naperville, Illinois
 - Education: MSU (BS, MS Candidate)
 - Experience: CSE498 Grad, 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 (It's free.)
 - 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]

- [3340EB](#), [3352EB](#), [3358EB](#)
- In-Person Access
 - Fully Vaccinated With Booster
 - Sanitizing Wipes
 - Keyboard and Mouse
 - Desktop
 - Before and After Use
 - Hand Sanitizer
- Holler if Wipes and/or Hand Sanitizer Out



The Capstone Labs

[2 of 3]

- Security
 - Keep lab doors closed.
 - Do not open doors for strangers
 - Do not give out the 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 by Us
 - BYOKC
- 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.
- Be careful with cabinet drawers; don’t “maniac” them.
- Water Dispensers (Cooler and Fridge) are not connected to a drain.



Devices From MSU

- For Capstone Project Use Only
- By Team for the Semester
- Includes “General Purpose” Devices

- iOS

- iPads
- iPhones

If you need something, ask.

- Android

- Tablet
- Phone

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

- Surface Pro

- Oculus Rift

For starters, use emulators.

- Something Else

- How do you get them?

- Ask TM

- Pick Them Up from TM



Devices From Project Sponsors

- Special Purpose Devices
 - iOS or Android Device
 - NVIDIA Jetson
 - Drone
 - Raspberry Pi
 - Etc...
- How do we/you get the devices?
 - Ship to Dr. D. at MSU
 - Pickup from Dr. D. and/or TMs
- Where do we keep the devices?
 - In Capstone Lab
 - Locked Cabinet
- How do we return the devices?
 - Return to Dr. D. and/or Instructors
 - 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 > Weekly Schedule
- Schedules > Major Milestones
 - 09/13: Status Report Presentations
 - 09/22: Project Plan Presentations
 - 10/13: Alpha Presentations
 - 11/15: Beta Presentations
 - 12/06: Project Videos
 - 12/07: All Deliverables
 - 12/09: Design Day
 - 12/14: Capstone Wrap Up
(10:00 a.m. – 12:00 p.m.)

- 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.
- Read the syllabus.



Team Organization

- Up to Each Team
- Organize into Roles
 - Sponsor/Client Contact
 - Program Manager
 - Developer Roles
 - 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, Griffin, Tommy
- Be Ready to Discuss During Interviews



Grading

[1 of 7]

• Team (70%)	
▪ Project Plan Document & Presentation	10
▪ Alpha Presentation	10
▪ Beta Presentation	10
▪ Project Video	10
▪ Project Software & Documentation	25
▪ Design Day	<u>05</u>
▪ Total	70
• Individual (30%)	
▪ Technical Contribution	10
▪ Team Contribution	10
▪ Team Evaluation	05
▪ Meeting Attendance, Preparation & Participation	<u>05</u> ← Can Be Negative
▪ Total	30



- Final Grade Sum Of...
 - Individual Total
 - % of Team Total Based on Team Contribution
- Grand Total =
$$\begin{aligned} &(\text{Individual Total}) \\ &+ \\ &(\text{Team Total}) * (\text{Team Contribution}) / 10.0 \end{aligned}$$
- *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
<i>Nota Bene: Assumes Perfect Score In Every Other Category</i>					



Grading

[4 of 7]

- Every student must earn the following required minimal grades in each grading category.
- Failure to earn the required minimal grades in any of the grading categories is grounds for receiving a final grade of 0.0 for the course.
- 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 & Participation 0.0 / 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

NB: Your teammates will be evaluating you weekly and at the end of the semester.



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
 - status in any academic program at MSU including CSE,
 - the need to be graduated this semester,
 - the ability to enroll in CSE498 next semester,
 - financial aid,
 - hours worked in a job while a student at MSU,
 - distance commuting to MSU,
 - anticipated graduation from MSU,
 - acceptance of a job in anticipation of graduation,
 - rank in the armed forces,
 - mortgage on a property,
 - lease on a property,
 - upcoming wedding, or
 - visa status,
 - or anything else.



