

**Final Project:**

I did Option B, where I created a computer program to reflect markov chains in directional processes. I first explained markov chains, their uses, and the connection to music. I also talked about the history of markov chains and how the algorithm is constructed. Then, in my computer program, I created functions to showcase markov chains and how they determine probabilities/sequences. I also showed how to decide a sequence of notes, in addition to choosing durations, pitches, and dynamics. I ran a few rounds to see how the states fluctuate. Finally, using these random notes, I ordered them into a piece that can be played in python, and showed the digital sheet music.

Here's the link to the google colab document:

[https://colab.research.google.com/drive/1\\_ZcsDxLSnn4x-kFz\\_spDHJSybaZi0w24?usp=sharing](https://colab.research.google.com/drive/1_ZcsDxLSnn4x-kFz_spDHJSybaZi0w24?usp=sharing)