



# NEXT GEN EMPLOYABILITY PROGRAM

| Creating a future-ready workforce

Team Members

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# CAPSTONE PROJECT SHOWCASE

Project Title

**MUSIC WEB APPLICATION USING DJANGO FRAMEWORK**

Abstract | Problem Statement | Project Overview | Proposed Solution |  
Technology Used | Modelling & Results | Conclusion



## Abstract

This project involves developing a music web application using the Django framework to address the challenges faced by music enthusiasts in discovering new music and engaging with their favorite tunes. Key features of the application include a vast music library, personalized recommendations, intuitive playlist management, and social interaction capabilities. By leveraging advanced algorithms and modern web technologies, our platform aims to provide users with a seamless and immersive music discovery experience.

## Problem Statement

In today's fast-paced world, music enthusiasts often struggle to discover new music tailored to their tastes and preferences. Existing music streaming platforms may lack personalized recommendations and social interaction features, leading to a fragmented and unsatisfactory user experience. Additionally, managing playlists and sharing music with friends can be cumbersome and inefficient. There is a need for a comprehensive music web application that addresses these pain points and provides a seamless and immersive music discovery experience for users.

## Project Overview

This project aims to develop a music web application using the Django framework to address the mentioned challenges faced by music enthusiasts. The application will offer a wide range of features, including a vast music library, personalized recommendations, playlist management tools, and social interaction capabilities. By leveraging advanced algorithms and modern web technologies, we intend to create a user-friendly platform that caters to the diverse needs of music lovers.

## Proposed Solution

- The proposed solution involves developing a music web application with the following key features:

**Comprehensive Music Library:** The application will offer a vast collection of songs spanning various genres, artists, and albums, providing users with access to a diverse range of music.

**Personalized Recommendations:** Advanced recommendation algorithms will analyze user preferences, listening history, and trends to suggest tailored music recommendations, helping users discover new artists and genres.

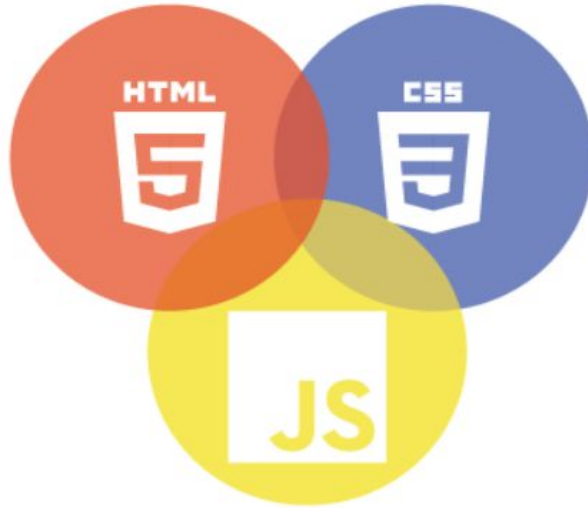
## Proposed Solution

**Playlist Management:** Users will be able to create custom playlists, add or remove songs, and organize their music library according to their preferences. Playlist management tools will enable seamless organization and customization of playlists.

**Responsive User Interface:** The user interface will be designed with responsive design principles to ensure optimal performance across devices and screen sizes. Intuitive navigation and seamless transitions will enhance the overall user experience.

