ABSTRACT

Recommender systems play a crucial role in music streaming services like Spotify, helping users discover music that aligns with their preferences. The goal of this research is to create a music recommendation system that utilizes collaborative filtering with Non-Negative Matrix Factorization (NMF). Matrix Factorization decomposes user-music interactions into smaller matrices to predict user preferences for songs they have not listened. NMF imposes a non-negativity constraint on the decomposed matrices, making the resulting factors easier to interpret. Performance evaluation is conducted using RMSE (Root Mean Squared Error) and MAE (Mean Absolute Error) metrics. Based on the test results, the NMF method with an RMSE value of 0.4727 and MAE value 0.3693.

Keyword : recommender system, *collaborative filtering*, *matrix factorization*, music