sdmay18-23: Internet of Things, Data Analytics for Snow Plow Truck-Data Live

Week 14 Report
February 24 – March 9

Team Members

Alan Peine — *Git Master*
Colin Heinrichs — *Test Engineer*
Evan Warych — *Report Manager*
Michael Entin — *Meeting Reporter*
Zachary Wilson — *Meeting Facilitator / Point of Contact*

Summary of Progress this Report

The last two weeks were very heavy with development. With the goal of a working prototype being out before spring break quickly approaching a lot of work needed to be done to stay on track with the project schedule. During the last two weeks connections between the database and backend caused the most troubles in completing this task. After that connection was properly formed using the mongodb/spring boot connector a few routes were set up to pass basic truck data to our front end to be graphed and displayed for the end consumer. This was a major completion as obviously data is now flowing freely from the beginning of the process with the data loggers on the truck, all the way through the front end display to be analyzed.

Pending Issues

Despite the accomplishments of the last two weeks being crucial for the groups performance, there is still plenty of work to be done to create a finished product for our client. Refinement in the data passed is the most glaring issue. Currently data is logged every 4 milliseconds, creating very detailed and often redundant charts at the end. Data compression is something that will be heavily looked on in the second half of the development phase. Secondly the database is only handling some of the intended data properly, the use of GPS data specifically is something that will require continued troubleshooting due to the different logging style from the other data.

Plans for Upcoming Reporting Period

With spring break the developers will be taking a week off from development, especially after the intensive past two weeks. Once the group returns from break, continuous debugging of the current problems will take place. Hopefully a plan to shrink the amount of data points being passed to the front end and the presentation of truck GPS will have a more concrete solution by the end of the next reporting period. On top of that, polishing the front end presentation may be looked at.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Alan Peine	Data logger debugging and logger script	8	96

	refactoring		
Colin Heinrichs	Deployment of data logger conversion service as well as introduction of continuous deployment of backend.	11	91
Evan Warych	Back end routes and data transfer to front end. Application authentication research	10	85
Michael Entin	Data base to backend connection and transportation	16	103
Zachary Wilson	Front end data presentation	14	91