## Technology Used

Front-end



Back-end





## Modelling & Results

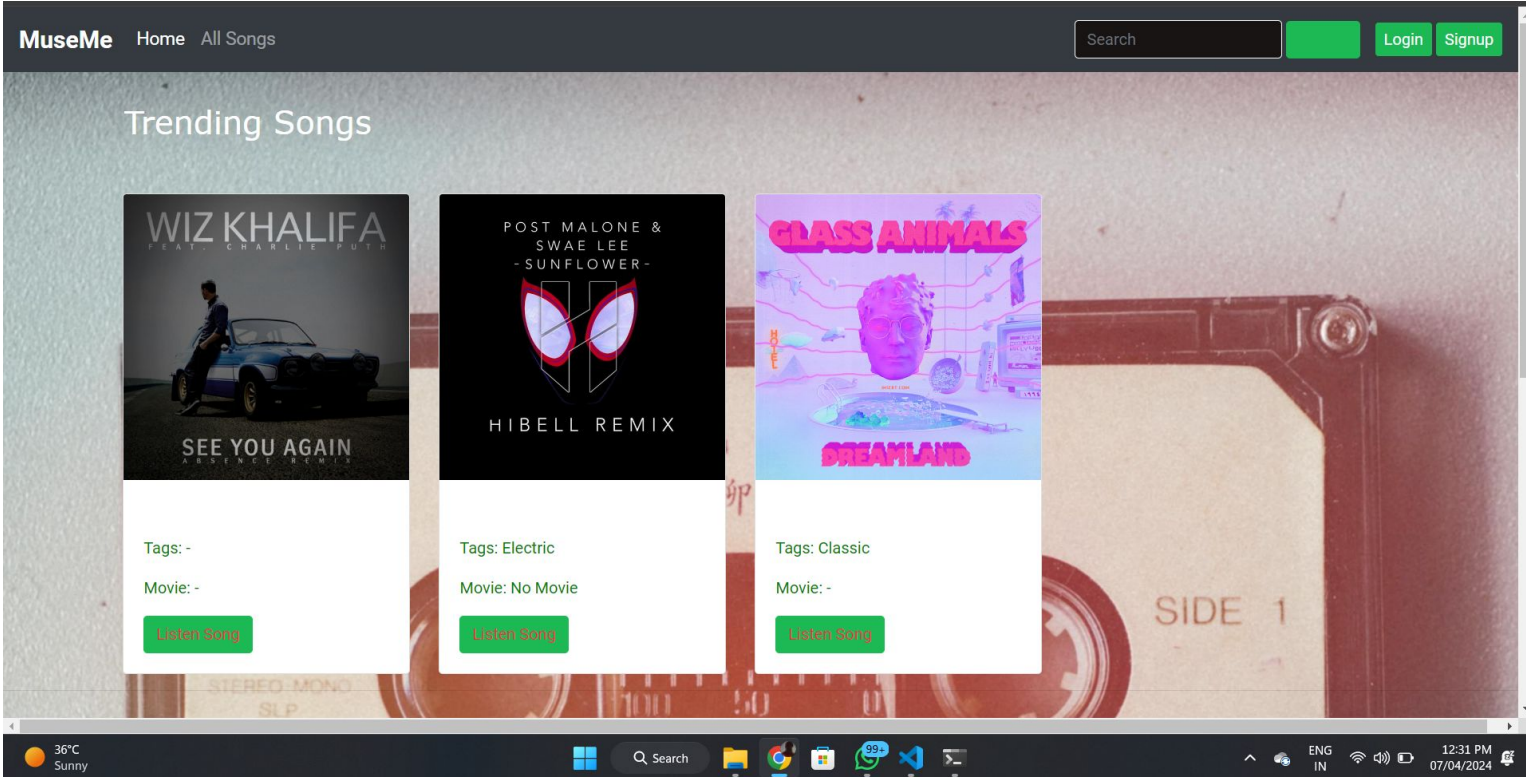
We begin by introducing the modeling approach adopted for the project, providing insights into the techniques and methodologies utilized. Following this, we describe the datasets employed for modeling, highlighting the features and target variables within the data. We also discuss any preprocessing or data cleaning steps undertaken to prepare the data for analysis.

Next, we delve into the development of the models, elucidating their architectures and components. We provide explanations of the chosen models, including any pertinent hyperparameters and tuning strategies applied.

We then proceed to discuss the training and evaluation procedures used to assess model performance. We outline the training/validation splits, batch sizes, and evaluation metrics utilized. We present the results obtained from the training/validation/testing phases, accompanied by relevant visualizations and tables.

Subsequently, we analyze the results, interpreting the model performance metrics and identifying any trends or patterns observed. We compare different models or variations of the same model to ascertain their effectiveness.


## Homepage



The screenshot displays the MuseMe website's homepage. At the top, a dark navigation bar contains the 'MuseMe' logo, links for 'Home' and 'All Songs', a search bar, and 'Login' and 'Signup' buttons. The main content area is titled 'Trending Songs' and features three song cards. Each card includes an album cover, the song title and artist, tags, a movie association, and a 'Listen Song' button. The background of the page is a collage featuring a vinyl record with 'SIDE 1' and 'STEREO-MONO SLP' markings, and a vintage-style photograph of a man leaning against a car.

