

EE/CprE/SE 492 WEEKLY REPORT #

02/24/2020 – 03/09/2020

Group number: sdmay20-24

Project title: Wearable Cardiac Monitor

Client &/Advisor: Huang Cheng

Team Members/Role:

Andrew O'Brien - Software

Peyton Sher - Software

Ruiyu Sun - Hardware

Scott Beard - Hardware

Samantha Kimball - Communications

Vincent Lazzaro - Communications

Weekly Summary:

This week we worked on getting our project video finished for the peer review. We also met up with our advisor and discussed packaging the chips and power usage. We also needed to make up our mind about the final decision about which arduino we were using so we could get our PCB fabricated.

Past Week Accomplishments:

Andrew O'Brien: Significant Progress in the background bluetooth connectivity.

Peyton Sher: Communication with group with status and what needs to be done, as well as app progress

Ruiyu Sun: Meet with advisor and group; work on PCB with Scott.

Scott Beard: Worked on PCB with Ruiyu

Samantha Kimball: We had an advisor meeting to discuss our project progress and I worked with Vincent to reduce the Arduino code where we could. We also worked on our video presentation for the peer evaluations.

Vincent Lazzaro: Worked on developing a way to identify when a heartbeat accord. Worked on presentation. Had an advisor meeting.

Pending issues:

Andrew O'Brien: There is still work to be done with maintaining a bluetooth connection when the app closes. I have found some helpful tips and will be working on that this coming week.

Peyton Sher:

Ruiyu Sun: The power supply requirements are not the same for all boards. We need to add a regulator proply on the PCB.

Scott Beard: Add a voltage regulator and recharging circuitry must be added to operate the system as required

Samantha Kimball: Our system is still noisy when movement is involved but our signal looks good overall.

Vincent Lazzaro: Figuring out a way that can accurately identify a heartbeat and not accept a movements of the body as a heartbeat sometime

Individual contributions:

Name	Contribution	Weekly Hours	Cumulative Hours
Andrew O'Brien	I worked on bluetooth. It has been a lot bigger task than I initially thought it would be.	12	37
Peyton Sher	Meetings and app work	8	20
Ruiyu Sun	Meeting, PCB work	8	22
Scott Beard	PCB work, peer presentation	8	20
Samantha Kimball	Advisor meeting, helped Vincent with looking through the Arduino code to reduce lines where we could and worked on the peer evaluation presentation	10	30
Vincent Lazzaro	Worked on developing a way to identify when a heartbeat accord. Worked on presentation. Had an advisor meeting	10	37

Plans for the upcoming week:

Andrew O'Brien: This week I would like to get the remaining bluetooth stuff working so that we can move onto other app functions.

Peyton Sher: Get the bluetooth actually working in one page so we can actually see live data streaming from the device.

Ruiyu Sun: Finish PCB design and order.

Scott Beard: Finish PCB and order

Samantha Kimball: Work with Vincent to get final touch ups done before sending our parts off to get the PCB and hopefully start working on the final presentation.

Vincent Lazzaro: Work on getting the device to accurately identify a heartbeat

Summary of weekly advisor meeting:

We met with our advisor this week to discuss the updates on the project. We talked about including a voltage regulator to reduce the power consumption by not sending data continuously to the app. Another thing we discussed was that our battery was fairly large so if we can, try to find another smaller battery. This might be difficult as it is starting to get into crunch time and we couldn't find another smaller battery that would fit our constraints when we were looking initially.