Problem Statement and Solution

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Title: Difficulty in Matching Music to User Emotions

Many people enjoy music as a way to relax, motivate themselves, or improve their mood. However, choosing songs that accurately match their current emotional state is often time-consuming and ineffective. Users frequently struggle to find music that resonates with their emotions in real time, leading to frustration, wasted time, and a less satisfying listening experience.

For example, a student feeling stressed before an exam may want relaxing or motivating music but wastes several minutes searching through playlists without finding the right match, which adds to their anxiety rather than relieving it.

The goal of this project is to develop an application that automatically identifies a user's mood and plays music that aligns with or enhances that emotion, providing an effortless and enjoyable music experience.

Proposed Solution

The proposed solution is a cross-platform application for Android, iOS, and Web that leverages real-time facial emotion recognition to detect a user's mood and immediately plays songs designed to complement or improve their emotional state. The app uses the device camera to analyze facial expressions and determine the user's current emotion. Based on this detected mood, it automatically selects music to relax, motivate, or uplift the user. Over time, the system can learn individual preferences to provide a highly personalized experience.

For instance, if the app detects that a user appears sad, it could play an uplifting playlist to improve their mood, whereas a happy user might receive energetic music to maintain motivation. The interface is designed to be seamless and user-friendly, requiring minimal effort: the user simply opens the app, lets it scan their face, and enjoys music tailored to their emotional state.

This approach not only saves users time but also enhances their well-being by providing music that aligns with their emotions and encourages engagement through a smooth, interactive experience.