Meeting Attendance, Preparation & Participation (MAPP) [1 of 5]

“Meeting-Ready”

- In Person
 - Ready
 - Seated with Team in Correct Room in Assigned Seat
 - Coat and Hat Off
 - All Mobile Devices in Airplane Mode and Stowed
 - Not Ready
 - Entering the Room
 - Walking to a Seat
 - Taking off Coats and/or Stowing Devices
- Online
 - Ready
 - Joined to Microsoft Teams Meeting in Correct Channel
 - In Appropriate Location
 - Not Ready
 - Joined Using Only a Phone
 - In Inappropriate Location (Car, Bar, In Line at the RIV, etc.)



Meeting Attendance, Preparation & Participation (MAPP) [2 of 5]

Attendance Process

- In Person
 - By TM
 - Sign a Form
- Online
 - Microsoft Teams
 - Who
 - When Joined/Left the Meeting
 - Google Forms
 - One or More at Random Time During Meeting
 - One at End of Meeting
 - 60 Seconds to Complete

**Google Form
Attendance Check**

↑↑↑↑↑↑↑↑
Only An Example



Meeting Attendance, Preparation & Participation (MAPP) [3 of 5]

MAPP Point Deductions

- All-Hands / Split-Hands
 - Meeting-Ready \leq 3:00:00 p.m.
 - Present
 - -0.0 MAPP Points
 - 3:0:01 p.m. \leq Meeting-Ready \leq 3:05:00 p.m.
 - Late
 - -0.5 MAPP Points
 - Meeting-Ready $>$ 3:05:00 p.m.
 - Absent
 - -1.0 MAPP Points
 - Leave Meeting
 - In Person: Leave the Room
 - Online: Miss Google Form (During or At End)
 - -1.0 MAPP Points
 - Weekly Triage Google Form and Google Slides
 - Late or Not at All
 - -0.5 MAPP Points



Meeting Attendance, Preparation & Participation (MAPP) [4 of 5]

- Almost No Excuses Accepted
 - One or Two Excused Possible for Interviews
 - Must Provide Information
 - Date, Company, Recruiter Name & Contact Info
 - In Advance
 - To Instructors
- Must Attend (No Excuses Accepted)
 - Your Team Presentations
 - All Project Video Viewing
 - Design Day
 - Design Day Wrap Up
- Read the syllabus.
 - Meeting Attendance, Preparation and Participation (MAPP) Grade
 - Meeting Attendance Policies and Procedures

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

-5.0 MAPP Points Per Absence



Meeting Attendance, Preparation & Participation (MAPP) [5 of 5]

- Excused Meeting Absences
 - Job Interviews
 - Documentation Deemed Valid
 - In Advance
 - Sickness Including COVID
 - Documentation Deemed Valid
 - ASAP
 - Grief Absence
 - See MSU Policy
 - Done in Advance
 - Some MSU Events
- Cannot Accommodate Most Conflicts
- No Accommodations for Personal Reasons Other Than Above
- Cannot Be Excused from Doing Work
- Taking or Retaking Capstone in Spring 2023
 - Limited Enrollment
 - Students who are first-time eligible get first priority.



Technical Contribution

- Required of Everyone
- Significant Work and Code
- Does Not Include Code...
 - Committed by Someone Else
 - For CheckInCount = 1 to 100 {Modify Code Slightly; Checked Code In Again}
 - That Does Not Work
 - That Was Copied from the Internet
 - Not Included In The Project
 - Etc...
- Necessary, but Not Sufficient
 - Doing Research
 - Creating UI/UX Designs
 - Creating Documents
 - Giving Presentations
- Read the syllabus.
 - Final Course Grade
 - Minimal Grade Requirements



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)
 - Benton Harbor
 - Battle Creek
 - Kalamazoo
 - Grand Rapids
 - Metro Detroit
- From East Lansing to Client and Back
- Cars Per Team Per Trip
 - < 6 Team Members, 1 Car
 - = 6 Team Members, 2 Cars
- 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...
 - After Meetings
 - Visit: 3149 EB
 - Call: 353-5573
 - Email: (dyksen@msu.edu)
 - Message Using Microsoft Teams
- Make Appointment
 - Meet in Person
 - Call Using Microsoft Teams
 - Meet Using Microsoft Teams



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?

