

sdmay18-18: Fleet monitoring system

Week 8 Report

October 30 - November 6

Team Members

Tyler Hartsock — *Web Manager*

Anthony Guss — *Technical Lead*

William Fuhrmann — *Test Engineer*

Kendall Berner — *Project Manager*

Matthew Fuhrmann — *Report Manager*

Venecia Alvarez — *Point of Contact*

Summary of Progress this Report

For the front-end, the fleet manager dashboard with charts for speed and gas and the live map of vehicles is almost complete.

For the microcontroller, we began to change the code we initially wrote for Android to Python because we pivoted from using an Android board to using a Raspberry Pi. We researched the Python-Can library and ordered a GPS board to work with the Raspberry Pi. The group members who were not familiar with Python began learning the language.

For the server, we began working on deploying the server to Google Cloud, and made changes to the API for the server to have the database more reflective of the data the server will receive from the Raspberry Pi.

Pending Issues

The only remaining issue is waiting for the hardware that works with the Raspberry Pi (the PiCAN2 and the Adafruit Ultimate GPS) to be delivered so we can begin integrating them.

Plans for Upcoming Reporting Period

For the front-end, we plan to integrate the front-end with the server using API calls and look into using the Google Road API to get speed limits and route plotting.

For the microcontroller, we plan to integrate the hardware that should be delivered over this week to the board and write Python modules to use this hardware to query and parse information coming from the OBD-II port.

For the server, we plan to work with the microcontroller and front-end teams to ensure that the APIs for data ingestion and requesting are working correctly, and to move the server to the Google Cloud platform.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Tyler Hartsock	I began to learn how to use Python, and looked into the server code to see what changes were needed.	2	16.5

Anthony Guss	I began to learn and look at Python resources for CAN usage. I also worked on beginning to set up the server on Google Cloud, but was not able to access the account I set up with Lofti's link. I also worked on making changes to the server API to allow us to have our database more reflective of the data we will be getting from the Pi.	4.5	35.25
William Fuhrmann	I worked on learning Python as well as reading up on the Python-Can library for the Raspberry Pi. I also worked with Matt on remaking code from our Android prototype in Python so that we can now send dummy data to the server. Once we can get the Can library integrated in our code, we will be able to send live data to the server.	3.5	35.75
Kendall Berner	Spent time this week working with Venecia to design our front end and began implementation of it. The main page is mostly in order, and the edit fleet page is stubbed out. Still need to get the client to actually make calls to the server.	5.5	32.5
Matthew Fuhrmann	I worked on remaking code from the Android prototype we had in Python to send dummy data to the server which can later be replaced with live data to run on the Raspberry Pi. I also researched a GPS to order for the Raspberry Pi.	4	46
Venecia Alvarez	I worked with Kendall to design the fleet manager dashboard. We created some rough sketches that we posted in #35. Then stubbed out some more things with the chart so that integration with real data from the server will be quick and easy. Next week I am going to look more into the Google Road API to get speed limits and possibly plotting an entire route.	2.5	31.5