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MindGuide: A Conversational AI-Based Chatbot for Mental Health Self-Identification and Support

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Abstract- Mental illness is a major global health issue that affects everyone, regardless of age or gender. While mental wellness is being more widely understood, rapid access to psychological support is still struggled with by many. This is often due to social stigma (prejudice), discrimination, and a lack of professional knowledge. Additionally, necessary medical care is not obtained by many people due to the exorbitant cost of treatment. AI technology is improving fast, making conversational bots feel more natural and understand context better than before. These new tools make it easier to provide quick, simple support to people dealing with emotional issues.
Therefore, MindGuide was developed as an AI conversational agent to assist individuals in comprehending their feelings and offer preliminary psychological support.
MindGuide runs on Ollama (a large language model) and is built using the LangChain framework. MindGuide is an AI-powered chatbot designed to act as a private, 24/7 mentalhealth companion. It helps people by providing support, guidance, and a safe space to talk, supplementing traditional therapy. MindGuide is not intended as a substitute for professional medical advice or therapy rather, it is designed to offer supplementary assistance for instant guidance.
Keywords – Mental Health, Chatbot, Artificial Intelligence, Large Language Models (Ollama), vector_db, RAG, LangChain, Self-Assessment, DigitalHealth.

1. INTRODUCTION

Across the globe, anxiety, depression, and elevated stress levels are experienced by many individuals. Although mental health is now discussed more openly, access to support continues to be hindered by expenses, social stigma, and insufficient availability of services. As a result, early assistance is often not received, making timely identification increasingly critical. When assistance for mental health conditions cannot be accessed or when seeking help is feared the issues are often intensified and become more difficult to resolve. To address this, a significant function is now being played by digital solutions (such as applications, virtual therapy, and online platforms) in improving the accessibility of mental health support [1, 6].
Conversational AI (such as chatbots) has become widely adopted because human-like interaction is provided and immediate responses are delivered. With the development of advanced AI models, significant improvements have been achieved in contextual understanding, empathetic responses, and the handling of diverse user needs.
MindGuide is a conversational AI system that has been intended to support the early consideration of mental and emotional well-being. Mental health conditions are not diagnosed or treated by this tool; instead, reflection on personal feelings is encouraged, emotions are identified, and general coping strategies are suggested.
Through this user-friendly and anonymous platform, the fear associated with discussing mental health is reduced, and individuals are encouraged to seek professional assistance when necessary.

2. LITERATURE REVIEW

a. Limitations and Ethical Considerations

Despite the increasing utilization of AI based chatbots in mental wellbeing support, several challenges and limitations have been identified. One of the major challenges associated with chatbots is that they may respond to a user's query or message with an incorrect or inappropriate response. This is because chatbots lack a proper understanding of human emotions and situations [10], [12]. Mental health is a sensitive aspect of an individual's well-being, and inappropriate responses from chatbots can disapprovingly affect users experiencing serious emotional distress [1, 6].
An additional important concern associated with chatbots is privacy. Since a person is likely to share personal issues with a chatbot, it is essential to make sure about data handling appropriately. Researchers also emphasize the need to clearly inform user that chatbots are not a replacement for professional mental health services [14], [15].

b. Comparative Analysis Table

Several studies have explored the utility of AI-based chatbots for intellectual wellbeing support. Below, The Table concludes the key research contributions, along with the technologies employed and their respective advantages and limitations.

Table 1: Literature Review

S.no	Title	Tech	Pros	Cons	Futue work
1	Chatbot-Delivered Interventions for Improving Mental Health Among Young People [2025]	AI Chatbots, NLP	Provides easy access to mental health support	Limited emotional understanding	Improve personalization and monitoring
2	Evolution of AI Mental Health Chatbots from Rule-Based Systems to LLMs [2024]	Rule-based systems, NLP, LLMs	Shows progress in chatbot intelligence	Some systems still lack empathy	Develop more context-aware models
3	Large Language Model-Based Chatbots for Mental Health Counseling [2025]	LLMs, Transformer Models	More natural and context-based conversations	Risk of incorrect responses	Add safety checks and human supervision
4	Prompt Engineering Framework for LLM-Based Mental Health Chatbots [2025]	Prompt Engineering, NLP	Improves response quality	Depends heavily on prompt design	Develop adaptive prompting methods
5	Clinical Effectiveness of CBT-Based Chatbots [2025]	CBT Chatbots, NLP	Helpful for mild anxiety and stress [5]	Not suitable for severe cases	Combine with professional therapy
6	Chatbot-Delivered Interventions for Improving Mental Health Among Young People [2025]	AI Chatbots, NLP	Provides easy access to mental health support	Limited emotional understanding	Improve personalization and monitoring

3. SYSTEM OVERVIEW

MindGuide is a chatting platform where a person can have a direct conversation with a MindGuide chatbot. MindGuide is about privacy and simplicity and usability. The person can converse with MindGuide with great comfort and no worries [14, 15].