**MuseMe** Home All Songs  [Login](#) [Signup](#)


### Trending Songs



WIZ KHALIFA  
FEAT. CHARLIE PUTH  
SEE YOU AGAIN  
ADVENTURE

Tags: -  
Movie: -


[Listen Song](#)



POST MALONE &  
SWAE LEE  
- SUNFLOWER -  
HIBELL REMIX

Tags: Electric  
Movie: No Movie







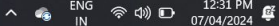
[Listen Song](#)



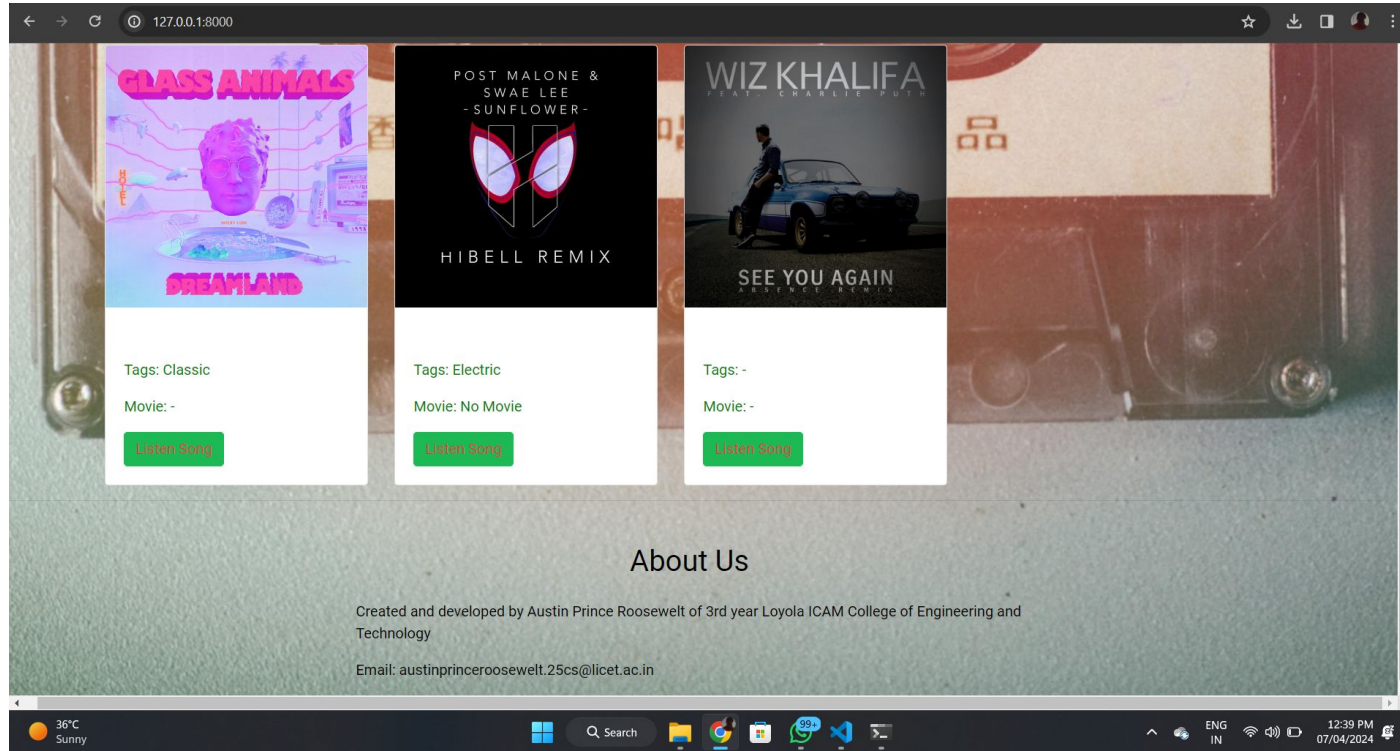
CLASS ANIMALS  
DREAMLAND

Tags: Classic  
Movie: -

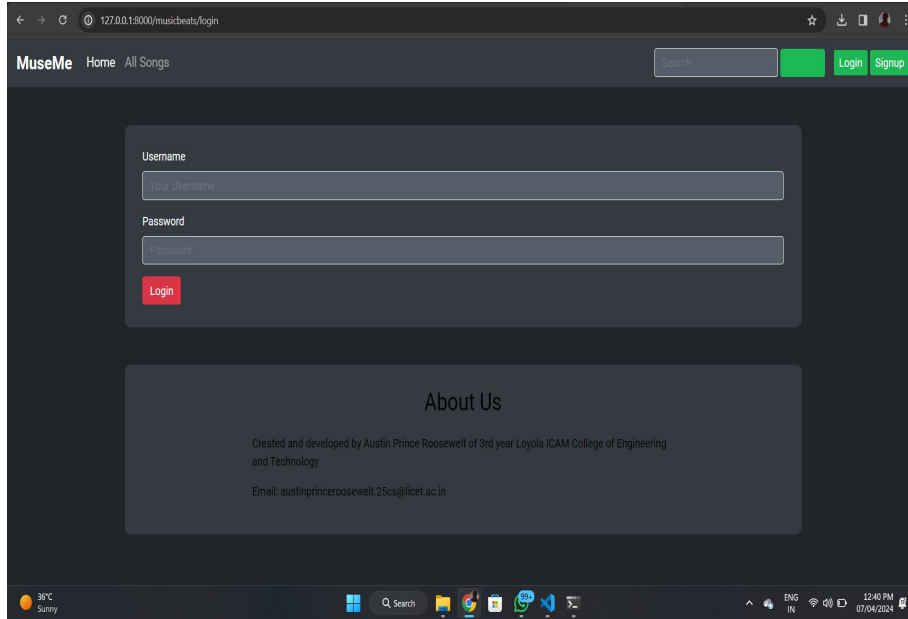
[Listen Song](#)

36°C Sunny  Search      

## About-Us-Page



## Service-Page



A screenshot of a web browser showing the login page of a service named 'MuseMe'. The browser's address bar displays '127.0.0.1:8000/musicbeats/login'. The page has a dark theme. At the top, there is a navigation bar with 'MuseMe', 'Home', and 'All Songs' links, a search bar, and 'Login' and 'Signup' buttons. The main content area features a login form with 'Username' and 'Password' labels, corresponding input fields, and a red 'Login' button. Below the form is an 'About Us' section with text stating it was created and developed by Austin Prince Roosevelt of 3rd year Loyola ICAM College of Engineering and Technology, with an email address 'austinprincerosewell.25cs@licet.ac.in'. The Windows taskbar at the bottom shows the date as 07/04/2024 and the time as 12:40 PM.