We're not done yet.



Team Photos

[1 of 7]

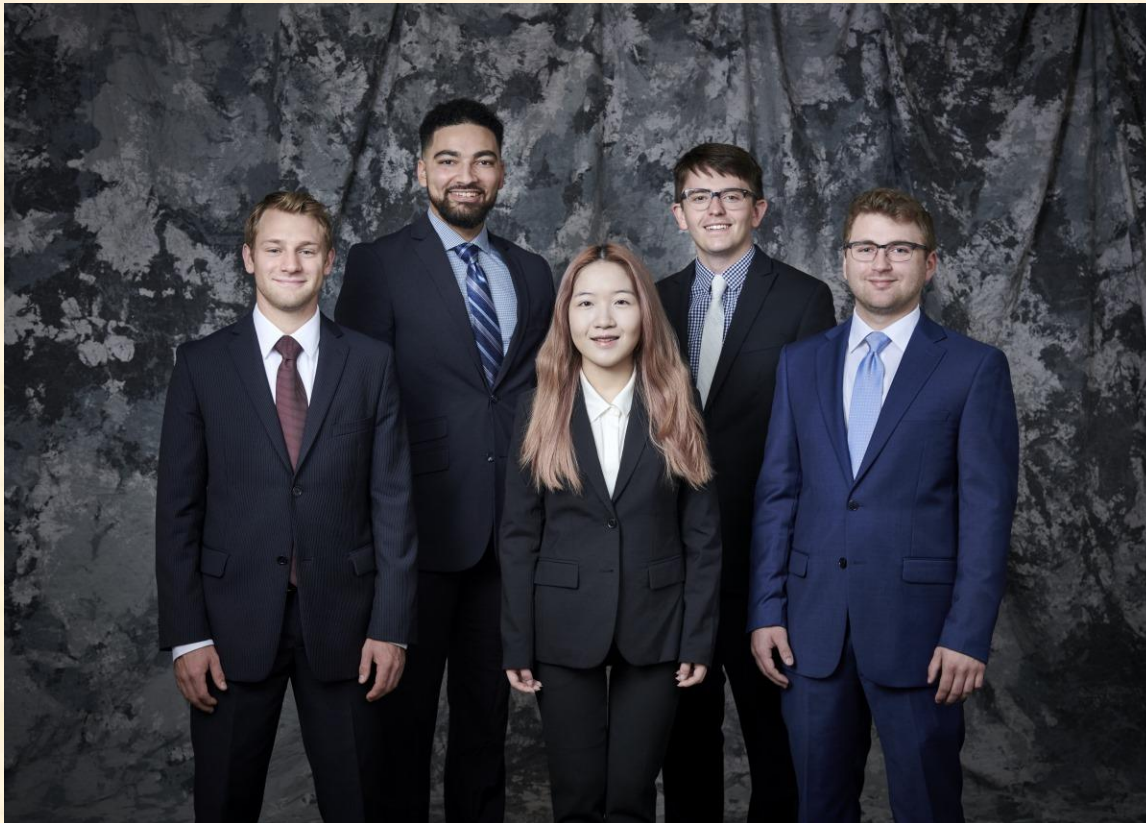
- Taken by Professional Photographer
- Used
 - On Capstone Website
 - In Design Day Booklet
 - In The Capstone Experience Booklet
- Dress
 - Business or Business Casual
 - Coordinated



Team Photos

[2 of 7]

- Team Amazon, Fall 2019





- > Home
- > News
- + Projects
- + Schedules
- + Design Day
- + Other Links
- + Archives
- > Contact Us

Team Amazon



Detroit, Michigan
Seattle, Washington

SPARTI: Selling Partner Application Ready to Integrate

[Watch the Video...](#)

Founded in 1994 as an online bookstore, Amazon is the largest online retailer in the world. Amazon has seen tremendous growth and success, making history by becoming the second U.S. company to be valued at \$1 trillion. A key factor in Amazon's rise to the top is their e-commerce platform, which accounted for nearly 50% of all online retail purchases last year.

