

**POPULARITY PREDICTION AND FEATURE  
RECOMMENDATION SYSTEM FOR  
MUSIC INDUSTRY**

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## **ABSTRACT**

This research aims to create an audio popularity prediction system for music artists using machine learning and deep learning. The challenge addressed in this study is the difficulty for artists in determining how to make their songs successful and gain evaluations without involving a large number of people, as there is presently no effective answer to this problem. The study focuses on three auditory characteristics: loudness, duration, and instrumentality. The innovative aspect of this study is the suggested solution to the problem, which is to develop an audio feature recommendation system to assist musicians in improving their music by providing ideas and rating values for certain audio elements. The study objectives include identifying gaps in existing solutions for artists, implementing the audio feature recommendation system, providing methods to improve audio features, and reviewing the proposed system's effect and benefits in the music business. Three research problems are identified: how to use a machine learning model's data set in another model, which features should be included the most in the feature recommendation system, and what is the current development in the machine learning recommendation system.

**Keywords** – Machine Learning, Popularity Prediction, Recommendation System, Audio Features, Music Audio