MuseMe Home All Songs

Search Login Signup

Username

Your Username

Password

Password

Login

About Us

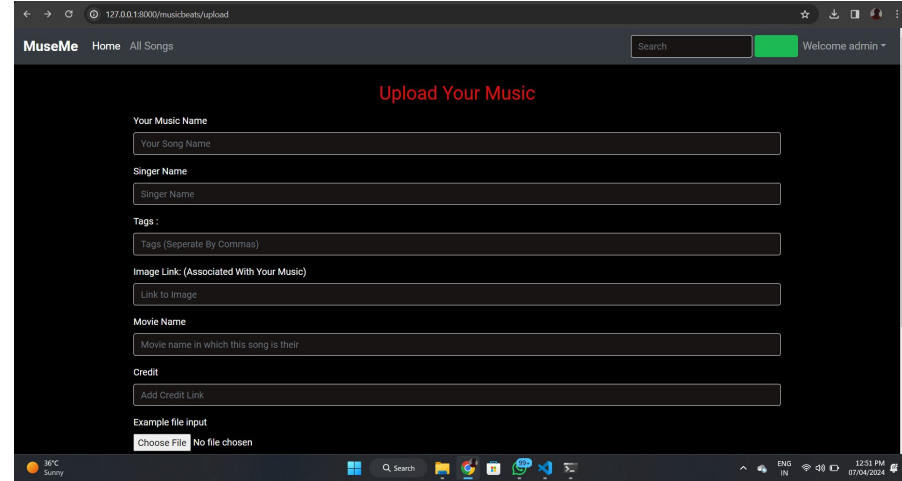
Created and developed by Austin Prince Roosevelt of 3rd year Loyola ICAM College of Engineering and Technology

Email: austinprincerosewell.25cs@licet.ac.in

36°C Sunny

Q Search

ENG IN 12:40 PM 07/04/2024



A screenshot of the 'Upload Your Music' page in the 'MuseMe' application. The browser address bar shows '127.0.0.1:8000/musicbeats/Upload'. The page title is 'Upload Your Music' in red. The navigation bar is identical to the login page but includes a 'Welcome admin' dropdown. The form contains several input fields: 'Your Music Name' (with a sub-label 'Your Song Name'), 'Singer Name', 'Tags' (with a sub-label 'Tags (Separate By Commas)'), 'Image Link: (Associated With Your Music)' (with a sub-label 'Link to Image'), 'Movie Name' (with a sub-label 'Movie name in which this song is their'), 'Credit' (with a sub-label 'Add Credit Link'), and 'Example file input' (with sub-labels 'Choose File' and 'No file chosen'). The Windows taskbar at the bottom shows the date as 07/04/2024 and the time as 12:51 PM.

