MICHIGAN STATE UNIVERSITY

01/19: Team Status Reports

The Capstone Experience

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Spring 2017

From Students…
…to Professionals

Team Amazon

Status Report

[1 of 4]

ACRA: Amazon Customer Review Analyzer

- Project Description
  - Improve Amazon Shopping Experience
  - Enable More Informed Purchase Decisions
  - Provide Automatic Analysis of Product Reviews
  - Filter Out Irrelevant or Mismatched Reviews
- Project Plan Document
  - Project Plan Document is started and is a quarter way done
  - We have written a mock up app
  - Technical Details are drafted and will be discussed Friday

Team Amazon

Status Report

[2 of 4]

ACRA: Amazon Customer Review Analyzer

- Server Systems / Software
  - Amazon Web Services (Machine Learning, Lambda, API Gateway)
  - Amazon's Similar Products API
  - Amazon's Retrieving Customer Reviews API
  - NLTK (Python Natural Language Processing Library)
- Development Systems / Software
  - Mobile: Xcode, Android Studio
  - Backend: Pycharm
  - Version Control: Git private repository

Team Amazon

Status Report

[3 of 4]

ACRA: Amazon Customer Review Analyzer

- Client Contact
  - Have had first conference call with client
  - In the process of setting up weekly client meetings
  - Meeting in person tomorrow
- Team Meetings
  - Will meet as needed, ~2 times weekly
  - Slack has been set up for streamlined communication
- Team Organization
  - Corporate Contact: Tess
  - Everything else: Everyone

Team Amazon

Status Report

[4 of 4]

ACRA: Amazon Customer Review Analyzer

- Risk 1
  - Unsure of best way to build, handle, and store ML models
  - Meeting with faculty to talk about big data processing
- Risk 2
  - Have to hand classify a large amount of reviews to accurately train models
  - Have identified a subset of reviews to work with first
- Risk 3
  - Unfamiliar with Amazon's APIs and Web Services
  - Built a dummy script to test out API
- Risk 4
  - Team unfamiliar with iOS development (Swift)
  - Building simple Hello, World! App

Team Auto-Owners

Status Report

[1 of 4]

Location-Based Services Mobile App

- Project Overview
  - Design and build a SQL database of customer information
  - Create an iOS and Android application for end users
  - Utilize the Google Maps API to display local customer info
  - Implement an admin web portal for management purposes
- Project Plan Document
  - Document is ~30% complete
  - 3 slides completed
  - Currently planning out screen mockups

Team Auto-Owners

Status Report

[2 of 4]

Location-Based Services Mobile App

- Server Systems / Software
  - Most recent version of Ubuntu is up and running
  - Using SSH to access server
  - SQL database is functioning
- Development Systems / Software
  - Android development will use Android Studio
  - iOS development will use Xcode
  - Google Maps API will be used for map integration

Team Auto-Owners

Status Report

[3 of 4]

Location-Based Services Mobile App

- Client Contact
  - Met with the client in person
  - Scheduled a weekly Webex meeting Tuesday at 2:30
- Team Meetings
  - Team meeting every Tuesday and Thursday after class
  - Team has met five times so far
- Team Organization
  - Seth and Alex are working on Android and iOS dev respectively
  - Yunfei is assigned to implementing the Google Maps API
  - Josh is assigned to constructing the database and server

Team Auto-Owners

Status Report

[4 of 4]

Location-Based Services Mobile App

Risks

- IOS Development
  - No one in our group has experience programing IOS APPs
  - Assigned Alex to research and develop the app using Swift in Xcode
- Mapping API
  - No prior experience with implementing Google Maps API
  - Assigned Yunfei to research the API and implement it
- Data Caching
  - Application needs to cache data from database when offline
  - Working on building a functional caching prototype

Team GE

Status Report

[1 of 4]

PETT: Predix Enabled Toy Train

- Project Description
  - Record all available data using sensors
  - Automate PETT trains by analyzing the data
  - Control GE logo lights based on environment status
  - Feed all sensor data to Predix
- Project Plan Document
  - 30% through project plan
  - Completed executive summary, functional specification, and design specification.

