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Emotion-based Music Recommendation Application

Abstract

In today's world, utilizing music-streaming services and their respective recommendations has become a daily occurrence for many. In this project, we are proposing an application that provides music recommendations based on emotional predictions and requests from users. Users will input their past music information using industry-leading music streaming platforms. Our users will then request recommendations from their previously listened-to music based on a particular emotion they would like to experience. Our application will output calculated recommendations based on songs classified by emotions using their past music data, retrieved from their inputted streaming platform account.

Product Description

First, the user will input their particular streaming platform information. This will provide our application with the data required to make appropriate recommendations later on. Next, the user will need to select an emotion they would like to experience from the application's music recommendations. Finally, the user will be presented with the calculated recommendations that were predicted to invoke the emotion they requested. The recommended songs will not be new songs to the user. All recommendations will be based on the user's previous music library.

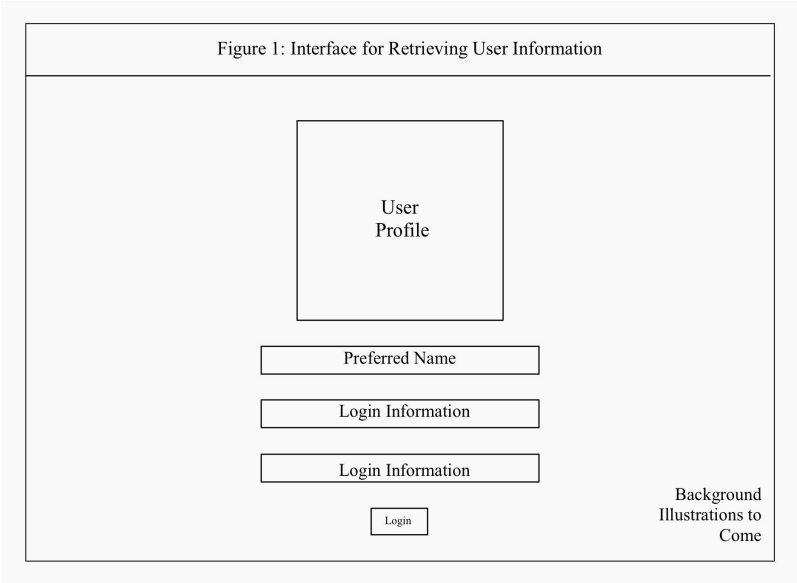
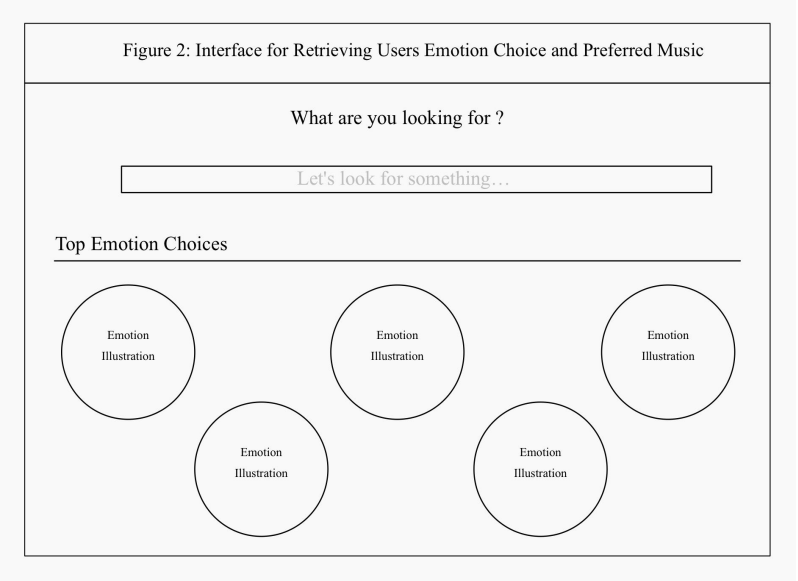


Figure 1.

Displays the user interface when users first open the application. Users will be able to input music-streaming account information.

Figure 2.

Displays the user interface when users have successfully connected music-streaming account, and its corresponding information, where users can select the emotion of the recommendations they would prefer.



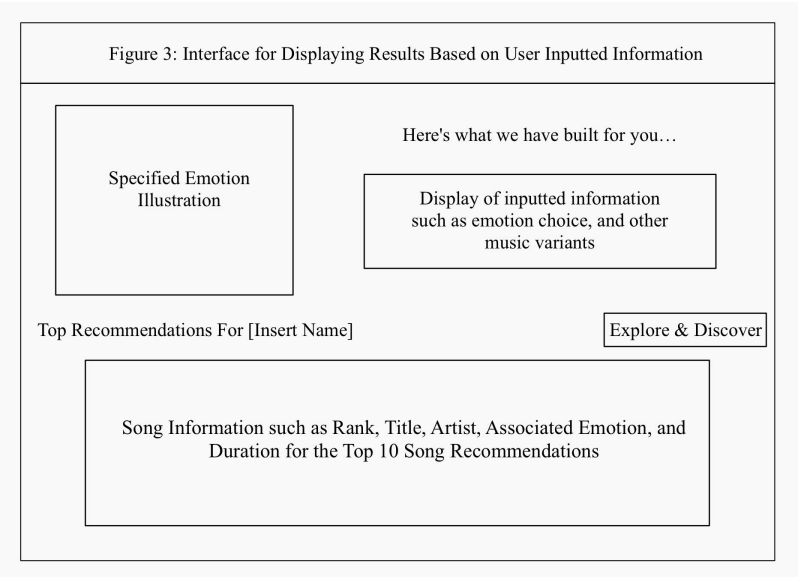


Figure 3.

Displays the results after the application calculates recommendations based on emotion selected and users' information from their music streaming account.

Incremental Approach

In our first increment, the application will consist of creating a code that is able to retrieve users' music streaming data from a particular music streaming platform using the corresponding API. Additionally, our first increment will include a user interface to retrieve user information that would be required for the code.

In our second increment, we will create another user interface to retrieve the emotion request of the user and a clustering network that categorizes the users' songs to their appropriate emotions based on the users' music streaming data.

In our third increment, the application should be able to retrieve song recommendations from the clustering network based on the user's emotional requests. We will also create a corresponding User Interface that presents the recommendation findings.