



**KALINGA INSTITUTE
OF INDUSTRIAL TECHNOLOGY**

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Mental Health Chatbot

With Online Therapist Booking

Under the guidance of
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Introduction

Mental health issues are increasing, but access to therapy remains limited due to cost, stigma, and availability.

This chatbot provides instant AI-driven support and a direct therapist booking option.



Problem Statement



Limited Access to Mental Health Support – Many individuals struggle to find timely and affordable mental health support due to a shortage of therapists, long wait times, and high costs.

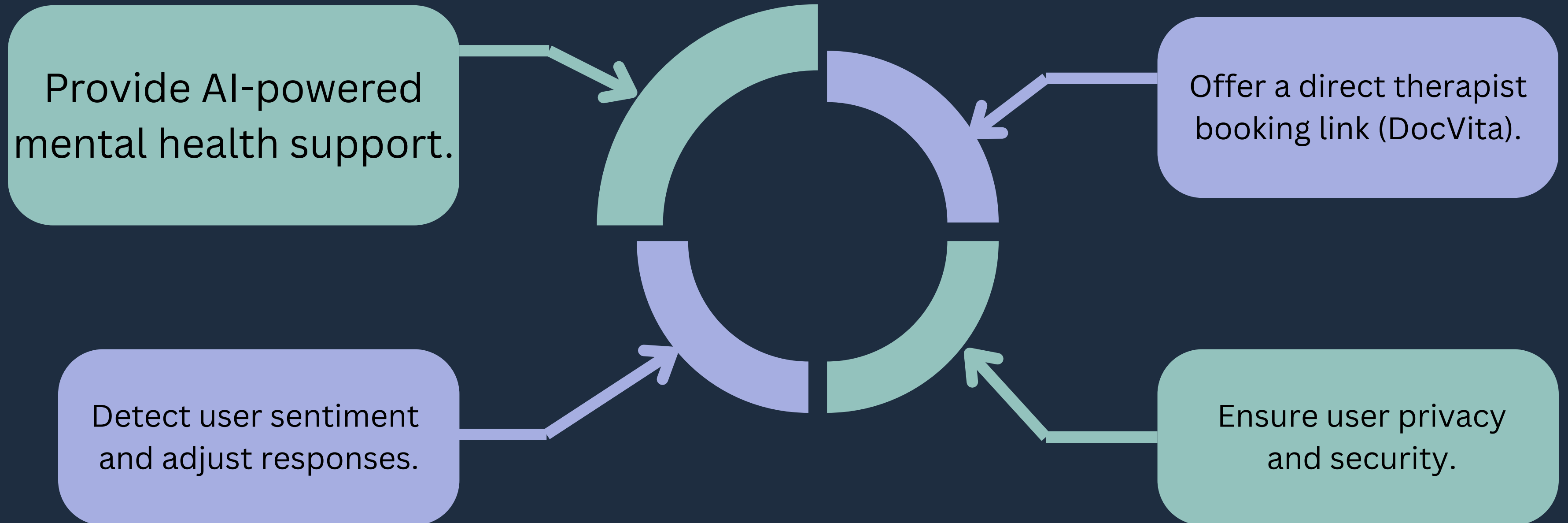


Lack of Immediate Assistance – People experiencing stress, anxiety, or depression often need instant guidance, but traditional therapy services may not provide real-time support.