Team GE

Status Report

[2 of 4]

PETT: Predix Enabled Toy Train

- Server Systems / Software
  - Predix, need train and sensors working first.
- Development Systems / Software
  - JMRI, downloaded and running on raspberry pi. Need equipment to continue.
  - Raspberry PI, currently connected to sensors and collecting data. Also, sending data to Predix.
  - Arduino, controls GE logo light
  - Various sensors (Beam break, temperature, etc.), currently only the temperature, beam breakers, and barometer sensors are working. Testing sensors on prototype to figure out what works best.

Team GE

Status Report

[3 of 4]

PETT: Predix Enabled Toy Train

- Client Contact
  - Weekly conference call with client on Tuesdays at 4:30 PM
  - Have already met in person and had one conference call
  - Currently coordinating bi-weekly on-site meetings
- Team Meetings
  - Meet almost every day of the week
  - Official weekly team meeting after class Thursdays
- Team Organization
  - Currently all working together to set up the train.
  - Lucas and Henok assigned testing and implementing sensors.
  - Matt and Josh assigned train automation.
  - Lama assigned client contact, manages project plan, and researching Predix and interactive dashboard.

Team GE

Status Report

[4 of 4]

PETT: Predix Enabled Toy Train

Risks

- Risk 1 - Predix
  - New technology from GE that none of us know how to use
  - Talking to experts from GE, Predix documentation, spending time using the software
- Risk 2 – Sensors
  - Not always completely accurate, wear and tear, placement
  - Testing different positions along the track, testing different sensors, redundancy to mitigate wear and tear of any single sensor
- Risk 3 – Hardware
  - Hardware sensors, trains, train track, Arduinos, Raspberry Pis, etc can fail at any time.
  - Thoroughly test hardware and have back up of each main component.
- Risk 4 – JMRI and automating DCC trains
  - We've never used this software, we need specialized hardware to connect a Raspberry Pi to the DCC track. Not familiar with automating DCC trains. Not sure if we have enough sensor data
  - Devoting programming time and reading up on the documentation. Getting specialized hardware from client.

Team GM

Status Report

[1 of 4]

Employee Transportation Experience App

- Project Overview
  - Warren Tech Center
  - Help Employees & Visitors Find Parking
  - Minimize Parking Time on GM Campus
    - Find Closest Parking Spot To Appropriate Building
  - Show Shuttle Routes & Call Lyfts
- Project Plan Document
  - Assigned Roles
  - Brainstormed Ideas
  - Started a Template
  - System Architecture & Screen Mockups

Team GM

Status Report

[2 of 4]

Employee Transportation Experience App

- Server Systems / Software
  - Visual Studio
    - SQL Server
- Development Systems / Software
  - Xamarin
    - C#
  - Visual Studio
    - ASP.NET (C#)
    - JavaScript (AngularJS), HTML/CSS
  - Google Maps API
  - Lyft API

Team GM

Status Report

[3 of 4]

Employee Transportation Experience App

- Client Contact
  - Conference calls: 1
  - Weekly Meeting: Fridays at 2:30 pm
- Team Meetings
  - Schedules/General Times To Meet
  - Times Met: 4
- Team Organization
  - Architecture, Design, & Backend: Vincent, Brendan
  - Admin Portal: Brendan
  - Primary Xamarin Developers: Phyllis, Robert
  - Main Client Contact: Robert

Team GM

Status Report

[4 of 4]

Employee Transportation Experience App

Risks

- Predictive Analysis
  - Client Wants Parking Predictions But We Need Users/Data
  - Future Client Contact For Clarification/Specification
- Limiting User Interaction
  - Meant For Parking, But Not While Driving
  - Larger And Simpler Interfaces
- Testing
  - Meant for Apple CarPlay & Android Auto, But Don’t Have Actual Devices
  - Emulators and/or Client Help
- Apple CarPlay License
  - Apple is very selective with MFi licenses
  - Work with GM, Dr. D, and Spencer to try and obtain a license

Team Humana

Status Report

[1 of 4]

Humana Kids

- Project Overview
  - To reduce childhood obesity by educating users
  - Android device to track the child's health habits
  - Website for parents to monitor child's trends
  - Allow Humana associates to view and analyze the usage data
- Project Plan Document
  - Currently six pages
  - ~20% complete

Team Humana

Status Report

[2 of 4]