The MindGuide chatbot helps users share their emotional state, thoughts, and problems. With MindGuide, there's no need to analyze or diagnose anything. MindGuide is just there to help people understand themselves, sharing what they are feeling, and feel a little lighter without any pressure.

At times the MindGuide chatbot asks questionsthat help a person understand themselves in a deeper manner. The idea behind MindGuide is to help people understand themselves, express what they're feeling, and feel lighter without any pressure.

4. METHODOLOGY

Python is the language in which mindguide is being developed. We are using Streamlit, a framework that helps us to create web applications quickly. An attractive user interface is build using this framework. The interface is simple and easy to use so people can fous on chatting without getting distracted by designs.

We are using a language model, which is run on the backend using Ollama. The Langchain Framework is in charge of the system. We use simple templates to make sure the responses feel supportive and appropriate [4]. We also have a conversion buffer memory that stores past messages so the context of the conversation is preserved and the conversation flows smoothly [2, 3].

The system works in the following steps:

1. The user types in text about how they're feeling what they think or what is worrying them.
2. The text is turned into signals that the system can understand.
3. The system understands what the user is saying and responds based on the context of the conversation.
4. The response is then shown to the user away through the interface.
5. The conversation history is updated,. The context of the past conversation can be considered when generating future responses.

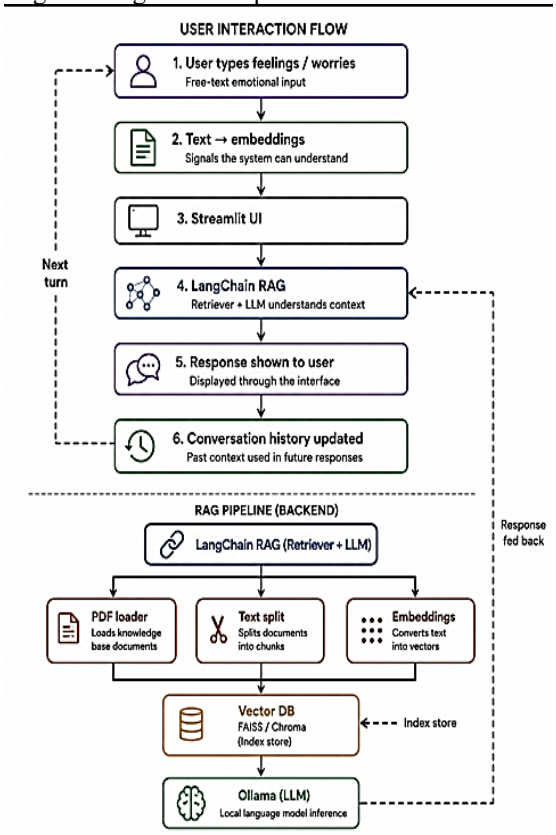

Figure 1: Workflow of MindGuide System

The mindguide system is also designed to be expanded in the future. Because the mindguide is modular we can add features to make it more efficient and effective. Some things we might add in the future include emotion

analysis, mental health assessment tools and a recovery augmented knowledge system. This will help the mindguide be even better at supporting users. The mindguide system and its features are designed to work to provide a smooth and supportive experience, for users [1, 6].

5. SYSTEM DESIGN AND IMPLEMENTATION

MindGuide is made up of three parts: the artificial intelligence part, the conversation part and the part that users see. The part that users see is what people interact with. It provides a simple and clean interface where users can communicate with the chatbot without distractions. The focus here was to make the interaction feel natural and easy to follow.

When people talk to MindGuide the conversation part takes what they say and organizes it into something that makes sense. This part also keeps track of what has been said so the conversation can keep going in a meaningful way. This is done using the LangChain framework, which helps MindGuide remember what was said earlier. Because of this MindGuide can give responses that're relevant, to what is being talked about. The artificial intelligence part of MindGuide, conversation part of MindGuide and the part that users see all work together to make MindGuide work.

