



A Music App: HyBeats

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Abstract—

With the advent of smart phones and Internet, users are at the age of information overloading. Recommendation systems are used to address this problem by providing recommendations or suggestions. Every smart phone nowadays contains Music players which will organize the music content in the mobile device. Most of the players available now will provide frequently played songs or recent songs as suggestions to the users. In this paper we have developed a mobile based music recommendation App. The proposed App considers users listening pattern and provides suggestions based on the similar users to a target user.

With fast development of communication technologies and propagation of mobile devices, smart phones are increasing in number rapidly, there are about 2 Billion smart phones in 2016 around the world and the number is about to reach 3 billion by 2019, with increasing number of mobile applications the major course of entertainment has changed, all companies around the world are focusing on mobile device rather than desktop as their major source for clients.

The content for entertainment may be games, music, video streaming but one of the major source is music listening which attract countless number of users. This makes very difficult for the users to choose a perfect application which fullfills all their wishes and makes he satisfied while listening to the music. This thesis is about the required all in one music streaming app "HyBeats" which provides multiple facility and ease of access with better design, stability and performance. This will discard the unnecessary applications replacing them with all in One Indian music streaming app with multiple functionalities. Almost all the android or ios users use the music player to stream online music now-a-days. While using these online music streaming apps , people think about the connection between music and mind, sound quality, sharing their favourite music to the loved ones, and many other features. This makes very difficult for the users to choose a perfect application which fullfills all their wishes and makes he satisfied while listening to the music.

This thesis is about the required all in one music streaming app "**HyBeats**" which provides multiple facility and ease of access with better design, stability and performance. This will discard the unnecessary applications replacing them with All in One Indian music streaming app with multiple functionalities.

Introduction—

Music streaming services have become the most popular method for consumers to listen to music. Streaming services offer consumers unlimited access to large catalogues of music.

In this project we will make sure that the music lovers should get every functions/facility in one app only. This app will have its own fruit features which are not available in today's music streaming apps like Spotify, Jio Saavan etc. If a customer is sending a friend request or sharing his/her playing music with a person then there is proper privacy of everything. The main motive of this application is to share your feelings and emotions through songs. Once a person connects to the other via "add request" button, they share their playlists, listen to same song at the same time played by the host person, send stickers and texts to express their feelings, and many more.

Related Works—

"Spotify -- Large Scale, Low Latency, P2P Music-on-Demand Streaming [1]."

Spotify is a music streaming service offering low-latency access to a library of over 8 million music tracks. Streaming is performed by a combination of client-server access and a peer-to-peer protocol. In this paper, we give an overview of the protocol and peer-to-peer architecture used and provide measurements of service performance and user behavior. The service currently has a user base of over 7 million and has been available in six European countries since October 2008. Data collected indicates that the combination of the client-server and peer-to-peer paradigms can be applied to music streaming with good results. In particular, 8.8% of music data played comes from Spotify's servers while the median playback latency is only 265 ms (including cached tracks). We also discuss the user access patterns observed and how the peer-to-peer network affects the access patterns as they reach the server. It's impossible to discuss the music streaming market without Spotify. This app is in line with the two streaming giants — Apple Music and YouTube Music. It's no secret that Spotify has been growing fast, offering an enormous selection of music at no cost. Free accounts have some listening limitations and ads. The service offers premium accounts to get unlimited access to music.

"Mobile based music recommendation system [2]."

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suggestions. Every smart phone nowadays contains Music players which will organize the music content in the mobile device. Most of the players available now will provide frequently played songs or recent songs as suggestions to the users. In this paper we have developed a mobile based music recommendation App. The proposed App considers users listening pattern and provides suggestions based on the similar users to a target user.

“Music Sharing Platform Based on Sina App Engine [3].”

