

sdmay19-18: Real time Route Optimization

Report 2

February 15 - February 22

Team Members

Junjie Wen — *Backend Developer; Data Analytics Lead*

Zhanghao Wen — *Web Developer*

Yuhang Xie — *Web Developer; UI Lead*

Xinhe Yang — *Web Developer*

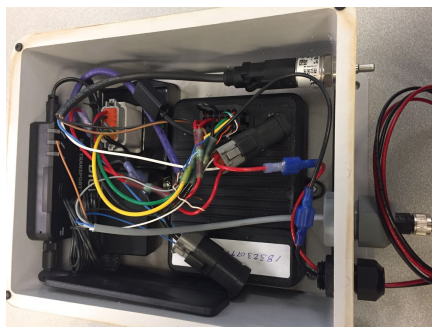
Tianhao Zhao — *Communication Leader; Technical Writing*

Summary of Progress this Report

- We had talked about the scope of the project to finalize as a product or something that could present as a whole thing itself.
 - We tried to limit our goals to make it feasible to achieve by the end of the semester.
 - We forfeited trying to connect with live data, instead we use historical data to represent our algorithm.
-

Past Week Accomplishments

We hold a meeting with our client and adviser on campus. We discussed about our goals on the final product, including specific details on how rerouting could be implement, how our features could be displayed and achieved. We limit our goals by using history data instead of live data, since we could not get access to the live data from company and we don't have ideas on how to implement without data.



The client provides us a sensor box from the snowplows that provides the GPS locations, outside temperatures and pressures. We could get those history data from the website after we do a running test with the sensor box. It has two interfaces that connects to the power outlets as shown in the picture on the left.

We also get a municipal document of snow plows operation requirement during certain conditions. We tried to analyze the different requirement with different data fields we need to implement. Then we could meet the requirement within our re-routing purpose.

We started development with client suggestions on rerouting, by analyzing predictions of a single truck. We could monitor the change of variables with corresponding situations. We could make triggers upon variables changing, e.g. the time, and temperature. We could also display the movement of trucks with tails, so that we could monitor the task (trace) done by the truck.

Pending Issues

- We refine the goals, so we need to have different plans on implementation.
- We have different/new variables, we need to add to our data field and use appropriately.
- We don't have specific thoughts on how to rerouting or how much we could achieve in rerouting. Therefore, we need to make some progress first, and see how we could display the data.

Plans for Upcoming Reporting Period

- Get data from company's website that client provided us.
- Try to integrate data with our existing codes.
- Consider on how real history data could implement our project.

Individual Contributions

| Team Member | Contribution | Weekly Hours | Total Hours |
|--------------------|---|---------------------|--------------------|
| Junjie Wen | Contribute understanding of project. | 8 | 19 |
| Zhanghao Wen | Study and provide algorithm of materials of truck that can be used in | 5 | 15 |

| | | | |
|--------------|--|----|----|
| | our project | | |
| Yuhang Xie | Provide your own ideas based on the content of the meeting | 10 | 22 |
| Xinhe Yang | Meeting with client and had more understanding about the scope of project | 10 | 20 |
| Tianhao Zhao | Schedule meeting with client. Collecting problems and concerns of the project. Recording meeting. | 10 | 20 |