MuseMe Home All Songs

Search Welcome admin

Upload Your Music

Your Music Name

Your Song Name

Singer Name

Singer Name

Tags :

Tags (Separate By Commas)

Image Link: (Associated With Your Music)

Link to Image

Movie Name

Movie name in which this song is their

Credit

Add Credit Link

Example file input

Choose File No file chosen

36°C Sunny



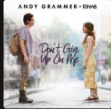






Q Search

ENG IN 12:51 PM 07/04/2024

## Departments-Page

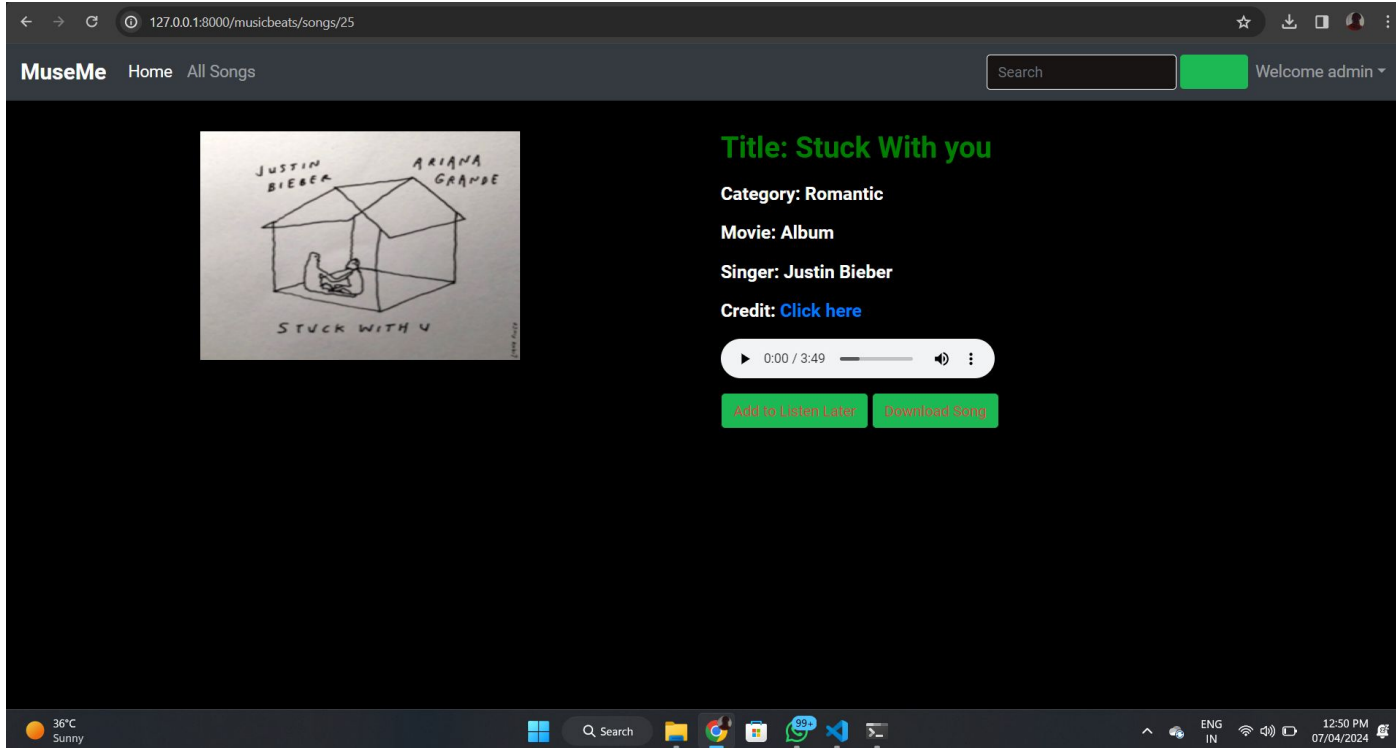
← → ↻ 127.0.0.1:8000/musicbeats/songs/ ☆ ⬇ 🗖 👤 ⋮

