Musical Minds LLC

Overview
Musical Minds came to us and told us that we needed to create the back end parts of their application. We were tasked with processing EEG waves into useable data, creating an IOS SDK, and creating and training a Machine Learning model. All of this was to be tied together with their app and uploaded onto an iPhone.

Objectives
Our objective was to create the backend of the Musical Minds application. We had to process raw EEG data into useable values, plug those values into an SDK and a machine leaning algorithm.

Approach
- Our team decided to break down our problem into three smaller parts
  - a processing team for handling the raw EEG data
  - an IOS SDK team for building the SDK
  - a machine leaning team that would build and train the model.
- We started out by doing a decent amount of research
  - We did not have anybody familiar with any of the code required for this project.
- After a few weeks, we got the processing team to start their coding so that they could begin to get a set of test data for the other teams to work with.
- IOS started shortly after to build the SDK
- Machine learning required the other two to be completed to get the data for training the model, but they built their model while they were working

Outcomes
- We finished with three working parts of the project, but could not get them to work together.
- With our code, Musical Minds will be able to adapt our results for their data sets and headphones, as theirs will be different
- We discovered that the test headset is not worth using as it comes poorly documented and has connections issues. Our sponsor has learned this and is shifting gears for test headsets.