Humana Kids

- Server Systems / Software
  - Rack Mounted Capstone Server
  - Deploying Azure s
- Development Systems / Software
  - Django/PyCharm installed
  - Android Studios installed
  - Initial programs running
  - Git repository setup

Team Humana

Status Report

[3 of 4]

Humana Kids

- Client Contact
  - Met twice – understand project requirements
  - Weekly virtual meetings with Humana, 11AM Tuesdays
- Team Meetings
  - Weekly triage meetings - 4:40PM Mondays
  - Weekly team meetings - M (2PM),T (10AM), F (12PM)
- Team Organization
  - Michael & Yaqeen (Web Apps)
  - Lisa & Ayush (Android Launcher)

Team Humana

Status Report

[4 of 4]

Humana Kids

Risks

- The Use of Machine Learning
  - No experience using ML
  - Researching Microsoft Azure. Talking to people with experience
- The use of the capstone server
  - Not familiar with the environment
  - Researching tutorials and getting help from others
- The use of Android Launcher
  - Implementation of Launcher vs normal app
  - Setting up basic Launcher with Home Screen
- The Use of a Django as a web frame
  - No experience using this web frame
  - Doing Django tutorials, and researching libraries

Team Meijer

Status Report

[1 of 4]

MyMeijer: Crowdsource Shopping

- Project Overview
  - Improve in-store shopping experience immediately by enabling customers to instantly notify staff of critical events such as out-of-stock items or spills/hazards in the store
  - Provide Companion Mobile Apps
  - Reward Users for Participation
  - Provide Web App for Corporate Scoreboard
- Project Plan Document
  - Skeleton project plan created
  - Intermediate deadlines scheduled
  - Mostly done by next Tuesday to go over at client meeting

Team Meijer

Status Report

[2 of 4]

MyMeijer: Crowdsource Shopping

- Server Systems / Software
  - Client in progress of getting us into their services:
    - Access to Meijer data through new Meijer accounts
    - Access to Meijer's Microsoft Azure for mobile services, databases
    - Access to Meijer's Visual Studio Team Server for task management and version control
- Development Systems / Software
  - Visual Studio with Xamarin environment installed & tested
    - Still need to set up Xcode w/ developer license for iOS deployment
    - Ready to hook into Azure once Meijer gets us set up
  - Bluebird device deployment
    - Meijer will be sending target device so we can develop for it

Team Meijer

Status Report

[3 of 4]

MyMeijer: Crowdsource Shopping

- Client Contact
  - 11am-12pm, Tuesdays
  - Met twice via conference call
  - No in-person meeting scheduled – will check if Client desires at next call
  - Scheduled weekly goals for project with Client
- Team Meetings
  - 10am-11am Tuesdays ,prior to client call
  - 11:30am-12pm Wednesdays, prior to triage meeting
  - Additionally as needed before class meetings
  - Met four times so far
- Team Organization
  - Mark - Android Development / Database Systems
  - Matt – iOS Development / Azure Web Services
  - Mike – Corporate Scoreboard Web Developer
  - Nancy – Client Liaison & Corporate Scoreboard Design/Development

Team Meijer

Status Report

[4 of 4]

MyMeijer: Crowdsource Shopping

Risks

- Meijer data access
  - Need to identify what corporate data is available and what we can access (for employee authentication, item barcode scanning, location data, etc)
  - Work with Client and stay in quick communication regarding data access through our Meijer accounts
- Bluebird device development
  - Unfamiliar with Bluebird devices & don't have the physical device yet
  - Device on the way from Client – begin testing as soon as it arrives
- Xamarin development
  - Team unfamiliar with Xamarin & iOS deployment not configured
  - Get developer license set up ASAP and begin making small prototypes
- Customer in-store location
  - Detecting customer's location in-store may not be possible automatically
  - Backup Plans: We can have the customer scan a nearby item for location or manually report current aisle

Team Michigan State University

Status Report

[1 of 4]

CATAlyst: Mapping CATA Routes and Buses in Real-Time

- Project Overview
  - Android/iOS application to view real-time locations of buses and route information
  - Allow users to filter display by route numbers and destinations
  - Nearby bus stops will be displayed with the routes serviced
  - Users will ultimately be able to upload schedules, allowing them to receive notifications for appropriate departure times
- Project Plan Document
  - Outline Complete
  - Percentage: 10%

