

Comprehensive Review of Mobile Personal Assistant (Chatbot) for Depression Patients Using Emotion Recognition :A Large Language Model

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Depression is a common mental health issue that affects many people, often making them feel persistently sad or lose interest in activities. Despite its global impact, with 246 million people affected worldwide, access to professional help remains limited due to cost, stigma, and accessibility issues. Existing mobile personal chatbots primarily offer generic responses without personalized context, lacking deep personalization that adapts to user history, preferences, and specific mental health needs, thereby reducing their effectiveness. Additionally, they have limited integration with established mental health tools, inadequate emotion recognition through multimodal inputs, insufficient mechanisms for long-term engagement, and often lack robust privacy and security measures, compromising user trust and reliability in tracking and assessing mental health conditions. This review explores how AI-powered chatbots, especially those integrated with emotion recognition, might offer personalized and empathetic support to people dealing with depression. The study explored the effectiveness, feasibility, and ethical considerations of implementing AI in mental health applications, aiming to identify gaps in current care methods and enhance patient support and engagement. Future work will focus on refining the system, expanding its capabilities, and ensuring it meets diverse user needs while adhering to ethical considerations and data privacy.

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