

## ***EE/CprE/SE 492 Status Report 1***

***Start Date – End Date:*** End of 491 - 1/30/2025

***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 Sensors

Neil Prange - Software Engineer

Aidan Klimczak - Design Engineer - Microcontroller

Justin Jaeckel - Software Engineer - Embedded systems

Ty Decker - Security - Stenographer

Katerina Zubic - Team organizer and sensor engineer

- **Weekly Summary**

From the last report, we completed semester one of the project and presented it to our panel. Our final product was able to read heart rate from a user, and also send a signal from the veteran wearable device to the dog worn device. In our presentation, we highlighted and explained our completed functionality by showing demonstrative videos. Some feedback we got was that we need to more clearly outline our constraints for the device, and generate a better plan for complete testing of the device. Over break, we did not work as much, but have gathered some thoughts about what direction we would like to head for the upcoming semester.

○ **Past week accomplishments**

N/A

**Neil Prange - Research/Testing**

- Fill out schedule for upcoming semester
- Look into future wearable designs

**Aidan Klimczak - Research/Design**

- Develop a schedule for the coming semester
- Began researching for upgrades to the current prototype.

**Justin Scherrman - Research/Design**

- Update team member schedules for available times to work together.
- Communicated with the BAE team to set up new meeting times.
- Began research into iteration 2.0 of the current design.

**Justin Jaeckel - Research / Development**

- Brainstormed ideas about future development
- Worked on scheduling for upcoming semester

**Ty Decker - Research / Security**

- Updated team members and advisors on new meeting availability
- Started formulating a plan for security testing.
- Completed lab safety procedures document.

**Katerina Zubic - Research & Testing**

- Gathering available times between the team, Dr. Selim, and BAE systems
- Began discussing the next steps for our project
  - Power, chassis, blood pressure.

○ **Pending issues**

- We do not have a scheduled meeting with Professor Selim or BAE
- Fixing our power consumption issues. The battery is depleted in roughly 1 hour.

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours</u>	<u>HOURS cumulative</u>
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Neil Prange	Met with the team to discuss plans for the upcoming semester, looked into some solutions for wearable implementations, looked into PTSD detection a little more.	2	2
Justin Scherrman	Worked with team discussing next steps and planned our advisor meeting. More steps to come after meeting with Dr. Selim	3	3
Justin Jaeckel	Began research into different ways the product could be improved in a future iteration	2	2
Aidan Klimczak	Began to research the next steps of our project. Develop solutions to the lack of battery life for our device.	2	2
Katerina Zubic	Began working on the organization of the next iteration of the project. Discussed testing for our power-related issues.	3	3
Ty Decker	Began discussing plan for this semester and provided the team and advisors with a new availability schedule. Formulating concrete plan for security testing.	2	2

○ **Plans for the upcoming week**

- Get introductory planning around current schedules with advisor meetings, BAE meetings, and weekly team meetings.
- Begin planning for the project goals and give people things to research and develop.
- We are looking to research our present issues with power, as well as looking back into blood pressure monitoring possibilities.

○ **Summary of biweekly advisor meeting**

N/A

We recently got into contact with Dr. Selim, so we are still figuring out scheduling conflicts. However, we are continuing