# Music Recommendation System Project

This repository contains the implementation of a Music Recommendation System using the Spotify dataset from Kaggle. The system is built with Machine Learning techniques to suggest songs to users based on their listening history and preferences.

## Project Overview

The Music Recommendation System aims to predict the likelihood that a user will enjoy a song. By analyzing the user's past song history and the properties of the music, the system will generate a list of recommended tracks. The model uses the Spotify dataset which contains a variety of features such as acousticness, danceability, energy, instrumentalness, liveness, loudness, speechiness, tempo, valence, and others.

## Objectives

The primary objectives of this Music Recommendation System project are as follows:

- \*\*User Personalization:\*\* To create a personalized experience for users by recommending tracks based on their individual tastes and listening habits.

- \*\*Feature Utilization:\*\* To effectively use the features available in the Spotify dataset, such as acoustic properties and metadata, to inform the recommendation algorithms.

- \*\*Model Accuracy:\*\* To develop a Machine Learning model that accurately predicts user preferences, aiming for high precision and recall in the recommendations.

- \*\*Scalability:\*\* To ensure the system can handle a large number of users and songs without a decline in performance.

- \*\*User Engagement:\*\* To increase user engagement by providing relevant song recommendations that would encourage further interaction with the service.

- \*\*Algorithm Diversity:\*\* To explore and implement different recommendation algorithms and evaluate their effectiveness for this specific application.

- \*\*Data Analysis:\*\* To perform comprehensive data analysis to understand user behavior and song popularity, which in turn can improve the recommendation engine.

- \*\*Continuous Learning:\*\* To implement a system that learns over time, improving its recommendations as it gains more data on user preferences.

These objectives drive the development and iterative improvement of the music recommendation system. By achieving these goals, the project aims to deliver a robust and enjoyable user experience.

## License

This project is licensed under the MIT License - see the LICENSE file for details.

## Acknowledgements

Kaggle for providing the Spotify dataset.

The creators and contributors to the libraries used in this project.

##Contact

For any queries regarding the project, please reach out through the Issues section on GitHub.

## Contributors

Shiva Chaithanya # Music Recommendation System Project

This repository contains the implementation of a Music Recommendation System using the Spotify dataset from Kaggle. The system is built with Machine Learning techniques to suggest songs to users based on their listening history and preferences.

## Project Overview

The Music Recommendation System aims to predict the likelihood that a user will enjoy a song. By analyzing the user's past song history and the properties of the music, the system will generate a list of recommended tracks. The model uses the Spotify dataset which contains a variety of features such as acousticness, danceability, energy, instrumentalness, liveness, loudness, speechiness, tempo, valence, and others.

## Objectives

The primary objectives of this Music Recommendation System project are as follows:

- \*\*User Personalization:\*\* To create a personalized experience for users by recommending tracks based on their individual tastes and listening habits.

- \*\*Feature Utilization:\*\* To effectively use the features available in the Spotify dataset, such as acoustic properties and metadata, to inform the recommendation algorithms.

- \*\*Model Accuracy:\*\* To develop a Machine Learning model that accurately predicts user preferences, aiming for high precision and recall in the recommendations.

- \*\*Scalability:\*\* To ensure the system can handle a large number of users and songs without a decline in performance.

- \*\*User Engagement:\*\* To increase user engagement by providing relevant song recommendations that would encourage further interaction with the service.

- \*\*Algorithm Diversity:\*\* To explore and implement different recommendation algorithms and evaluate their effectiveness for this specific application.

- \*\*Data Analysis:\*\* To perform comprehensive data analysis to understand user behavior and song popularity, which in turn can improve the recommendation engine.

- \*\*Continuous Learning:\*\* To implement a system that learns over time, improving its recommendations as it gains more data on user preferences.

These objectives drive the development and iterative improvement of the music recommendation system. By achieving these goals, the project aims to deliver a robust and enjoyable user experience.

## License

This project is licensed under the MIT License - see the LICENSE file for details.

## Acknowledgements

Kaggle for providing the Spotify dataset.

The creators and contributors to the libraries used in this project.

##Contact

For any queries regarding the project, please reach out through the Issues section on GitHub.

## Contributors

Shiva Chaithanya Vangala