Tauscher, Zachary  
Engineering Notebook Spring 22  
CS 420  
Option 2

Week 1 (1/16-1/22)

This was the initial week of classes and we all decided to continue to work on the same project from last semester. Some changes from last semester include the addition of a new teammate, Jorge Garcia and Dr Cheng is no longer here so Dr. Wang became our new product owner. This semester we are going to further develop our audio surveillance system to provide coordinates of an audio source as opposed to just the direction of arrival, polish up our machine learning driven audio classification program, and finish integration of these systems. The work this week was primarily reviewing our previous semesters progress to prepare for work going forward

Week 2 (1/23-1/29)

In this week we broke down our major tasks as a team and began to assign work. Our major focuses this semester are the sound localization, audio classification, User interface, and mounting structure. We identified who would be working on each task and began to add them to our workflow. This week I got Jorge up to speed on what our project is and what we would like him to do. We began to work on setting up 3d design software to design a housing for our physical system to allow it to be mounted on a ceiling. I also started to work on the sound localization program, picking up from where I left off last semester. This semester I have asked Jacob to work with me on this section as well. We will be dividing the work to allow for simultaneous testing. I found documentation on the concepts of time delay of arrival and open-source code designed to localize an audio source using these concepts. I also began to work with the provided documentation from the microphone array that we have on sound source localization. From this I was able to start building this project. I hope to have this finished in the coming weeks.

Week 3 (1/30 – 2/5)

This week I was unable to make progress on my section of the project as the SGA due date for budget requests for RSO’s was Friday the 4th. I am the Treasurer for the Air Force ROTC detachment here at Embry Riddle and this took priority for this week. I will continue working on sound source localization at the start of the next week.

Week 4 (2/6 – 2/12)

This week I have picked where I left off in week 2 and plan to make up the lost time from week 3