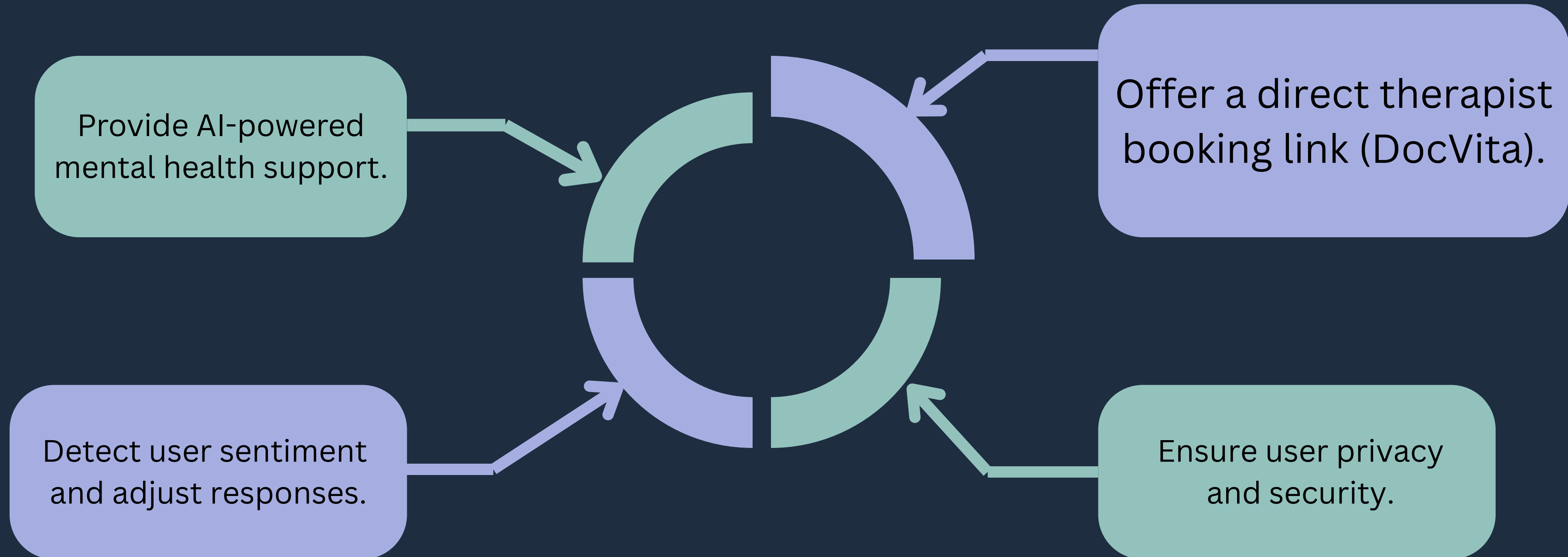


Difficulty in Therapist Discovery & Booking – Finding the right therapist and scheduling an appointment can be overwhelming due to scattered information and inefficient booking systems.