Team Michigan State University

Status Report

[2 of 4]

CATAlyst: Mapping CATA Routes and Buses in Real-Time

- Server Systems / Software
  - Running Ubuntu 16.04 web server
  - Installed LAMP Server
  - Tested to ensure SSH functionality
- Development Systems / Software
  - Eclipse
  - Xcode
  - Android Studio

Team Michigan State University

Status Report

[3 of 4]

CATAlyst: Mapping CATA Routes and Buses in Real-Time

- Client Contact
  - Had initial meeting with client on 1/13/17
  - We added our clients to a Slack channel to work out times we can meet weekly
- Team Meetings
  - We have had 6 team meetings to this point
  - Team meetings are on Tuesdays and Thursdays from 1-3pm
- Team Organization
  - Cathy – Project Manager, Backend/iOS Developer
  - James – Customer Contact, Android Developer
  - Tom – Prototype Engineer, Android Developer
  - Jimmy – System Administrator, iOS Developer
  - Charlie – Project Facilitator, iOS Developer

Team Michigan State University

Status Report [4 of 4]

CATAlyst: Mapping CATA Routes and Buses in Real-Time

Risks

- Pulling CATA data
  - CATA will only let developers pull their data once every 30 seconds
  - Need find a way to interpolate the data between pulls
- Handling bad information from CATA
  - Sometimes the data that CATA gives is not accurate
  - Find a way to determine between dummy data and legitimate data
- Connecting both Android and iOS applications to our interface
  - Connecting to the Google Maps API's and our interface that deliver bus information
  - Build simple prototypes that connect to both Android and iOS
- Implementing filtering based on schedules
  - Allow users to input their schedules, and give a departure time
  - Figure out a calculation for departure time based on average bus routes departure and arrival times

Team Microsoft

Status Report

[1 of 4]

Intune Company Portal Helper Bot

- Project Overview
  - Develop natural language bot to help Intune customers resolve bugs
  - Link customers to articles based on their issues
  - If articles do not help user, send diagnostic report to Microsoft engineers
  - Develop chat bot interface via an Android application (*iOS / Windows)
- Project Plan Document
  - Start planning on deadlines with the clients
  - Working on skeleton
  - Percentage complete: 10%

Team Microsoft

Status Report

[2 of 4]

Intune Company Portal Helper Bot

- Server Systems / Software
  - Visual Studio Team Services (version control)
  - Microsoft Azure
- Development Systems / Software
  - Microsoft Bot Framework
  - Visual Studio
  - Android Studio
  - LUIS (Language Understanding Intelligence Services)
- Everything installed except Azure

Team Microsoft

Status Report

[3 of 4]

Intune Company Portal Helper Bot

- Client Contact
  - Initial meeting last week via phone
  - Weekly phone calls – Monday, Wednesday, Friday*
- Team Meetings
  - Tuesdays and Thursdays (formal meetings)
  - Monday and Wednesdays*
- Team Organization
  - Ramon – client contact, full stack developer
  - Nick – developer, program manager
  - Dave – back end / cloud specialist
  - Anh – developer, front end specialist
  - Lefan – developer, back end / cloud specialist

Team Microsoft

Status Report

[4 of 4]

Intune Company Portal Helper Bot

Risks

- Learn Microsoft Bot Framework
  - Technology that is critical to the application
  - Microsoft documentation, tutorials, demos, etc.
- Android development
  - We have to develop an Android application, team has little experience
  - Android documentation, tutorials, demos, etc.
- LUIS
  - Crucial to ranking support pages based on natural language
  - Documentation, tutorials, templates
- Azure
  - Cloud-based platform used for hosting our bot
  - Documentation

Team Mozilla

Status Report

[1 of 4]

Improvements to Firefox's about:preferences

- Project Overview
  - Reorganizing preferences
  - Telemetry probes
  - Search functionality
- Project Plan Document
  - Document has been created in Google Docs
  - Outline has been made
  - Meeting has been scheduled to assign sections

Team Mozilla

Status Report

[2 of 4]

Improvements to Firefox's about:preferences

- Server Systems / Software
  - Bugzilla accounts made, access granted
  - Mozilla Portal access granted
- Development Systems / Software
  - HTML, CSS, XUL, Javascript
  - Simple text editors
  - Mercurial Source Control

