

EE/CprE 492 Bi-Weekly Report

01/28/18 - 02/08/18

Sdmay18-22: Adaptive Wireless Wearable Neuro-Stimulator

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Team Members

Kevin Wang — Meeting Facilitator

Kevin Simons — Test Engineer

Matthew Stephenson — Report Manager

Patrick Walsh — Communications Manager

Brian Weber — Chief Engineer

Weekly Summary

Website:

The website has been updated to be fully php, and then we implemented the base of the website app. There is now a login page that only accepts valid users that are in our database, after logging in there is a form with all the query refinements we planned for, and then when submitting that we currently just do a predefined database query and load all the Heart Rate data onto the screen.

Past Week Accomplishments

Website

- Website has a login form with actual credentials
- Website was hooked up to the database so we can pull our stored info onto the page

Android App

- Updated settings menu to allow for navigation to other preference screens
- Added terms and conditions page

Wearable

- Temperature sensor working
- Worked on getting readings from the Bluetooth device
- Got a better understanding of accelerometer sensor (reading datasheet)

Pending Issues

- Website needs to use the form data to form the query instead of doing a predefined query
- Website will need to display the database info not in a table but in a graph
- Look into support for BLE on Bluetooth chip on device
- Connect Android app to database
- Further update settings page for more settings
- Get bluetooth working on wearable for wearable-phone communication
- Get accurate data read from accelerometer

Individual Contributions

<u>Name</u>	<u>Contribution</u>	<u>Per Week Hours</u>	<u>Cumulative Hours</u>
Kevin Wang	Changes to Bluetooth in application, enable permissions in App. Continue on figuring out parsing incoming data.	3	12
Kevin Simons	Updated the website to use php, added real credentials to the login form, created form input for the defined user information, hooked up the php to our SQL database and was able to load predefined data onto the website.	4	16
Matthew Stephenson	Got temperature sensor working. Worked on accelerometer sensor. Read datasheet for accelerometer. Wrote API for data communication between wearable and Android device.	4	16
Patrick Walsh	Updated the settings page to allow navigation to different settings pages. Added the terms and conditions to the about page.	5.5	23
Brian Weber	Set up the temperature sensor and started	3	12

	working on the Bluetooth sensor to work. Plan on renting a android phone to use to work with the device.		
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Plan for Upcoming Week

Website:

The immediate plan for the website is to refine the query with any of the users form inputs, so if they only want a certain subset of users, only that data is returned. This should mean all of our form inputs are hooked up to a certain part of the SQL query. Also we are currently loading the data into php, and need to figure out if the size of our datasets can be graphed through php, or if we'll need to take that data out of php and use a javascript graphing library.

Android App:

In the upcoming weeks, we plan to get the Android device talking to the database so that we can begin to make sure that everything can talk to each other. We also plan on finishing up on the first round of navigation functionality implementation, which we will further refine as we get other basic functions working.

Hardware:

Going forward, we are going to be working on getting bluetooth working on the wearable. This will make spoofing input to the app possible. Once that is done, testing the app will be easier and we can be sure that the pipeline is working. Additionally, we will be looking into getting sensor reading for the accelerometer. This will enable us to detect motion.

Summary of Advisor Meeting

2/2/2018

Since last meeting suggested focusing on hardware more, progress check mostly on hardware, which sensors team was able to get working or issues with gathering information from a sensor. Advisor also gave suggestions on configuration of settings for the Android application

2/9/2018

Meeting was mostly a check on progress of parts of project. Continuing from last meeting, hardware was still deemed important in terms of moving on from spoofed data and mock connections sooner. It was suggested to dive more into getting the Android App talking

with the database, as well as work to get Bluetooth connected, whether just any device or otherwise.