

## *EE/CprE/SE 491 WEEKLY REPORT 05*

### *Availability Prediction Based on Multi-Context Data*

#### *Week 5 Report*

10/10/18-10/17/18

sdmay19-33

**Client & Advisor: Goce Trajcevski**

#### *Team Members:*

**Justice Wright: Report Facilitator**

**Shane Impola: Scribe**

**Noah Chicchelly: Meetings and Communications Facilitator**

**Nick Schmidt: Software Systems Engineer**

**Tristan Anderson: Network Systems Engineer**

**Brendon McGehee: Hardware Systems Engineer**

#### *Weekly Summary*

This week was a week of really solidifying the groundwork of each individual tea. The Network team edged closer to a fully testable server environment and continued to familiarize themselves with AWS. The frontend team established the ability to send and receive JSON's which will be what they end up receiving and displaying in app. They also continued to perform general tutorials working on transferring their existing skill-set to this new medium. The hardware team established a fully working sensor node prototype and is working diligently to simply transfer data from these nodes to the aggregation unit. It is noted that while progress was made this was a particularly heavy week as far as midterms go and hours input were affected for most group members.

#### *Past Week Accomplishments*

Integrated sensors with transceiver modules - Brendon & Justice

- Set up breadboard prototype of sensors and transceivers to detect when someone is seated. If someone is detected in the seat then it is transferred over to other arduino and illuminates an LED.
- Coded arduino IDEs to check both IR sensor and force sensor before it sends the illuminate LED command.
- Research data transmission possibilities between pi and sensor nodes
- Continue to test (pi-less) data relay to aws.

Continued setting up server side, server architecture and database - Noah & Shane

- Continued working on server architectures and figuring out AWS
- Continued working on basic testing tools
- Looked into database relationships more

Continued work on flutter app - Nick Schmidt & Tristan Anderson

- Finished working through flutter tutorials and read through additional tutorials to learn details.
- Built very basic skeleton of possible app framework.
- Completed working HTTP request app to implement into our app in the future.

## *Hours Report*

<i>Team Member</i>	<i>Weekly Hours</i>	<i>Total Hours</i>
Justice Wright	4	28
Shane Impola	3	27
Noah Chicchelly	3	28
Nick Schmidt	4	28
Tristan Anderson	4	26
Brendon McGehee	6	27

## *Upcoming Week*

### **Brendon**

- Research how to integrate sensor prototype with networking component of the project.
- Setup and execute testing for hardware component of project.
- Continue to work with Justice on sensor data transfer.

### **Justice**

- Continue to work with Brendon on sensor data transfer.
- Obtain and work with a pi directly for data transfer to aws
- Get with both other teams to work towards full integration

### **Shane**

- Finish the server architecture implementation
- Set up database with all tables and dummy data
- Work on the communication API

### **Noah**

- Finish up AWS work
- Complete communication between front-end and server
- Add additional queries to front-end
- Progress towards communication with hardware

### **Nick**

- Add http requests to app framework, requires working test data server.
- Help setup possible test data.
- Continue to improve app GUI

### **Tristan**

- Implement HTTP requests into Nick's app.
- Continue researching radio transceiver for Raspberry Pi.

- Continue to improve app GUI