The conversation logic layer acts as the core of the system. In our implementation, the layer processes user inputs and converts them into structured prompts that can be understood by the language model. It also manages the flow of conversation by maintaining context using LangChain's memory mechanism. Because of this, the chatbot is able to refer to earlier parts of the conversation, which makes the responses feel more relevant.

The people making MindGuide paid attention to keeping users safe and private. The system does not require any personal information from users to use the platform and the system does not keep any user information after the communication ends. The chatbot also tells users that it is not a doctor and cannot say what is wrong with them and users should go see a doctor if they are really upset or unhappy for a long time.

The system is also made to be changed. Some parts, like the templates for conversations or how much the system can. The settings for the language model can be changed or made better without having to start all over. This means the system can be changed and new things can be added on. The MindGuide system is made to be flexible. The MindGuide system can be updated easily. The MindGuide system has a design that allows it to be modified. This is very important, for the MindGuide system.

6. RESULTS & EVALUATION

A. System Evaluation

The system is also made to be changed. Some parts, like the templates for conversations or how much the system can. The settings for the language model can be changed or made better without having to start all over. This means the system can be changed and new things can be added on. The MindGuide system is made to be flexible. The MindGuide system can be updated easily. The MindGuide system has a design that allows it to be modified. This is very important, for the MindGuide system.

B. Observations

The system stored every exchange so the chatbot repeated facts that the user had mentioned earlier. This record kept the dialogue on one continuous line and let each reply echo the user's own words. The user felt that the chatbot listened and understood.

The program avoided technical medical terms - it named the user's feelings plus offered short, practical steps that matched everyday life. No formal clinical test was run but the way the chatbot acted agreed with results published in earlier studies on artificial intelligence mental health assistants [1, 6].

7. DICUSSION

The findings of the current research suggest that the system has the potential to be used as a first point of contact for people who need to seek mental health assistance. Due to the reachability and unspecified behaviour, it might encourage people who are otherwise apprehensive about seeking therapy to open up and share their feelings and thoughts more freely.

Table 2: Comparison of MindGuide with Existing Support Systems

Feature	Traditional Therapy	Basic Chatbots	MindGuide
Availability	Limited timings	24/7	24/7
Human Interaction	High	Low	Moderate AI interaction
Privacy	May vary	Moderate	Anonymous interaction
Cost	High	Low	Low
Emotional Support	Professional	Limited	Context-aware support

At the same time, there are also some limitations to the use of such large language models as those used in Ollama. Even though the system is capable of providing supportive responses to users, there is a possibility that it might provide false information as well as not fully understand the emotions and situations that a person might be going through. In situations where a person is going through extreme emotional crises, the responses given by the system might not be enough.

Ethical considerations are extremely important when creating such mental health chatbots as those used in MindGuide. The system must be able to communicate its limitations to the users and encourage them to seek the professional help that is required [1, 6, 9, 14].

5. LIMITATIONS & FUTURE WORK

As it has many benefits and features, but there are several limitations to the MindGuide system that need to be taken in mind. First and foremost, the system has not undergone

any clinical validation process, and its effectiveness has not been tested and proven through any clinical studies. In addition, it cannot treat in critical or severe condition.
The system uses various APIs therefore the bot can only be used by using internet as it cannot be accessed offline. This is an area that needs to be improved in the future to ensure that the system performs consistently and reliably.
In the future, more languages need to be added so that it can be accessed and used by different states of India. And computer vision in deep learning can be used for analyzinguser emotions and giving them answers in the form of the images and videos.

8. CONCLUSION

In the paper, the idea of a conversational AI-based mental health chatbot called "MindGuide" was introduced, aiming to help users in self-identifying about their emotional health and provide them supportive information. By utilizing large language models and conversational models, the chatbot aims to help peoplein their mental health condition, mainly for those who do not feel comfortable talking to the therapist or using traditional methods.Although the chatbot, like MindGuide, does not aim to provide professional support, it shows the potential of AI-based chatbots to provide support for emotional health, self-identifying, and the potential contribution of these technologies, if further developed, evaluated, and used appropriately, it can make a big change in providing mental health support and the awareness about emotional health.

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