Math 189 Midterm Project Proposal

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This proposal outlines our intention to harness the Spotify Million Playlist Dataset [1], employing advanced Machine Learning techniques, to enhance the automated selection of songs for playlist continuance. Vall et al. [2]. presents a study on hybrid music playlist continuation by leveraging hand-curated examples and song features to alleviate the cold-start problem for rare and out-of-set songs.

We intend to try to replicate the methods explained in this paper using the Spotify Million Playlist Dataset. The specific extension, as required by the project criteria, will depend on a better understanding of Collaborative Filtering in any models and algorithms used. The outcome of our algorithm on the dataset would be to accurately predict the next 10, 20,or 30 songs that would come in a playlist based on 10, 50,or 100 songs provided in the base playlist.

References

[1] Ching-Wei Chen, Paul Lamere, Markus Schedl, and Hamed Zamani. Recsys challenge 2018: automatic music playlist continuation. In *Proceedings of the 12th ACM Conference on Recommender Systems*, RecSys '18, page 527–528, New York, NY, USA, 2018. Association for Computing Machinery.

[2] Andreu Vall, Hamid Eghbal-zadeh, Matthias Dorfer, Markus Schedl, and Gerhard Widmer. Music playlist continuation by learning from hand-curated examples and song features: Alleviating the cold-start problem for rare and out-of-set songs. In *Proceedings of the 2nd Workshop on Deep Learning for Recommender Systems*, DLRS 2017, page 46–54, New York, NY, USA, 2017. Association for Computing Machinery.