

EE/CprE/SE 491 WEEKLY REPORT 3

Start Date – End Date: 9/26/2024 - 10/3/2024

Group number: 13

Project title: PTSD Detection Device

Client &/Advisor:

Advisor: Mohammed Selim

Mentors: Bae Systems - Alice Crutcher, Michael Goderre, Jennifer Plakyda, Ryan Littler

Client: America's VetDogs - Cheyenne Whitetree

Team Members/Role:

Justin Scherrman - Design Engineer - Communications and Sensor.

Neil Prange - Software Engineer

Aidan Klimczak Design Engineer - Microcontroller

Justin Jaeckel - Software Engineer

Ty Decker - Team stenographer

Katerina Zubic - Team organizer and sensor engineer

- **Weekly Summary**

This week, we began to split up the research into different expertises. These included, but are not limited to, sensors, microcontrollers, communication, and PTSD detection practices. Additionally, we continued to organize our Google Drive folder so that it is easy to access any previous information. Finally, we looked at the previous senior design teams' equipment and electronics to begin understanding their design scope to see if we could use elements of their ideas and products for our project.

○ **Past week accomplishments**

We were able to square off some of the organizational tasks. This included creating comprehensive Google sheets to sign off work hours. This is also per our faculty advisor's recommendation. Additionally, began utilizing a meeting note template to keep all information systematic. Finally, assigned research roles to each individual to begin a more in-depth understanding of components and design probabilities.

We believe we have come to a consensus that we will create our own design but may use the previous team's materials.

Neil Prange - Research

- Continued researching the product. Took a deeper look into what other senior design teams who had the same project worked on.

Aidan Klimczak - Research

- Created roles for the project and researched the general design of the project.

Justin Scherrman - Research

- Conducted research on existing products similar to ours. Choose a research role.

Justin Jaeckel - Research

- Researched the microcontrollers used by the last group.

Ty Decker - Research

- Started research on blood pressure wearables and continued to document meetings.

Katerina Zubic - Research + Organization

- Continued to develop a Gantt chart. Additionally, started preliminary research about any sensors that will be needed.

○ **Pending issues**

Inadequate research to further our project

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Neil Prange	Continued research into related projects.	6	18
Justin Scherrman	Researched related projects and market availability.	6	18

Justin Jaeckel	Examined hardware from last year and researched programming relevant microcontrollers	6	18
Aidan Klimczak	Created a list of positions each member should fill. Research a general concept for a design	6	18
Katerina Zubic	Continued to develop Gantt chart. Started research on sensors: heart rate, blood pressure, accelerometer, and EDA.	6	18
Ty Decker	Continued product research. Continued documenting meeting progress.	6	18

○ **Plans for the upcoming week**

- Complete lightning talk presentation
- Decide roles for the project research
- Continue research on project
- Finish the Gantt chart for Monday's meeting.

○ **Summary of biweekly advisor meeting**

No meeting for this report due to bi-weekly meetings. Thus, requirements and information from previous report still stands.