***EE/CprE/SE 491 WEEKLY REPORT XY***

***3/16/20-4/12/20***

***Group number: 26***

***Project title: From Bodily Sensors to Cloud and Back***

***Client &/Advisor:  Goce Trajcevski***

***Team Members/Role:***
Justin Worley: Cloud Engineer
John Kivley: Electrical Engineer
Richa Patel: Database Engineer
Isaac Zahau: Front-end/UI
Michael Lauderback: Embedded Systems Engineer

- **Weekly Summary**

Our team has shifted focus towards completing our final presentation and design document due to the recent developments regarding the COVID-19 outbreak. We have continued working on completing our specific tasks, however, our main goal is to complete the final presentation ahead of time to give us time to rehearse for the faculty panel. In addition, our advisor would like us to complete our design document ahead of time so we have time to refine any details before the deadline.

- **Past week accomplishments**

  - Justin Worley: Worked on Gantt chart. Setup an AWS ec2 instance to host the web server and mobile application. Started a web server as a starting point for the future web application.
  - John Kivley: Setup at home testing for the ESP32 bluetooth connections. Testing code for BLE mesh connection between boards for the sensors with the MCU.
  - Richa Patel: Started testing with DynamoDB and read some

documentation on it. Implemented tables, and worked with Isaac to set up an Android project for the database on AWS.
- Isaac Zahau: Set up Android project on AWS for the database and got started on the connection on Android Studio
- Michael Lauderback: Started programming MCU code in C. Writing independently testable objects so I can test the code without using the ESP32 arduino.

- **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*

- Justin Worley: Working with a remote environment with varying internet speeds.
- John Kivley: No longer have access to ISU labs for testing hardware. Testing at home is limited based on available equipment (e.g. no oscilloscope)
- Richa Patel: Trying to find ways to connect java with DynamoDB
- Isaac Zahau:Some issues with setting up private key on AWS but it should be a simple fix
- Michael Lauderback: I have some unexpected code bugs that I don't understand. They have the potential to be a simple fix, but first I need to figure out why the existing code I have does not work.

- **Individual contributions**

| NAME | INDIVIDUAL CONTRIBUTIONS | HOURS THIS WEEK | HOURS Cumulative |
|---|---|---|---|
| Justin Worley | Setup AWS ec2 instance and set up basic web server on that ec2 instance | 6 | 12 |
| John Kivley | Began testing ESP32 BLE connections at home and planned for future tasks and testing when quarantine is lifted. | 5 | 10 |
| Richa Patel | Started testing Amazon DynamoDB, Worked with Isaac on the setup for the Android project. | 5 | 10 |
| Isaac Zahau | Setting up Android on AWS and AWS on Android Studio | 5 | 10 |
| Michael Lauderback | Writing MCU code | 10 | 13 |

- **Comments and extended discussion**

- **Plans for the upcoming week**

    - Justin Worley: Keep an eye on AWS usage, and learn more about hosting web and mobile applications on AWS ec2 instance.
    - John Kivley: Research more on testing BLE connections and

begin testing our pulse sensor with the ESP32. Have battery tech ready to order when quarantine is lifted.

- Richa Patel: I will do more research on AWS, and I will work with Isaac or Justin if needed.
- Isaac Zahau: I will continue to work on connection to the database and will try to finish it before next Wednesday
- Michael Lauderback: Continue writing C code for the MCU. Fix the bugs I have. Work on the final presentation slide show. Touch base with John to get the code for the bluetooth mesh and wifi connection.

- **Summary of weekly advisor meeting**

We mostly talked about the design documents and the upcoming final presentation as mentioned above. Our advisor wanted us to create a skeleton PowerPoint for the presentation and to finish a draft by next Thursday. He also wanted us to update our Gantt chart with better color coding and for different tasks to overlap better. Our design document needed to include integration testing as well.