

## **EE/CprE/SE 491 WEEKLY REPORT 3**

**3/04/2023 to 3/24/2023**

**Group number:** sdmay23-08

**Project title:** PTSD Detection Device

**Client:** America's Vet Dogs

**Advisor:** Mohammed Selim

### **Team Members/Roles:**

Steven Trinco - *Hardware Design and Discord Admin*

Jon Pixler - *Hardware and Embedded Systems Lead*

Sam Brang - *Hardware Design*

Comlan Bocovo - *Client Interaction, Software Design, and Time Management*

Maisy Millage - *Software Design*

Carver Bartz - *Software Design*

### **Weekly Summary:**

Progress has been made on the Bluetooth communications and housing for the final device. Parts have been ordered to test the Bluetooth communication on a real device and the application is functioning on the new android device. We have ordered an android watch for better apis to communicate with the watch with data required for PSTD attack detection. Once the Bluetooth pairing is achieved on the host phone device, inter-communication coding and debug between the dog device and the host application on the phone will begin.

### **Past Week Accomplishments:**

Comlan Bocovo - Work with Jon and Carver on the Bluetooth permission when running on the android phone. Client meeting and improved Arduino code skills.

Jonathan Pixler - Researched and ordered all parts required for the implementation of the host application and the watch for acquiring biometric data to detect PTSD episodes. Debugged application side Bluetooth pairing code. Pushed forward on coding hardware controllers. Beginning preliminary stages of inter-device communication after building the hardware and sourcing all parts needed to drive Bluetooth communication over arduino.

Carver Bartz - Made code changes to allow for Bluetooth discovery as well as small code refactoring to better implement a service. Worked on loading app to physical device to debug Bluetooth issues.

Sam Brang - Found a power bank to use within our enclosure along with ordering velcro for our enclosure to be more secure on the dog vest.

Maisy Millage - none

Steven Trinco - Placed enclosure into a 3D printing que. Devised a power solution with Sam and ordered said part. Created a smaller form f



(Top Enclosure Completed Parts So Far)

**Pending Issues:**

Figure out how to get Bluetooth permission on android devices. 3D printing of the enclosure is taking more time than expected since the printer got jammed during the bottom half extrusion. Begin inter-device communication implementation.

### Individual Contributions:

Name	Individual Contributions	Hours This Week	Hours Cumulative
Jonathan Pixler	Researched and ordered all parts required for the implementation of the host application and the watch for acquiring biometric data to detect PTSD episodes. Debugged application side Bluetooth pairing code. Pushed forward on coding hardware controllers. Beginning preliminary stages of inter-device communication after building the hardware and sourcing all parts needed to drive Bluetooth communication over arduino.	6	12
Steven Trinco	Placed enclosure into a 3D printing que. Devised a power solution with Sam and ordered said part. Created a smaller form factor variant of the enclosure.	3	6
Comlan Bocovo	Work with Jon and Carver on the Bluetooth permission when running on the android phone. Client meeting	4	8
Maisy Millage	Working on the app activity page	4	8
Carver Bartz	Made code changes to allow for Bluetooth discovery as well as small code refactoring to better implement a service. Worked on loading app to physical device to debug Bluetooth issues	4	8
Sam Brang	Looked into power banks and found one that will work great for our device. Updated website. Bi-weekly report.	2	8

### Plans For the Upcoming Weeks:

- Find solution to bluetooth problems
- Test enclosure 3D print and iterate design as necessary

**Summary of Weekly Advisor Meetings:**

In our advisor meeting we talked about what we have accomplished this past week and what we will be working on in the coming weeks. We also discussed our plans to buy a battery pack, some clips, velcro, and the process to print our enclosure.