**Gene Park**
Final Project
QSS19

<u>**Dynamic Audio Visualization**</u>

I've always wondered whether music was getting louder every year with the evolving technology. There are three main sound frequencies in sound– bass, middle, and treble. If you listen back to rap music back in the 80s, I think there was much less bass, and all you could mostly hear is a lot of middle and treble. They didn't have the perfectly synthetic 808 bass that we have with our rap music today. For example, if you listen to modern day rap such as Travis Scott or Drake, you could hear that the bass is more full. If you hear the old school music such as B.O.B or Eminem, you don't really hear the bass as much.
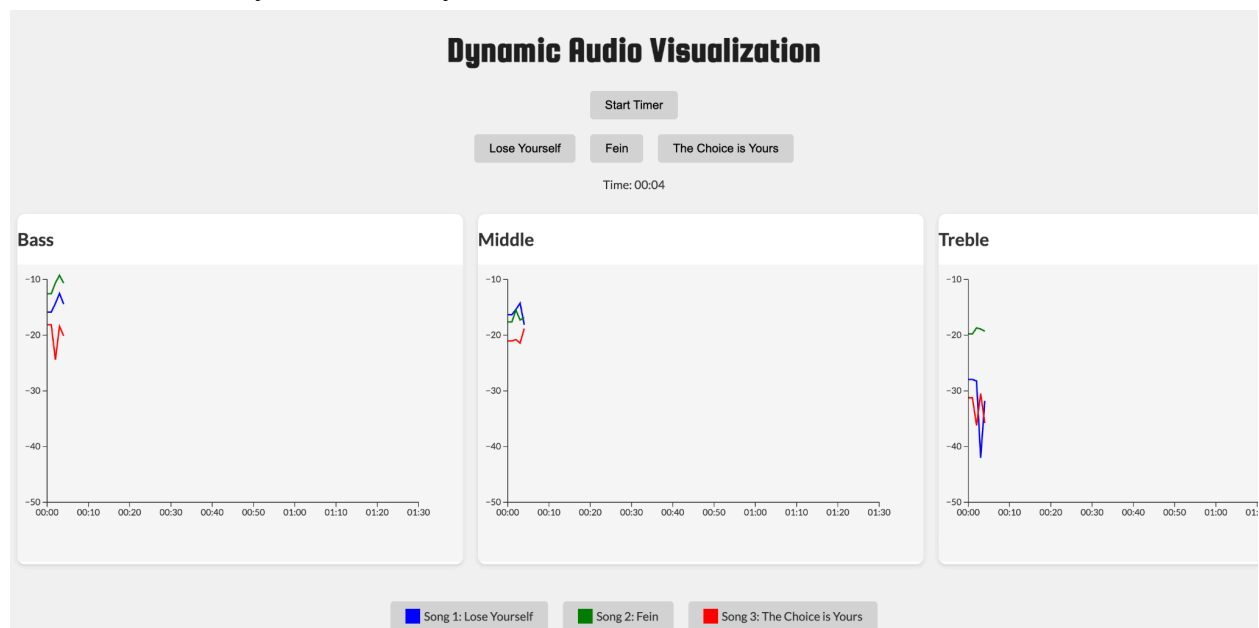
This idea inspired me to come up with this project. I filtered every song in three parts, bass, middle and treble, and then extracted a csv file with their loudness in decibels. I wanted to graph this with D3 making it animated with real time music playing in the background. You could tell when the beat comes in by looking at the graphs, but more importantly, you can compare which song is overall louder by looking at the bar graphs. My hypothesis was right in that the modern day rap music is louder than the older music. It's also interesting to see at a music producer standpoint, seeing how these three graphs interact with each other. For example, at first, the song "Fein" is louder in the bass than usual. After the beat kicked in, the bass went down so that it could make more room for the middle and treble.

If I could extend this project further, I would like the user to be able to automatically select the song within the browser and then it would extract the csv files for all three regions and then plot them real time.