Project And Professionalism

(6CS007)

Literature Review

Music Application Sarangi

Student Id: 2359339

Student Name: Spandan Dahal

Group: L6CG10

Reader: Aakash Adhikari

Supervisor: Dipti Gwayali

Submitted on: 2025/01/02

Acknowledgement

Table of Contents

1. Introduction

Music has become a major part of modern life in every person also with the help of modern technology the transform of people have become a major role. With the help of technology people have an easy access, discover and interact with music in any part of the world. In the past ten years the rise of music and music platform has become very large. At present people can hear music from any part of the world. At the present context we can see the different platforms for music like spotify and apple music who have rule the market in music industry. With the help of this application it will beneficial for both the artist and the listener. Likewise this application Sarangi is made for all the Nepali users and artist.

Sarangi is a project that aims to design and develop a music application that has a great UI and design. Sarangi will be focusing on the development of both the user and artist. This project offers the best user satisfaction and sets a new standard in the music application. Different types of new features and systems can be seen in the application. This application have an ability to compete with the best music application.

2. Literature Review

2.1 Music Recommendation System

Recommendation of music represents to the music which are listened more can be recommended to the user. Recommendation of music plays a vital role in the application. Before the application used to use the traditional recommendation system but now in this present context we can see the recommendation system has a vital role in the software. Different types of filtering methods can be sued to make the user to recommending the right music to the user. Different people of different society and culture listen music according their choice and it is very important to suggest the right songs to the user. In the recent times there are different types of technologies and artificial intelligence to know the right choice of the music of a

particular person. With the help of recommendation system it will be very helpful and easy to understand the choice of user in the music. (Liang, 07 May 2021)

2.2 Artificial Intelligence in Music Application

At the present time everyone know the use of Artificial Intelligence has been increasing rapidly in the market. In every sector the use of artificial intelligence is increasing rapidly and smoothly. Different types of artificial intelligence have their own features and work. Artificial Intelligence have a great scope in different fields. In music application we can use artificial intelligence in different forms and in most of the cases the work done by artificial intelligence matches the user choice. Now in the present time the most popular music application is "Espotify" this application is very popular in the market and most of the people use it in the world. This application has introduced the emotion based music player that can used by facial expression and can also play the music as the facial expression of the user. According to the user current mood the application can play the music. (Sun, 12 sept 2024)

2.3 Challenges and Future Directions

Music application have different types of challenges and work needed to be done. Different types of challenges and task can be seen in the application. At first we can see the cold start problem in the application. For most of the people the music application will be a new application to be use. So there might be some difficulties in using the application for the users. For the new users the proper guidance and steps should be teach in order to use the application. The user should feel comfortable to use the application.

In the future tasks of the application the admin of the project should focus on different platforms and works. The admin should be fully responsible for the work of the project. The work on the artificial intelligence to recommend the music should be done. Data of the user should be handled more safely. Loss of data can damage the application and user should feel safe to share their personal data to the application. (Avanzini, 14 March 2019)

2.4 User Interface Design in Music Application

User interface have a crucial role in the music application. User interface makes the user experience great in the application. Enhancing the user experience helps the user to use the application more easy and comfortable to use. If the user interface is not good in the application then the application has no future. Visual appeal is one of the most important work in the user interface design. At first every application should work on the simplicity work rather than the other stuffs. As more the application will be simple the more people can understand can work on the software and make the application easy to understand. The user feedback is most important in the user interface. The software should be tested time to time to make sure everything is working properly.

2.5 The Role of Data in Music Application

There are different types of data of user in the application. In order to use the application every user must put the personal data like name, phone numbers, email. In order to make the user account user must provide their bank details to the application. Therefore the data of the user must be kept safe. The incorporation of big data analytics in music applications has transformed how platforms analyze user behavior and preferences. As investigated the application of big data in music recommendation systems, highlighting that the collection and analysis of real-time data improve the capacity to accurately predict user preferences. This study emphasizes the significance of scalable infrastructures capable of handling extensive datasets without sacrificing speed or efficiency. Additionally as investigated the impact of user engagement metrics like skip rates, listening durations, and playlist durations on algorithm optimization. They determine that utilizing these metrics can result in more tailored recommendations, thus enhancing user retention rates. Nonetheless, they also warn about possible privacy issues stemming from large-scale data. User data are very important to the software because it contains all the crucial information of the user.

2.6 Accessibility in Music Application

Accessibility is one of the important domain of the music application. Music application design has a very important role in the software work smoothly. Accessibility continues to be a largely overlooked area in the development of music applications. A study conducted explores the interactions of visually impaired individuals with music applications and highlights major obstacles, including complicated navigation and insufficient screen reader support. The research promotes inclusive design principles, proposing elements such as voice-assisted controls and haptic responses to improve accessibility. In a similar manner, suggest a framework aimed at inclusive music application design, emphasizing customizable user interfaces. They contend that offering various interaction methods, like gestures and vocal commands, can accommodate a wider range of users, including those with motor impairments. This framework provides practical recommendations for developers looking to build more inclusive platforms. (Moysis, 13 feb 2023)

2.7 Emerging Technologies in Music Application

As the day passed every day a new technologies are used in the market and in every software. In order to make the application stable every updates should be done by time. New technologies like augmented reality (AR) and block chain are transforming the music application environment. A research explores the use of AR for music visualization, enabling users to engage with music in immersive experiences. Different types of new updates can be done by the help of different codes and networks. This method not only boosts user involvement but also offers chances for artists to craft distinctive experiences for their audience. Block chain technology is yet another field gaining momentum in music applications examined the application of block chain for equitable royalty distribution and copyright safeguarding. Increasing the raise of Artificial intelligence has a major role in technologies in the music application. At the present context artificial intelligence is used in every sectors and applications. They emphasize that decentralized ledger technology can resolve transparency concerns in the music industry, guaranteeing fair payment for artists. Nevertheless, the research highlights scalability and adoption issues that must be tackled for broad implementation. (LIu, 2021)

3. Conclusion

This report reviews the highlights of the component of the Sarangi. It has also discussed the components like interface design, user functions, recommendation system. It has also discussed the existing music application like Spotify and Apple Music. This application deals will all types of music in local area. Different types of algorithms are used with the advanced machine learning techniques. UI design helps to enhance the importance of the project. This report has a strong foundation for the music application Sarangi and helps in focusing and personalization, engagement and accessibility. The final outcome of this project Sarangi will be great.

References

Avanzini, F., 14 March 2019. *Multilayer Music Representation.* Milan, Italy, s.n.

Liang, L., 07 May 2021. Computer Muisc Software. Issue IEEE.

LIu, J., 2021. *Application Of Music Technology.* Dalian, China, IEEE.

Moysis, L., 13 feb 2023. Deep Music Learning. Issue IEEE, p. 21.

Sun, Y., 12 sept 2024. Artificial Intelligence In Muisc Application. Issue IEEE.