Team Mozilla

Status Report

[3 of 4]

Improvements to Firefox's about:preferences

- Client Contact
  - Initial Contact: Friday (1/13)
  - Weekly Meeting with Client Wed. 5 - 6 P.M.
  - Continuous online contact using IRCCloud
  - Clients plan to come to MSU Feb. 10th – 12th
- Team Meetings
  - Every Tuesday, Thursday after class
  - Triage Meeting Wednesday: 4:40
- Team Organization
  - Point of contact: Ian Ferguson

Team Mozilla

Status Report

[4 of 4]

Improvements to Firefox's about:preferences

Risks

- Risk 1
  - Learning to navigate massive code base
  - Clear communication with clients and practice
- Risk 2
  - Implementing features for hundreds of millions of people
  - Reading documentation rules and following proper testing procedures
- Risk 3
  - Bug descriptions can be ambiguous
  - Reaching out to all parties involved

Team MSUFCU

Status Report

[1 of 4]

Banking with Amazon's Alexa and Apple's Siri

- Enhancing Digital Banking Offerings
  - Provide customers access to various banking information from their Smartwatch or Amazon Alexa
  - Handle voice input for Amazon Alexa, Siri and Google Now
  - Allow user to transfer money between accounts via these platforms
  - Provide secure two-factor authentication to user's information
- Project Plan Document
  - Outlined document including specific bullets for our project
  - 2% complete

Team MSUFCU

Status Report

[2 of 4]

Banking with Amazon's Alexa and Apple's Siri

- Server Systems / Software
  - MSU GitLab Version Control (Running)
  - MiddleWare Server (Not Running)
  - Database Schema (Provided)
  - MSUFCU Security (Provided)
- Development Systems / Software
  - Xcode & Android Studio (Tested)
  - Amazon Alexa Skills (Tested)
  - Web Portal (Not Running)

Team MSUFCU

Status Report

[3 of 4]

Banking with Amazon's Alexa and Apple's Siri

- Client Contact
  - We have met once
  - Have scheduled recurring in-person meetings – Friday 12:30 PM
- Team Meetings
  - We have met twice
  - We have scheduled recurring in-person meetings – Wednesday 10:00 AM
- Team Organization
  - Steven – Client Contact & Alexa Developer
  - Will – Apple Watch Developer
  - Qiuning – Web Portal Developer
  - Kieran – API Developer
  - Ethan – Android Wear Developer

Team MSUFCU

Status Report

[4 of 4]

Banking with Amazon's Alexa and Apple's Siri

Risks

- Voice Interfacing
  - Using Alexa, Siri, and Google Now voice recognition software
  - Writing and testing simple tutorial applications
- Accessing MSUFCU Database
  - Accessing account information from their servers
  - Meeting with client - they are going to share documentation
- Developing Watch Apps
  - Using the specific design principles for smartwatch development (WatchOS & Android Wear)
  - Building prototype watch apps in Xcode and Android Studio
- Two-Factor Authentication / Device Security
  - How to authenticate users on all three platforms
  - Research industry standards in two-factor authentication

Team Rook

Status Report

[1 of 4]

FORCE Platform Ingestion Tool

- Project Overview
  - Normalize incoming alerts from APIs to standard JSON format
  - Use machine learning to predict related alerts
  - Construct web portal for analysts
  - Configurable API connections
- Project Plan Document
  - Project definition, risks, and cover page written
  - Diagrams (Use Case, DFD, UI mock-up, etc.)
  - 30% written

Team Rook

Status Report

[2 of 4]

FORCE Platform Ingestion Tool

- Server Systems / Software
  - Rack Mount Server running Ubuntu 16.04LTS
  - Python Django web framework
  - MySQL Database for data storage

- Development Systems / Software
  - React/Redux for web design
  - Apache Thrift for data normalization

Team Rook

Status Report

[3 of 4]

FORCE Platform Ingestion Tool

- Client Contact
  - One conference call along with emailed follow-up questions
  - Conference Calls are Thursdays at 4:30pm
- Team Meetings
  - Three team meetings so far
  - Tuesdays/Thursdays after Triage/Conference calls
- Team Organization
  - Split into Back-end, Front-end, and Machine Learning Dev's
  - Will McGee is the Point of Contact

