Advanced AI Therapy System with Emotion Recognition and Recommendation Engine

A PROJECT REPORT

Submitted by:

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Under the guidance of:

Mrs. STERLIN MINISH T N

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING,
INTERNET OF THINGS
AT

PRESIDENCY UNIVERSITY

BENGALURU

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PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report **"AI THERAPIST"** being submitted by Yadhunandhan (20211CIT0132), Ashutosh Patil (20211CIT0139), Manisha (20211CIT0104), Kaveri c(20211CIT0112) in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.

20/01/2025

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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **AI THERAPIST** in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **STERLIN MINISH T N., Assistant Professor, School of Computer Science Engineering Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

The AI Therapist project is designed to provide accessible, personalized mental health support through a virtual therapist. This system has designed to help one's well-being and support mental health stability. This system uses advanced natural language processing (NLP) to create natural, empathetic conversations, allowing users to feel heard and understood in a safe, non- judgmental environment.

At the heart of the project lies a hybrid recommendation system, which intelligently combines content-based and collaborative filtering techniques. This approach enables the delivery of highly personalized therapy suggestions, effective coping strategies, and curated resources tailored to the user's specific emotional needs, experiences, and preferences. Whether it's offering breathing exercises, mindfulness techniques, or curated self-help content, the system adapts to ensure the user receives meaningful and actionable support.

To further enhance the user experience, the AI Therapist goes beyond traditional chatbot functionality. It leverages conversational AI to simulate human-like interactions, creating a rich and engaging conversational flow that mimics real-life therapy sessions. This makes users feel comfortable and supported, encouraging them to open up about their challenges.

The AI Therapist is not just a tool but a supportive companion that aims to bridge the gap in mental health accessibility. With increasing demand for mental health services, this project offers a scalable and cost-effective solution, ensuring that individuals can access help anytime, anywhere. While it is not a replacement for human therapists, the AI Therapist complements professional care, particularly for those who face barriers like stigma, high costs, or limited availability of therapists. By leveraging technology, the project aspires to empower users to take proactive steps toward mental well-being while fostering a sense of comfort and confidentiality.

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