sdmay18-18: Fleet monitoring system
Week 9 Report
November 6 - November 13

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, we discovered that the Google Roads API's price point is currently unreasonable for adding to the project after thorough research. We did practice leaving bread-crumb trail of vehicle location so that the path they take can be easily seen.

For the microcontroller, we created a working prototype that has the Raspberry Pi using the PiCAN2 to access speed from our OBD-II simulator and sends it to the server. This involved installing the PiCAN2 board and creating a server_send and can_interface module to get the information we need and upload it to the server in the REST API format.

For the server, we successfully got the server hosted on the Google Cloud and set up our hosted MongoDB database. Our server code had to be substantially modified to get everything working correctly on Google Cloud.

Pending Issues

One of our team members, Kendall, is in the hospital with a collapsed lung.

Plans for Upcoming Reporting Period

For the front-end, we plan to try to get the fleet manager dashboard finished by integrating it with the server API.

For the microcontroller, we plan to finish the GPS interfacing code, add more PIDs to the simulator for testing current gas level of the vehicle, and add some convenience setup for the Raspberry Pi to automatically run our code.

For the server, we plan on working with the microcontroller and front-end group to ensure that the server provides all of the APIs to them correctly and work on debugging any issues that occur when testing the API.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Tyler Hartsock	I researched server side information so we	3	19.5

	can start mocking data and testing our website.		
Anthony Guss	I worked on getting the server set up on the Google Cloud and on getting a hosted MongoDB.	8	43.25
William Fuhrmann	For this week I worked with Matt on writing the python CAN code for our new hardware. I also continued learning about python which I had no experience with prior to last week. We got our python code running on our Raspberry Pi so that it queries speed from the CAN tester and sends it to the server.	3.5	39.25
Kendall Berner	I was in the hospital with a collapsed lung, and was unable to work.	0	32.5
Matthew Fuhrmann	I installed the PiCAN2 to the Raspberry Pi with the help of ETG, and developed a Python application with Will that queries, receives, and sends the value of the speed PID to the server using REST APIs.	5	51
Venecia Alvarez	This week, I looked into Google Roads API for finding speed limits and Google Maps API for plotting paths on a map. I found that we won't be able to access speed limits without purchasing a premium membership from Google. Plotting paths on a map is pretty simple though, but will need many coordinates for long trips. I practiced plotting paths for the front end.	2.5	34