Team Rook

Status Report

[4 of 4]

FORCE Platform Ingestion Tool

Risks

- Automating normalization of various input data format
  - Each API has its own style of storage for their alerts
  - Using tools like Apache Thrift
- Building ML algorithm to identify relations with other alerts
  - Correlate alerts into cases, either new or existing
  - Learning about current identifiers and using training data to improve
- Creating an effective design for web portal UI
  - Security analysts will use this tool everyday
  - Members of team took up job and dove into React/Redux

Team Spectrum Health

Status Report

[1 of 4]

Resident Physician Shift Tracking

- Project Overview
  - Mobile app to report resident shift times
  - Admin portal for Resident Coordinator to create new modules and view resident shift times
  - Push notifications to alert time limits are approaching
- Project Plan Document
  - Skeleton document
  - 2 pages
  - 10 percent
  - Summary and risk analysis

Team Spectrum Health

Status Report

[2 of 4]

Resident Physician Shift Tracking

- Server Systems / Software
  - Azure to be set up by Spectrum
  - Local host until server is up
- Development Systems / Software
  - Visual Studio and Entity Framework
  - Android Studio and JDK 8
  - Xcode and command line tools
  - Hello World programs
  - GitHub for version control
  - Zen Hub for issue tracking

Team Spectrum Health

Status Report

[3 of 4]

Resident Physician Shift Tracking

- Client Contact
  - First conference call last Friday (1/10)
  - In-person meeting this Friday (1/17)
  - Weekly Conference Calls on Fridays
- Team Meetings
  - 5 meetings thus far
  - Planned meetings for Thursdays – Saturdays
  - Additional meetings when necessary
- Team Organization
  - Matt Lamb is our client contact
  - Matthew Hannan: Android Application
  - Katie Foss: iOS Application
  - Matt Lamb and Hao: Admin Web Portal

Team Spectrum Health

Status Report

[4 of 4]

Resident Physician Shift Tracking

Risks

- Risk 1
  - Open ended design process for product
  - Create frequent mock-ups and communicate frequently with clients
- Risk 2
  - Simultaneously developing same application and contributing to the same code base
  - Strict code reviews and version control
- Risk 3
  - Consistency across the app for UI/UX when having 3 teams designing 3 different set of features
  - Communication between teams and client

Team TechSmith

Status Report

[1 of 4]

Teacher's Virtual Toolbelt

- Project Overview
  - Web application for lesson planning
  - HoloLens application used to display and interact with holograms, text, and reference material
  - Quizzes made available during lesson
  - Mixed reality view streamed from HoloLens
- Project Plan Document
  - Completed Summary
  - Draft of Functional and Design Specifications
  - Outline of Schedule and Risks
  - Document 50% complete

Team TechSmith

Status Report

[2 of 4]

Teacher's Virtual Toolbelt

- Server Systems / Software
  - Microsoft Azure App / Live Services
    - Waiting on TechSmith's Azure account information
  - Web Service APIs
  - Mixed Remote View Compositor
    - In progress...
- Development Systems / Software
  - HoloLens Application (Unity)
    - Successful test development and deployment
  - ASP.Net MVC Web Application
    - Test application created and running

Team TechSmith

Status Report

[3 of 4]

Teacher's Virtual Toolbelt

- Client Contact
  - On-site meeting 1/13
  - Weekly conference calls Friday's @ 1:30pm (demos)
- Team Meetings
  - Wednesday's @ 9:40am
  - Sunday's @ 6:00pm
  - Three group meetings so far
- Team Organization
  - Customer Contact, Front-end – Alex
  - .Net Back-end – Zeke
  - HoloLens - Yang and Ryan

Team TechSmith

Status Report

[4 of 4]

Teacher's Virtual Toolbelt

Risks

- HoloLens Development
  - No previous experience
  - HoloLens Academy and Unity tutorials
- Mixed Reality Live Stream
  - Key component of the application with minimal documentation on implementation
  - Start early and consider alternatives (OBS, Live Services)
- HoloLens Communication with Web Service
  - Implementing API calls from the HoloLens
  - Research setting up .Net API endpoints and API calls from HoloLens

