PROJECT TITLE : AI-Powered Mental Health Assistant

Abstract:

Mental health is a critical aspect of overall well-being, yet many individuals face barriers in accessing personalized and timely support. The AI-Powered Mental Health Assistant addresses this challenge by offering a mobile application designed to enhance mental wellness through real-time mood analysis and customized recommendations. The system harnesses advanced technologies, including Artificial Intelligence (AI), Natural Language Processing (NLP), and Machine Learning (ML), to create an intuitive, user-centric experience.

The application leverages Python for building AI models and NLP pipelines using frameworks like TensorFlow and spacey, enabling the analysis of user inputs, such as text or voice, to detect emotions and sentiments. The frontend is developed with React Native, ensuring seamless functionality across platforms, while the backend is built using Node.js or Django, facilitating efficient data management and integration with AI models. To enhance user engagement, a chatbot powered by dialog flow provides real-time conversational support.

The app's features include personalized suggestions for relaxation techniques, mindfulness exercises, therapy options, and self-care activities tailored to the user's emotional state. A secure database, such as MongoDB or PostgreSQL, stores user data, enabling ML algorithms to analyse historical patterns and improve recommendations over time.

This innovative solution empowers users to proactively manage their mental health, promoting awareness, reducing stigma, and making mental wellness resources more accessible. By combining programming expertise with state-of-the-art AI technologies, the AI-Powered Mental Health Assistant offers a comprehensive, on-demand, and personalized approach to emotional well-being, making it a valuable tool for today's fast-paced world.