EE/CprE/SE 491 WEEKLY REPORT 5

11/11 - 11/25

Group number: 32

Project title: Development of a Smart Sensing System for Road Performance Data Collection

Client &/Advisor: PROSPER - Bo Yang & Halil Ceylan

Team Members/Role: Victor Guerra, Ethan Young, Michael Petersen, Shlok Singh

- **Weekly Summary:**
  This week we have begun to further prototype the code needed for the various Arduino modules, and begin assembling the Arduino with the various modules. We have created a web server with Microsoft Azure, where we will host the backend and the website. We also finalized our rough draft of the design document and reviewed it with an advisor from class.

- **Past week accomplishments**
  - GPS/GSM prototype coding
  - Designed filter for accelerometer data
  - Received the Arduino and modules we ordered

- **Pending issues**
  - Antennae needed for GPS/GSM module. Coding still required for IRI calculation post-filtered accelerometer data.

- **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS cumulative
Victor Guerra	Design Document	8	37
Ethan Young	Design Document	8	41
Michael Petersen	Design Document	8	37
Shlok Singh	Design Document	8	37

- **Plans for the upcoming week**

  We plan to get the design document finalized as well as make the presentation slides for the design presentation. We will also begin work on assembly as well as continue work on the cloud server. Furthermore, we will work on integrating the module libraries into the Arduino project.

- **Summary of weekly advisor meeting**

  We met with Bo to discuss IRI calculation using the double integration method. And the systems required to process the data to the IRI measurement. This also includes discussing some of the obstacles we might face in the code implementation of this process.