Team Two Men and A Truck

Status Report

[1 of 4]

Mobile Mini Movers Who Care

- Project Description
  - Mobile game for children using Unity game engine
  - Similar games: Hilltop Racing, Bad Piggies
  - Collect points while keeping boxes on truck
  - Upgrade system (Bad Piggies)
- Project Plan Document
  - Outline in place
  - ~2% complete

Team Two Men and A Truck

Status Report

[2 of 4]

Mobile Mini Movers Who Care

- Server Systems / Software
  - Unity Collaborate
  - Works well on lab and personal computers
- Development Systems / Software
  - All necessary software installed (Unity, VM Fusion, Microsoft Office)
  - Tested, everything functional on lab/personal computers

Team Two Men and A Truck

Status Report

[3 of 4]

Mobile Mini Movers Who Care

- Client Contact
  - First meeting: Monday – 3 PM (phone conference)
  - Recurring: Wednesday – 3 PM (Phone/screen share conference), possible in-person
- Team Meetings
  - Had 3 in-person meetings
  - Minimally twice per week: Tuesdays and Thursdays after 498, more if needed
- Team Organization
  - Client contact/team lead: Travis Nichols
  - Each member responsible for designing a level

Team Two Men and A Truck

Status Report

[4 of 4]

Mobile Mini Movers Who Care

Risks

- Gameplay testing
  - Need to know if the game is enjoyable by target audience
  - Have game tested by target audience (young children)
- Social networking service integration
  - Leaderboards associated with social network sites (stretch goal)
  - Research Unity documentation for linking Unity with social networks
- Assets
  - Need art and audio assets, no members are artists/audio majors
  - Unity asset store, outsourcing, TMT marketing department
- Consistency across different devices
  - Same proportional size for all screens
  - Test on variety of devices

Team Union Pacific

Status Report

[1 of 4]

Learning New Train Routes

- Project Overview
  - Pokemon Go For Railroads
  - AR-like Experience Learning Routes
  - Image Recognition
- Project Plan Document
  - Started All Sections, Rough Rough Draft
  - 9 pages so far
  - 50% Complete

Team Union Pacific

Status Report

[2 of 4]

Learning New Train Routes

- Server Systems / Software
  - Obtained FTP from Client
  - Process of Receiving Video/Data
  - Started Google Document Sharing
- Development Systems / Software
  - Unity Installed & Building
  - Started Test Web Development Environment

Team Union Pacific

Status Report

[3 of 4]

Learning New Train Routes

- Client Contact
  - Once, Holding Conference Call Meetings Weekly, Thursday 11am
  - Met In-person Last Week, Friday
- Team Meetings
  - Multiple Weekly Meetings, Tuesday/Thursday
  - Met 6 Times So Far
- Team Organization
  - Client Contact, Backend, Image Recognition Algorithm – Nick
  - Backend, Image Recognition Algorithm – Kangjie
  - Backend, Frontend UI – Jonathan
  - Backend, Data Overlay Specialist - Matt

Team Union Pacific

Status Report

[4 of 4]

Learning New Train Routes

Risks

- Image Recognition
  - Identify Track Features As They Become Visible
  - Utilize Image Recognition Libraries
- Performance
  - Real-time Processing with High Train Speeds
  - Optimize, Write Efficient/Lightweight Code
- 360 Degree Video
  - Given Video is in 360 Degree Form
  - Research HTML 5 Video, Lock To Forward Angle
- Unity
  - Minimal Familiarity with he Unity Engine
  - Unity Documentation

Team Urban Science

Status Report

[1 of 4]

Real Time Ad Campaign Management

- Project Overview
  - Real time recommandation engine that analyzes various trends in live digital marketing campaign data
  - Gives campaign managers a control panel and the option to make real time campaign changes based on what the engine recommends
  - Uses machine learning technology to process data in order to recommend campaign improvements
- Project Plan Document
  - ~10% written
  - Title page, rough index, and executive summary

Team Urban Science

Status Report

[2 of 4]

Real Time Ad Campaign Management

- Server Systems / Software
  - Rack mounted server is up
  - Ubuntu, .NET Core, Docker, neo4j are installed
- Development Systems / Software
  - Visual studios using .NET Core package
  - Docker

Team Urban Science

Status Report

[3 of 4]

