ABSTRACT

Mood and Emotional Preference Identification System to Support Music Genre Recommendation Using DNN Algorithm

Galih Wibisono [1)], Hendi Hermawan [2)], Riny Nurhajati [3)]

[1)] Student of Informatics Department, Universitas Pembangunan Jaya

[2)] Lecturer of Informatics Department, Universitas Pembangunan Jaya

[3)] Lecturer of Informatics Department, Universitas Pembangunan Jaya

This research presents the implementation of MoodTune, a web-based music recommendation system that generates playlists based on the user's emotional state. The system applies a Deep Neural Network (DNN) model to classify user mood using key audio features such as valence, energy, tempo, and danceability. Due to limited access to Spotify's audio-features API, these features are derived from a simulated dataset constructed from public references and local data. The application is developed using the Next.js framework and integrated with Spotify via NextAuth to retrieve the user's recently played tracks. The classified mood is then matched with suitable songs from a local dataset to provide personalized recommendations. Despite not relying on real-time audio data from Spotify, the system functions end- to-end and demonstrates the potential of using deep learning for emotion-aware music recommendation.

Keywords: Music Recommendation, Mood Detection, Deep Learning, Spotify API, Audio Feature Simulation, Emotion Based Playlist.