

EE/CprE/SE 491 WEEKLY REPORT 3

10/5/2019 – 10/18/2019

Group Number: 17

Project Title: Development of an App for Android Smart Phone for Pavement Roughness Estimation

Client/Advisor: Halil Ceylan

Team Members:

Tanner Dempsay

Joe Van Treeck

Christian Royston

Justin Kuennen

Greg Starr

Kyle Eckrich

Weekly Summary

- Outlined Git Repository Setup
 - Our team established the general form of our git repo for managing our project files
 - Each member will have a branch with a name corresponding to the members' names. These will be initially based off a branch called 'dev'. Completed features from individual branches will be merged into dev when stable, and other members will rebase on said features when necessary.
 - Dev branch is based on master. Merges into master are reserved **only** for significant milestones/demos of the project, where multiple features come together to meet a system functionality requirement.
 - Issues corresponding to features, bug-fixes, etc. will be assigned to individuals' branches.
- Team Meeting (10/14)
 - Collaborated on reflection assignment due 10/20.
 - Discussed the materials needed to start work on project. This includes Android phones to test application and phone mounts to attach phones to vehicle windshields.
- Node Server Demo
 - Created a small demo demonstrating two-way communication between an Android app and our Node.js server setup. Allows us to send accelerometer and location data to server in real-time.
 - Server can export datapoints to .csv file for further analysis for our IRI calculations.
- Lightning Talk Presentation
 - Our group was one of two to present our lightning talk during lecture (Tuesday section). Group practiced presentation and assigned speaking roles.

Past Week Accomplishments

- Node Server Application Setup
- Setup Server on VM
- Successful Communication with VM from separate device

- Reflection Assignment

Individual Contributions

<u>Team Member</u>	<u>Contributions</u>	<u>Hours This Week</u>	<u>Cumulative Hours</u>
Tanner Dempsay	Researched networking libraries for Android, Created Socket demo for communication between node server and demo app, setup clone of git repo on server VM	8	21
Christian Royston	Started working on screen sketches for Android app UI	5	14
Joe Van Treeck	Researching IRI calculation methods to create our algorithm based on quarter-car model	7	19
Justin Kuennen	Starting GPS library for Android application based on Google Maps	4	13
Kyle Eckrich	Lightning talk, meetings, design doc	5	14
Greg Starr	Assisting in Android UI Layout design and prototyping	5	14

Plans for the Upcoming Week

- Establish Mondo DB database structure
 - Start working on communication between database and server
- Begin implementing first iteration of IRI algorithm
- Finish screen sketches for frontend user interface
- Research GPX format outputting using GPS coordinates