Real Time Ad Campaign Management

- Client Contact
  - First client call was on Friday 1/13
  - Weekly calls set for Friday afternoons
  - First in person meeting set for Friday 1/20
- Team Meetings
  - 2 weekly meetings; Tuesdays and Fridays
- Team Organization
  - Yoseph – Client contact / Server administrator
  - Zach – Backend data processing
  - Tony – UI / front end
  - Hang – Backend recommendation engine

Team Urban Science

Status Report

[4 of 4]

Real Time Ad Campaign Management

Risks

- Server data
  - Getting data from the client app to the server and from the server to our app
  - Yoseph is familiar with server administration
- Data processing
  - Analyzing the data points provided
  - Bring it up with the client, they should be able to provide some resources
- Docker
  - Using Docker in order to make the app easily portable
  - Research on our own, bring it up with the client
- .NET Core
  - Use of .NET Core for deploying an application
  - Create a basic “hello world” app using .NET Core

Team Whirlpool

Status Report

[1 of 4]

Commercial Laundry Dashboard

- Project Overview
  - Enable Commercial Laundry Teams to Monitor Equipment
  - Display Current Status of Deployed Machines
  - Send Alerts and Notifications about Equipment Statuses
- Project Plan Document
  - Formatting and table of contents finished
  - Filling out each point in the table of contents still needs to be done

Team Whirlpool

Status Report

[2 of 4]

Commercial Laundry Dashboard

- Server Systems / Software
  - Currently learning Ionic, D3.js and Django
  - Designing System Architecture
  - Waiting for Access to Whirlpool API
- Development Systems / Software
  - Waiting for Design from Designer
  - Git Workflow, Slack Communication
  - Test Driven Development process still needs to be discussed

Team Whirlpool

Status Report

[3 of 4]

Commercial Laundry Dashboard

- Client Contact
  - Proposed weekly Google Hangout call times
  - Awaiting Client Contact's response
- Team Meetings
  - Meetup times have been scheduled for after class. Other times can be scheduled as needed.
  - Met 3 times as of now, will be laying out system architecture and workflow during next meeting.
- Team Organization
  - Backend: Nico and Dom
  - Data Visualization: Ryan and Mike
  - Frontend: Yuqi

Team Whirlpool

Status Report

[4 of 4]

Commercial Laundry Dashboard

Risks

- Risk 1
  - Overuse of Whirlpool API
  - Finding limitations in regards to Whirlpool API
- Risk 2
  - Visual Consistency
  - Design mobile first and seamless integration
- Risk 3
  - Code Overlap/Poor Documentation
  - Code reviews before merging code into designated branches and use of proper git workflow practices

Team Yello

Status Report

[1 of 4]

YelloVision: Career Fair Augmented Reality Experience

- Project Overview
  - Quickly preview information about a company and the opportunities available there.
  - Use Augmented Reality to identify companies at career fairs
  - Implement user profiles with information about themselves to help guide them towards new companies
- Project Plan Document
  - Figured out how the basics of the backend will have to work
  - Started working on making iOS and Android apps
  - Have done research into the Google Cloud Vision API

Team Yello

Status Report

[2 of 4]

YelloVision: Career Fair Augmented Reality Experience

- Server Systems / Software
  - No server required
  - Data will be on phone
- Development Systems / Software
  - XCode installed and working
  - Android Studio installed and working
  - Google Cloud Vision API set up

Team Yello

Status Report

[3 of 4]

YelloVision: Career Fair Augmented Reality Experience

- Client Contact
  - Conference call with client on January 13th
  - Decided with clients to have conference calls on a needed basis
- Team Meetings
  - Have meet a handful of times
  - Set up slack and meet when everyone is avaliable
- Team Organization
  - iOS Team
  - Android Team

Team Yello

Status Report

[4 of 4]

YelloVision: Career Fair Augmented Reality Experience

Risks

- Computer Vision
  - We need a way for our applications to identify company logos
  - Found Google API to handle recognition
- Android App Development
  - No members of our group have developed Android apps before
  - Assigned members to Android development, writing small apps to become familiarized with SDK
- iOS App Development
  - No members of our group have developed iOS apps before
  - Assigned members to iOS development, writing small apps to become familiarized with SDK