

MICHIGAN STATE

UNIVERSITY

Project Plan

Commercial Laundry Dashboard

**The Capstone
Experience**
Team Whirlpool

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

Functional Specifications

- Provide Whirlpool and their Trade Partner with a platform to maintain and monitor their appliances
- Displays alerts, errors and statuses of the machine
- Unifying appliance data into a single network



Design Specifications

- Filter Based on:
Trade Partner > Location > Appliance
- Add Graphic Visualizations
- Create Multiple Dashboard Views
- Interactive Map Capability



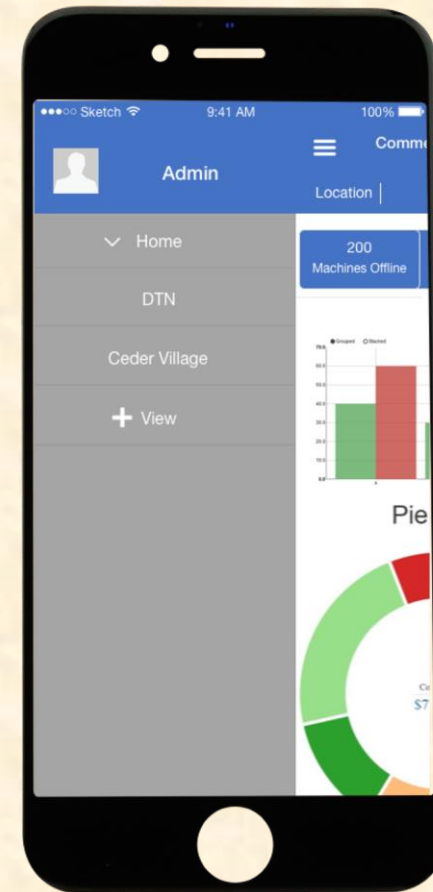
Screen Mockup: Web App(Data)



Screen Mockup: Web App(Map)



Screen Mockup: Mobile App

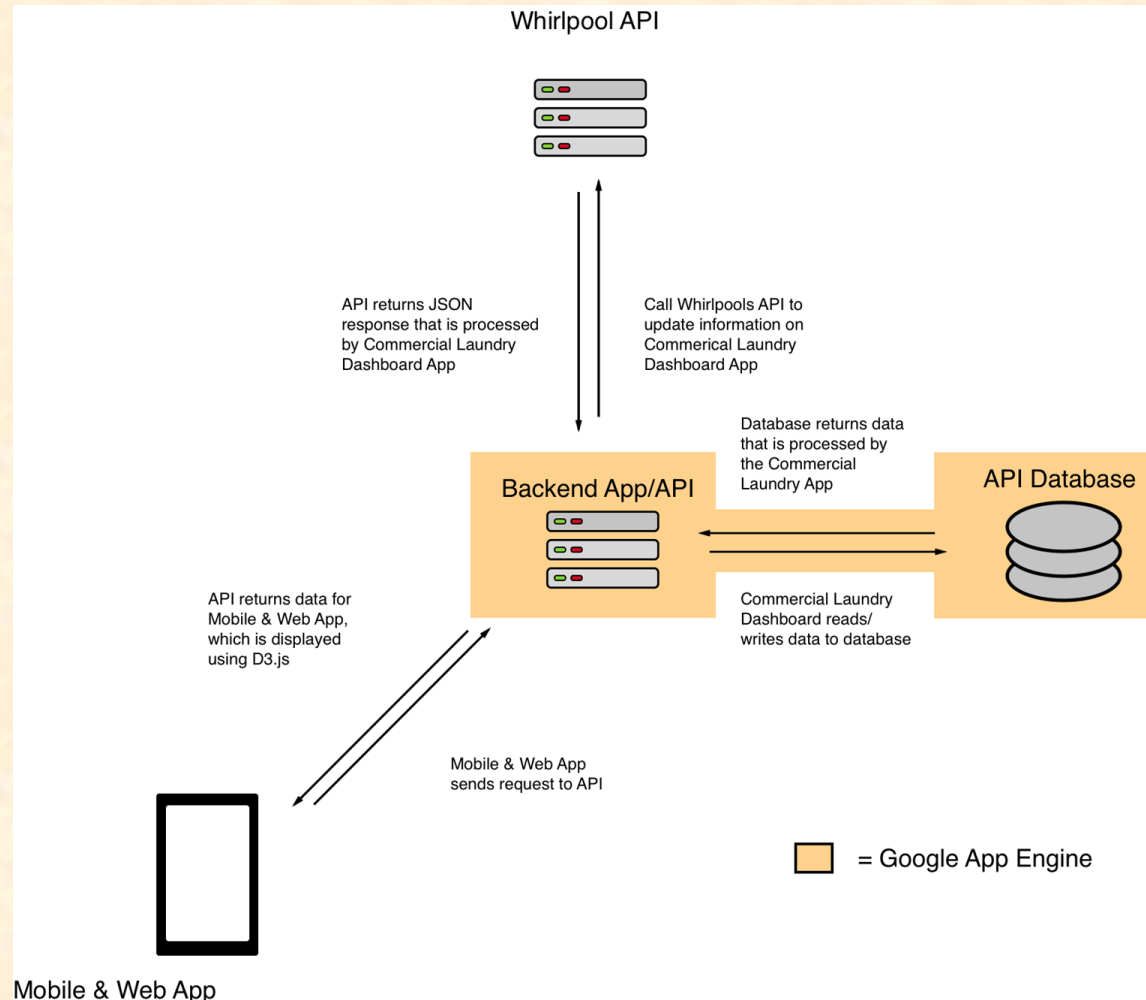


Technical Specifications

- Two (2) Ubuntu LTS servers
 - One will host Backend Application/API
 - Second will host Postgres Database
- Frontend Application
- Backend Application/API
- Postgres Database



System Architecture



System Components

- Hardware Platforms
 - Google App Engine Server
- Software Platforms / Technologies
 - Google App Engine
 - Flask
 - Cordova Ionic
 - D3.js



Testing

- Test Driven Development (TDD) will be a fundamental process while developing applications.
- Features must be tested before merging into master and production.
- Python unit tests library will be used for testing backend application.
- Frontend application will be tested using Jasmine and Karma.



Risks

- Database Usage/API Calls
 - Extensive amount contained in Whirlpool's API
 - Building our own API to filter only the necessary information
- Managing Dashboard Configurations
 - User configuration model and configuration process isn't finalized due to complexity and edge cases.
 - Creating a basic configuration and expanding off that
- Converting the Design to Whirlpool's Design
 - Not sure when we will receive the frontend designs
 - Send Whirlpool our mockups for constant feedback
- Push Notifications
 - Not sure how Ionic handles push notifications
 - Researching Ionic libraries and php solutions



Questions?

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