EE/CprE/SE 491 - sdmay18-18

Fleet Monitoring System

Week 1-2 Report

1/10-1/24

Client/Faculty Advisor: Lotfi Ben-Othmane

Team Members:

Venecia Alvarez - Point of Contact
Kendall Berner - Project Manager
Matthew Fuhrmann - Report Manager
William Fuhrmann - Test Engineer
Anthony Guss - Technical Lead
Tyler Hartsock - Web Manager

Past Two Week Accomplishments

- Client Code Refactoring - Venecia
    - Extracted code from AngularJS services to make it easier to extend web application.
    - Researched how to implement session tracking for the app.
    - Researched the usage of the Google Roads API, which will help provide more detailed information on the routes taken by drivers in a fleet.
- Login Page Implementation - Kendall
    - Implemented the login page for the web application.
- Login Server Implementation and Server Code Refactoring - Anthony
    - Implemented the login functionality for the server.
    - Refactored the server code to make it easier to change the schema for the database.
- Statistics Generation Research - Will
    - Researched/learned about R programming for use in calculating statistics from server data.
    - Familiarized with the server APIs used to give data and the server Node.js implementation.

- Front-end Research and Java-JWT Usage - Tyler
    - Looked into further needs for front-end functionality.
    - Began learning and using Java-JWT (JSON Web Token) for use with front-end.
- Vehicle OBD-II Testing - Matt
    - Investigated changes needed to move processing from Raspberry Pi to server.
    - Attempted to test Raspberry Pi OBD-II interface with 2001 Chevy Impala, but discovered that this vehicle does not provide CAN output for OBD-II, but a different format.

Individual Contributions

Team Member	Contribution	Hours for Current Report	Total Hours
Venecia Alvarez	Client Code Refactoring, Google Roads API Research	10	61
Kendall Berner	Login Page Implementation	8	60
Matthew Fuhrmann	Vehicle OBD-II Testing	9	80
William Fuhrmann	R Research, Server Learning	6	59.25
Anthony Guss	Login Server Implementation and Server Code Refactoring	8	66.25
Tyler Hartsock	Front-end Research and Java-JWT Usage	6	40.5

Plans for Next Two Weeks

- Raspberry Pi - Matt, Venecia
    - Test current PiCAN2 connection over OBD-II with vehicle using Venecia's car.
    - Create GitHub repository for Raspberry Pi code for automatic deployment.

    - Begin changing Raspberry Pi (working with server team) for new server API that receives raw OBD-II data and uses server PID requests.
- Server - Will, AJ
    - Change server API to ingest OBD-II output data instead of already processed data.
    - Work to develop API for choosing which statistics the fleet managers want and connecting that to PID requests.
    - Begin creating framework for statistics calculation extensions to the server.
- Front-end - Tyler, Kendall, Venecia
    - Work on integrating Google Roads API into front-end for more accurate descriptions of vehicle location.
    - Begin work with server team for developing API for statistics selection.