Music sharing is one of the most important components in interactive entertainment. In recent years, mobile music market has experienced a rapid growth. Current mainstream music sharing platforms provide users with a large number of online music, which however suffer some limitations of functionality since they neglect the interactions in the physical world. This paper presents the entertainment-oriented Location-Based Mobile Services (LBMSs), which is a music sharing platform based on Sina App Engine, where a novel music recommendation algorithm is proposed based on the geographical location. We utilize a map-based interface for visualizing the possible points of interest and the related information. The combination of online music sharing and offline music sharing creates a new music sharing mode. The proposed music sharing platform is developed with cloud computing techniques, which relies on sharing of resources and focuses on maximizing the effectiveness of the shared resources. Music sharing on cloud is more convenient and efficient in this case. Experimental results show that this platform can function properly and achieve satisfactory user experience.

“Releasing stress using music mood application: DeMuse [4].”

Listening to music can reduce stress. This research is to study the development of music mood application called DeMuse. It mainly concerns with the users' favorable and recommended music genre. In addition, DeMuse will be presented in health and fitness category of mood music based mobile application. In order to complete DeMuse, it will carry out the identification of the features for the particular mobile app (DeMuse), identification of the music and mood categories respectively. DeMuse will then equipped with the general features of music application and meditation purpose. Besides, it also contains the properties of organizing favourite music and theme. In the development of DeMuse, a methodology named Mobile-D is being applied. From this methodology, it might help us to make sure that a detail analysis to be done, every single functionality that needed will not be missed out, and increase the efficiency of work distribution and time spending. After that, several prototype might release in order to test by the target users, and hence building a strong interaction bond with users, so that a complete and successful DeMuse able to satisfy the communities. Thus, this music mood application was

expected to decrease users' stress level with suitable music therapy. DeMuse displays a series of proper category music which follow users' emotion to relief users' stress level in daily life in order to prevent direct and indirect negative impacts.

“The design of intelligent music system based on Internet of Things [5].”

With the rapid development of smart home, a cheap and intelligent music system which is easy to install and operate will be of great concern. In this paper, the STM32F407ZET6 is used as micro-controller core of the control by the music system. Audio decoding module, SD card, Bluetooth audio receiver, radio module, audio source selection module, po-wer amplifier, etc. are included in this system. The intelligent music system can achieve multi sound source input function and selection of the music playback mode including local music playback in SD card, mobile phone APP control by WIFI wireless module, handheld devices with Bluetooth. With high fidelity amplifier circuit design, sound quality is pure. Also it has the radio function for users. After integrated debugging of software and hardware, the music system can meet the requires of the design.

Proposed Model—

In this project we will make sure that the music lovers should get every functions/facility in one app only. This app will have its own fruit features which are not available in today's music streaming apps like Spotify, Jio Saavan etc. If a customer is sending a friend request or sharing his/her playing music with a person then there is proper privacy of everything.

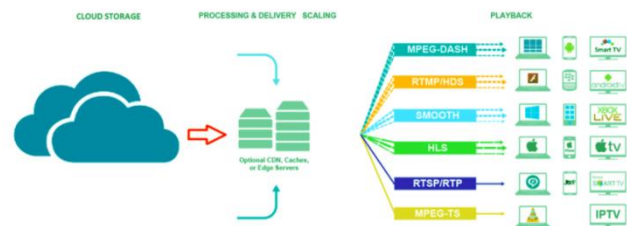


Fig 1 : Architecture Diagram

Data Collection—

In this section, we present the experiments we conducted to evaluate our model. Using the survey report as our baseline, we conducted an experiment to determine the setting of the hyperparameters.

Feseability—

As already demonstrated in the literature review, Many music apps have been already implemented in past spotify, Jio Savan, Wynk etc.

- To solve the unique problem that is faced, articulated in problem formation, we are going to use really basic objects.
- The codes will be written in basic language like HTML, CSS, JS and for backend data management we are going to use SQL or mongo DB. The codes will be hosted in GitHub.
- Product management will be all computer based; full time service will be provided as product will be auto generated at the same time backend team will be providing 24*7 service.
- The time limit of 2-3 months is required for proper testing and execution. Surveys and testing are the part where time is required more.

Conclusion and Future works—

In this project we will make sure that the music lovers should get every functions/facility in one app only. This app will have its own fruit features which are not available in today's music streaming apps like Spotify, Jio Saavan etc. If a customer is sending a friend request or sharing his/her playing music with a person then there is proper privacy of everything.

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