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A Systematic Review on Emotion-Based Music Recommendation System for Blind Individuals

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Abstract

Music recommendation systems based on emotions have gained traction for their ability to personalize user experiences. However, such systems often overlook the unique needs of blind individuals by depending heavily on visual user interfaces and data inputs such as facial expressions. This research systematically reviews existing emotion-based music recommendation systems, employing the PRISMA methodology to analyze their suitability for blind users. It explores various emotion detection methods, including electroencephalogram (EEG) signals, voice commands, and physiological signals, emphasizing non-visual alternatives. This study focuses on evaluating current technologies and methods, identifying their strengths and limitations, and proposing hybrid solutions combining EEG and voice recognition. This review results in the identification of significant gaps in accessibility and precision in existing systems for blind users. The proposed technique integrates EEG-based emotion detection and voice-command systems to create a non-visual, user-centered music recommendation platform. This hybrid approach leverages real-time adaptability and artificial intelligence-driven personalization to address these challenges. It will enhance the inclusivity and emotional engagement of blind users, providing accurate emotion detection and seamless interaction. The implications of the study highlighted the advancements in hybrid technologies and artificial intelligence are vital for future development to bridge the accessibility gap and ensure equitable user experiences.

Keywords: *Music recommendation system, Emotion, electroencephalogram emotion detection, Blind people, Voice command*