Today, more than half of the items sold on Amazon are managed and listed by third-party sellers. Amazon third-party sellers utilize the Amazon Seller Central portal to manually manage their listings and inventories on Amazon's platform. While the Seller Central site works well for small businesses, manual management becomes close to impossible for large and growing businesses.

Third-party sellers often create custom selling management applications. However, the process of creating these custom applications is often too difficult or overly time-consuming.

Our SPARTI application (Selling Partner Application Ready to Integrate) enables Amazon's third-party sellers to quickly and easily create custom selling management applications.

SPARTI provides users with a template application capable of fully connecting with Amazon's seller services. To deploy their custom site, a third-party seller merely needs to update the given template code with their own information.

Turnkey integration with Amazon Web Services (AWS) is also supported within SPARTI, giving third-party sellers the ability to automatically deploy and host their applications in the cloud.

Within the course of a day, a third-party seller is able to utilize the SPARTI project to build a containerized .NET application hosted on AWS ECS Fargate. The infrastructure for the application is instantiated by AWS CloudFormation.



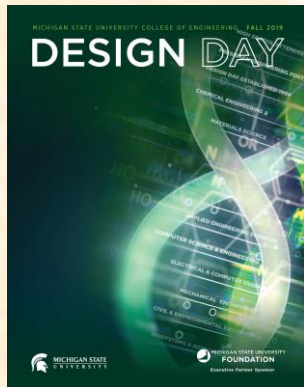
Team Amazon

SPARTI: Selling Partner Application Ready to Integrate

[Watch the Video...](#)

MSU Team Members (Left to Right)

Tyler Rozwadowski, Waterford, Michigan
Jordan Mulcahy, Jackson, Michigan
Rose Wang, Shanghai, Shanghai, China
Matt Maple, Portage, Michigan
Noah Girard, South Lyon, Michigan



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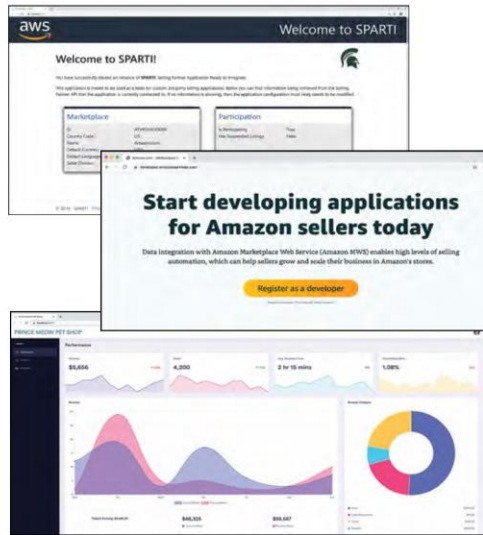
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Michigan State University Team Members (left to right)

Tyler Rozwadowski
Waterford, Michigan

Jordan Mulcahy
Jackson, Michigan

Rose Wang
Shanghai, Shanghai, China

Matt Maple
Portage, Michigan

Noah Girard
South Lyon, Michigan

Amazon Project Sponsors

Christin Burek
Seattle, Washington

Garret Gaw
Detroit, Michigan

Evan Daikoku
Seattle, Washington

Sushma Gopalakrishnan
Detroit, Michigan

Madhuri Marri
Detroit, Michigan

Team Photos
[4 of 7]



