**MUSIC RECOMMENDATION SYSTEM**

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**Introduction**

*In today’s digital age, music streaming services like Spotify and Apple Music use sophisticated recommendation systems to enhance user experience by suggesting songs that align with individual tastes. This project aims to build a basic music recommendation system, providing a personalized music experience.*

*The core of a music recommendation system involves analyzing user data to identify patterns and preferences. By employing techniques such as collaborative filtering, content-based filtering, and hybrid methods, the system can predict and recommend songs that users are likely to enjoy. This project will cover the following key aspects:*

1. ***Data Collection and Preprocessing:*** *Gathering and cleaning data from music databases to ensure it is suitable for analysis.*
2. ***Feature Extraction:*** *Identifying and extracting relevant features from the music data, such as genre, artist, tempo, and user ratings.*
3. ***Algorithm Implementation:*** *Implementing recommendation algorithms like collaborative filtering, which uses user behavior to suggest songs, and content-based filtering, which recommends songs with similar attributes.*
4. ***Evaluation and Optimization:*** *Assessing the performance of the recommendation system using metrics like precision, recall, and optimizing the algorithms for better accuracy.*
5. ***User Interface Design:*** *Creating an intuitive and user-friendly interface where users can interact with the recommendation system and receive personalized music suggestions.*

*By the end of this project, a functional music recommendation system that not only showcases technical skills but also provides a valuable service to users will be made. This project will enhance one’s understanding of machine learning, data science, and software development.*