Journal Report 12

12/9/19-12/13/19
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Daily Log

Monday December 9

I fixed an error I was getting with my song inputs. The way this works is that I feed a song URI into the spotipy library and it returns the song's name so that I can open that audio file in librosa to calculate MFCC. This was working for some songs, but around half of my songs were giving me FileNotFound errors. Then today I realized that all those songs were the ones with "feat." in their titles. It turns out the Spotify song titles didn't completely match the titles of songs with "feat." that I had downloaded, so I went through and manually added periods to their titles. Now all the songs are loading properly.

Tuesday December 10

I started entering my data into the fit function of my CNN model. Now that I've gotten to this stage, my focus is on fixing little runtime errors that are popping up all over the place as I get my CNN up and running. There are a lot of different functions and arguments I can use, and it's easy to get caught up and confused by all that, so I'm focusing on making a CNN with the bare minimum of layers/arguments and slowly integrating other things as I progress.

Thursday December 12

I've hit a roadblock: I keep getting errors when I input MFCC data into my fit function. I think the issue is that the MFCC data is made up of arrays filled with arrays, and the function is havign trouble parsing through all that. For now, I'll us one MFCC value per song as input until I learn how to train my CNN with multiple features (the Spotify song features). I should also probably use less data; right now I'm getting MFCCs from the first 30 seconds of each song when I could probably even use just 5-10 seconds of each song.

Timeline

Date	Goal	Met
11/18/19-11/22/19	Continue work on CNN and email MFCC researcher	Yes
11/25/19-11/29/19	Continue work on CNN	Yes
12/02/19-12/06/19	Continue work on CNN	Yes
12/09/19-12/13/19	Feed training data into 1-D CNN	Yes
12/16/19-12/20/19	Feed training data into 1-D CNN and train	In progress

Winter Goal

Run CNN and have it predict Spotify song popularity score (on a scale of 0-100) with at least 80 percent accuracy.

Reflection

It was really frustrating to have finally gotten so far in processing data for my CNN only to hit another error once I finally got to building it. I'll have to revise my plan - I honestly had thought that it wold be smooth sailing with the MFCC data, but Keras is complicated. I might even take time over Winter Break to better familiarize myself with it. There are tons of features and functions I want/need to learn more about.