MuseMe Home All Songs 🔍 Search Welcome admin ▾

|  |  |  |
|--|--|--|
|  <p><b>Die for You</b><br/>Tags: Hip Hop<br/>Movie: Album<br/><a href="#">Listen Song</a></p> |  <p><b>Stuck With you</b><br/>Tags: Romantic<br/>Movie: Album<br/><a href="#">Listen Song</a></p> |  <p><b>Don't Give up on me</b><br/>Tags: Five feet Apart<br/>Movie: Five Feet Apart<br/><a href="#">Listen Song</a></p> |
|  <p><b>Dandelions</b><br/>Tags: -<br/>Movie: -<br/><a href="#">Listen Song</a></p>            |  <p><b>Urugi Urugi</b><br/>Tags: Romance<br/>Movie: Joe<br/><a href="#">Listen Song</a></p>       |  <p><b>hayyoda</b><br/>Tags: Javan<br/>Movie: Javan<br/><a href="#">Listen Song</a></p>                                 |
|  <p><b>Naa Ready</b><br/>Tags: Fight<br/>Movie: Leo<br/><a href="#">Listen Song</a></p>       |  <p><b>Heat Waves</b><br/>Tags: Classic<br/>Movie: -<br/><a href="#">Listen Song</a></p>          |  <p><b>Sunflower</b><br/>Tags: Electric<br/>Movie: No Movie<br/><a href="#">Listen Song</a></p>                         |

36°C Sunny Windows Search Taskbar 12:49 PM 07/04/2024

## Blog-Page



The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/musicbeats/songs/25`. The website is titled "MuseMe" and has navigation links for "Home" and "All Songs". A search bar and a user greeting "Welcome admin" are visible in the top right. The main content area features a hand-drawn illustration of a person sitting inside a house, with the text "JUSTIN BIEBER", "ARIANA GRANDE", and "STUCK WITH YOU" around it. To the right of the illustration, the song details are listed: "Title: Stuck With you", "Category: Romantic", "Movie: Album", "Singer: Justin Bieber", and "Credit: [Click here](#)". Below this information is a video player with a progress bar showing "0:00 / 3:49" and a play button. At the bottom of the player are two buttons: "Add to Listen Later" and "Download Song". The browser's taskbar at the bottom shows the system clock as 12:50 PM on 07/04/2024, along with various system icons and a weather widget indicating 36°C and Sunny.

MuseMe Home All Songs

Search Welcome admin

**Title: Stuck With you**

Category: Romantic

Movie: Album

Singer: Justin Bieber

Credit: [Click here](#)

0:00 / 3:49

Add to Listen Later Download Song

36°C Sunny

12:50 PM 07/04/2024

## Future Enhancements:

**Better Recommendations:** Improve suggestions for songs and artists based on what users enjoy listening to. This could include looking at what their friends like too.

**More Social Features:** Add more ways for users to interact, like private messaging and group chats. This could help users connect with others who share their taste in music.

**Connect with More Music Sources:** Allow users to access music from more places, like Spotify or Apple Music. This would give them access to a wider range of songs and artists.

**Make it Look and Feel Better:** Update the design to make it more modern and easier to use, especially on phones and tablets.

**Smarter Playlists:** Create playlists automatically based on what users like and what they're doing. For example, if it's sunny outside, suggest some upbeat songs.

**Listen Without Wi-Fi:** Let users download songs and playlists so they can listen offline. This would be great for times when they don't have an internet connection, like on a plane or subway.

**Get Users Involved:** Encourage users to contribute their own playlists, reviews, and recommendations. This could help build a sense of community among users and make the app more engaging overall.



## Conclusion

In conclusion, the development process of our music application utilizing the Django framework has been characterized by diligence and innovation. Through meticulous attention to detail and a commitment to user-centric design, we have cultivated an exceptional platform that redefines the music listening experience.

Moving forward, our dedication to continuous improvement remains unwavering. We are poised to further refine and elevate our application, with a strategic focus on enhancing user engagement and fostering a vibrant community of music enthusiasts.

As we embark on the next phase of our journey, we express our sincere gratitude to all stakeholders who have contributed to our success thus far. Together, we will continue to push the boundaries of technological innovation and deliver unparalleled value to our users.

**Thank You!**