Tauscher, Zachary  
Engineering Notebook Sprint 2  
CS 420  
Option 2

Week 1

This week we started to work on a system called ODAS for sound localization. It is a library along with an application that is capable of localizing sounds to some degree that we hoped we could use to provide our application with the necessary data. Also we began to set up our 3d printing system and further refined our 3d model.

Week 2

In this week I continued further research into collecting time delay of arrival values from our microphone array and worked with Jorge on a finishing design elements of the 3d model. While I did not make much progress in the TDOA I did optimize the pi to work with our current system and adjusted the microphone array to work for the ODAS system. However, we ran into issues with compatibility with ODAS as it is not designed to run directly on a raspberry Pi and it is written in C. The library works but the application struggles to run. I plan to work on running the Raspberry Pi Remotely and running the application on an workstation computer.

Week 3

This week we had our finished printing of our first version housing. And began planning for the second model. I began to work with remote connection to the raspberry pi and the overall integration of our sound finding system with the other elements of our project.

Week 4

We are currently stumped on calculating true time delay of arrivals for our demo. While we know our sound finder code works in simulation, real time localization is still a problem, and we are looking for alternative solutions. Primarily we decide to go for an alternative 2 microphone array set up and began writing code to triangulate a sounds location based off angled direction of arrival from two microphone arrays. Additionally, I also worked on putting together a set of simulated time delay of arrival values to use in our system.