

EE/CprE/SE 491 - sdmay18-18

Fleet Monitoring System

Week 7-8 Report

2/22 - 3/7

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

- Path Plotting and Edit Fleet - Venecia
 - Worked on developing path plotting between certain times for a vehicle for the front-end.
 - Worked on the edit fleet page.
- Edit Fleet and Refactoring - Kendall
 - Refactored front end code for more scalability and worked on edit fleet page.
- Creating New APIs for Statistics Selection and PID Processing- Anthony
 - Worked with Matt on implementing the API for vehicle PID selection and processing. The server now receives and processes raw CAN data from the Pi and store the results in a database.
 - Improved model for managers, vehicle data, and added new model elements for statistics and PIDs.
- Statistics Generation Prototyping for Idle Time - Will
 - Completed R prototype for calculating idle time and percent of time spent idle using the old model.
- Front End Stylesheets and Statistics Viewing - Tyler
 - Worked on adding stylesheets for frontend.

- Began working on statistics viewing page for fleet statistics.
- Raspberry Pi Connectivity and Server PID Ingestion- Matt
 - Configured Hologram Nova mobile modem to work with Raspberry Pi.
 - Worked on designing the model for storing vehicle data and implemented new APIs and server processing for ingesting PID data from vehicles.
 - Moved code to new GitHub repository created by Lotfi, which required some extra setup because it started with an initial commit.

Individual Contributions

Team Member	Contribution	Hours for Current Report	Total Hours
Venecia Alvarez	Path Plotting and Edit Fleet	6	79.5
Kendall Berner	Edit Fleet and Refactoring	7	78
Matthew Fuhrmann	Raspberry Pi Connectivity and Server PID Ingestion	15	107
William Fuhrmann	Statistics Generation Prototyping for Idle Time	6.5	77.25
Anthony Guss	Creating New APIs for Statistics Selection and PID Processing	10	87.25
Tyler Hartsock	Front End Stylesheets and Statistics Viewing	6	55.5

Plans for Next Two Weeks

- Raspberry Pi - Matt
 - Change API calls to match updated server APIs.

- Add testing capability for mocking hardware elements.
 - Add automatic deployment of changes.
 - Create installation procedure and instructions, user documentation, and update design documentation.
- Server - Will, AJ, Matt
 - Work to develop API for choosing which statistics the fleet managers want and connecting that to PID requests.
 - Begin designing framework for statistics calculation extensions to the server.
 - Update R statistics prototype to work with new schema.
- Front-end - Tyler, Kendall, Venecia
 - Finalize website code.
 - Work with server team for developing API for statistics selection.
 - Identify other server endpoints needed.
 - Finish the Edit Fleet web page.
 - Finish the path plotting.