Amazon SPARTI: Selling Partner Application Ready to Integrate

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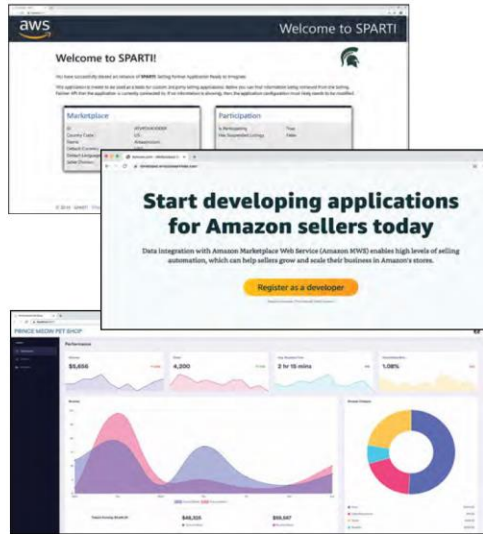
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Amazon Project Sponsors

Christin Burek
Seattle, Washington

Garret Gaw
Detroit, Michigan

Evan Daikoku
Seattle, Washington

Sushma Gopalakrishnan
Detroit, Michigan

Madhuri Marri
Detroit, Michigan

Team Photos
[5 of 7]

Team Photos

[6 of 7]

- Team TechSmith, Fall 2020



Team Photos

[7 of 7]

- Coordinated by James
 - Monday, September 26
 - 2:00 p.m. – 7:00 p.m.
 - Engineering 3540
- Dress
 - Business Preferred
 - At Least Business Casual
 - Team Coordinated



What's ahead?

[1 of 4]

- Upcoming Meetings

- 09/08, Th: Risks and Prototypes
- 09/13, Tu: Team Status Report Presentations
- 09/15, Th: Project Plan
- 09/20, Tu: Schedule and Teamwork
- 09/22, Th: Team Project Plan Presentations
- 09/27, Tu: Team Project Plan Presentations
- 09/29, Th: Team Project Plan Presentations

**10% of
Team Grade**



What's ahead?

[2 of 4]

- Split-Hands Meetings
 - Used On Presentation Days
 - 09/13: Team Status Report Presentations
 - 09/22-09/29: Team Project Plan Presentations
 - Three Locations
 - Luke's Teams [STEM 1130](#)
 - Griffin's Teams [Anthony 1279](#)
 - Tommy's Teams [Anthony 1320](#)
 - Find the rooms in advance.
 - Attendance Taken As Usual Including Lateness



What's ahead?

[3 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
- 09/22-09/29: Team Project Plan Presentations
 - Slide Deck Posted Online
 - Read and Review
 - Discuss in Triage Meetings

What's ahead?

[4 of 4]

- 09/13: Team Status Report Presentations
 - One Week From Today ← **Nota Bene**
 - 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. ET, Monday, 09/12
 - 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 TM
 - On TM’s Laptop Used by All Teams
 - One or More Presenters Per Team
 - Random Order



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-roosevelt-innovations-knowledge-science-status-report-presentation.pptx

Read Me

[1 of 2]

- Presenting

- The Status Report Presentations will be given on Tuesday, September 13.
- 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. Luke’s teams will meet in STEM 1130, Griffin’s teams will meet in Anthony 1279, and Tommy’s teams will meet in Anthony 1320.
- Dr. D. will combine the individual team slide decks into multiple slide decks, one for each TM.
- Your TM will have the combined slide decks on their laptop, which you will use for your presentation.
- 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.



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., Monday, September 12.
- 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., Monday, September 12. 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., Monday, September 12. 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.



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

Fall 2022



Team [Team Name]

Status Report

[1 of 4]

[Project Title]

- Project Overview

- Description Point 1
- Description Point 2
- Description Point 3
- Description Point 4

Status Information:

Think clicking “Status” on an Amazon order.

- You bought this on Thursday, September 1. 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.

- Project Plan Document

- Status Point 1
- Status Point 2
- Status Point 3
- Status Point 4

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

[4 of 4]

[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.