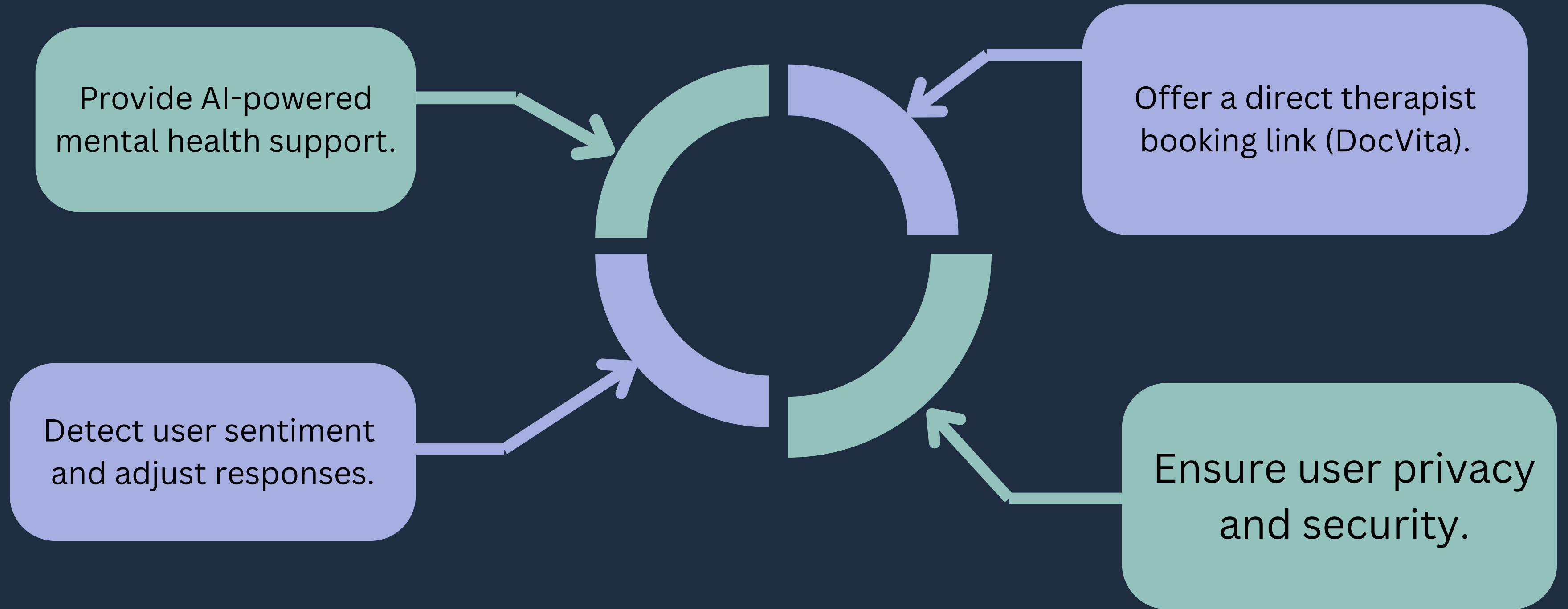
Objectives of the Project



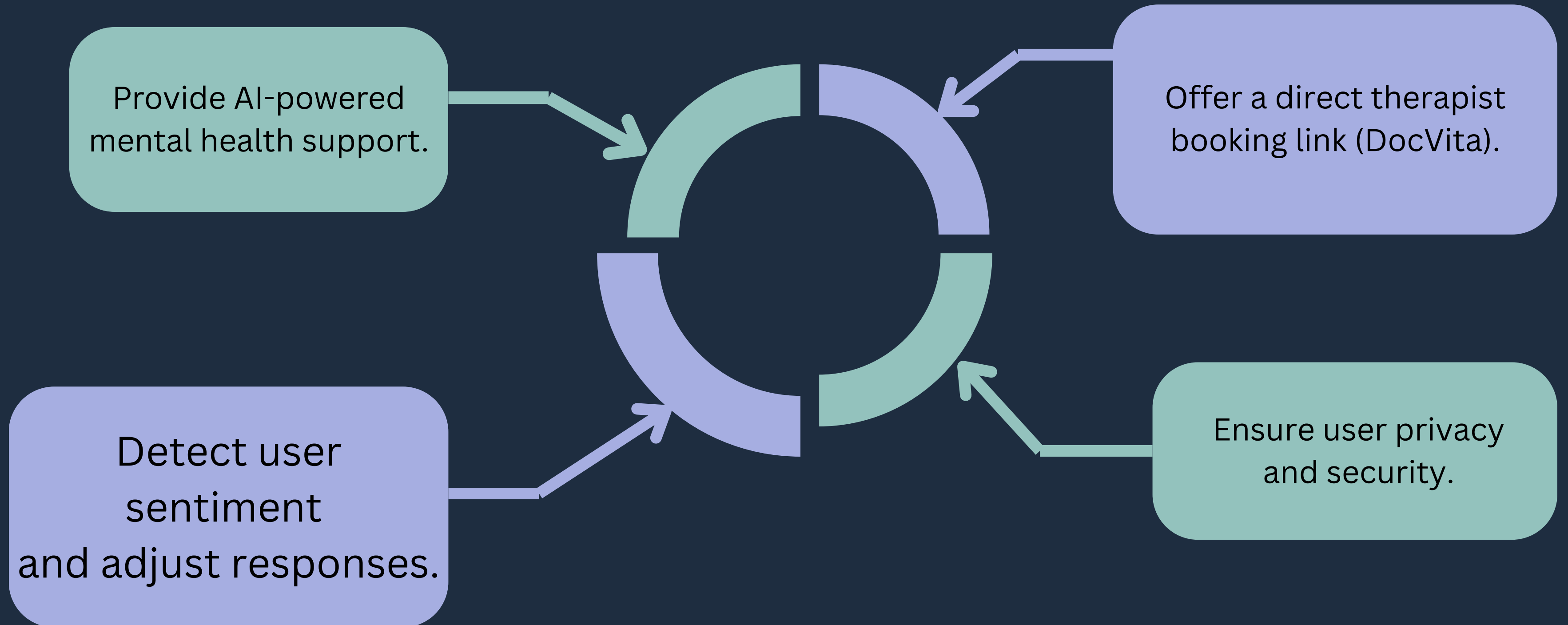
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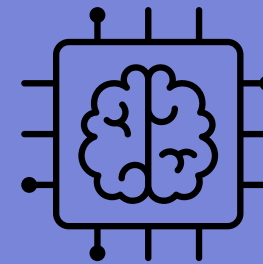


Technology Stack



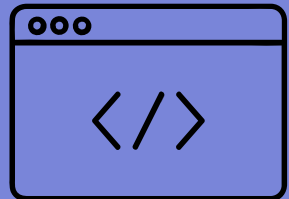
Backend:

Flask(Python)



AI Model:

Mistral-7B

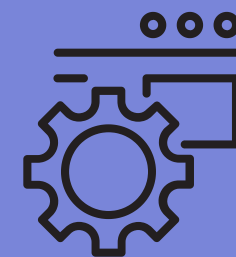


Frontend:

HTML

CSS

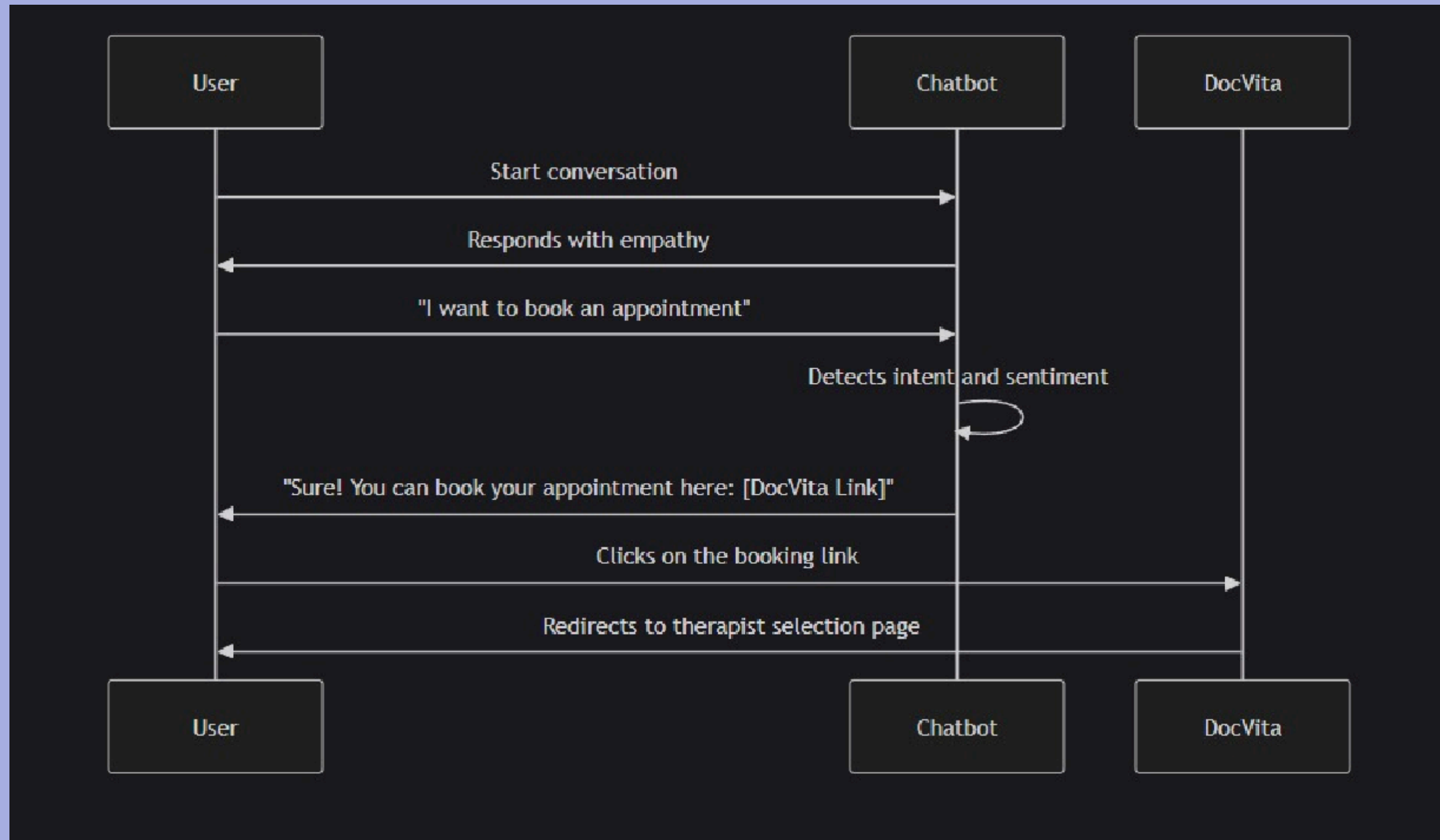
Javascript




Version Control

Github

System Architecture





 **Sereni - Your Personal Mental Health Chatbot**
You can share anything with me. This is a safe space ❤️

Hi

Hello! How can I assist you today?

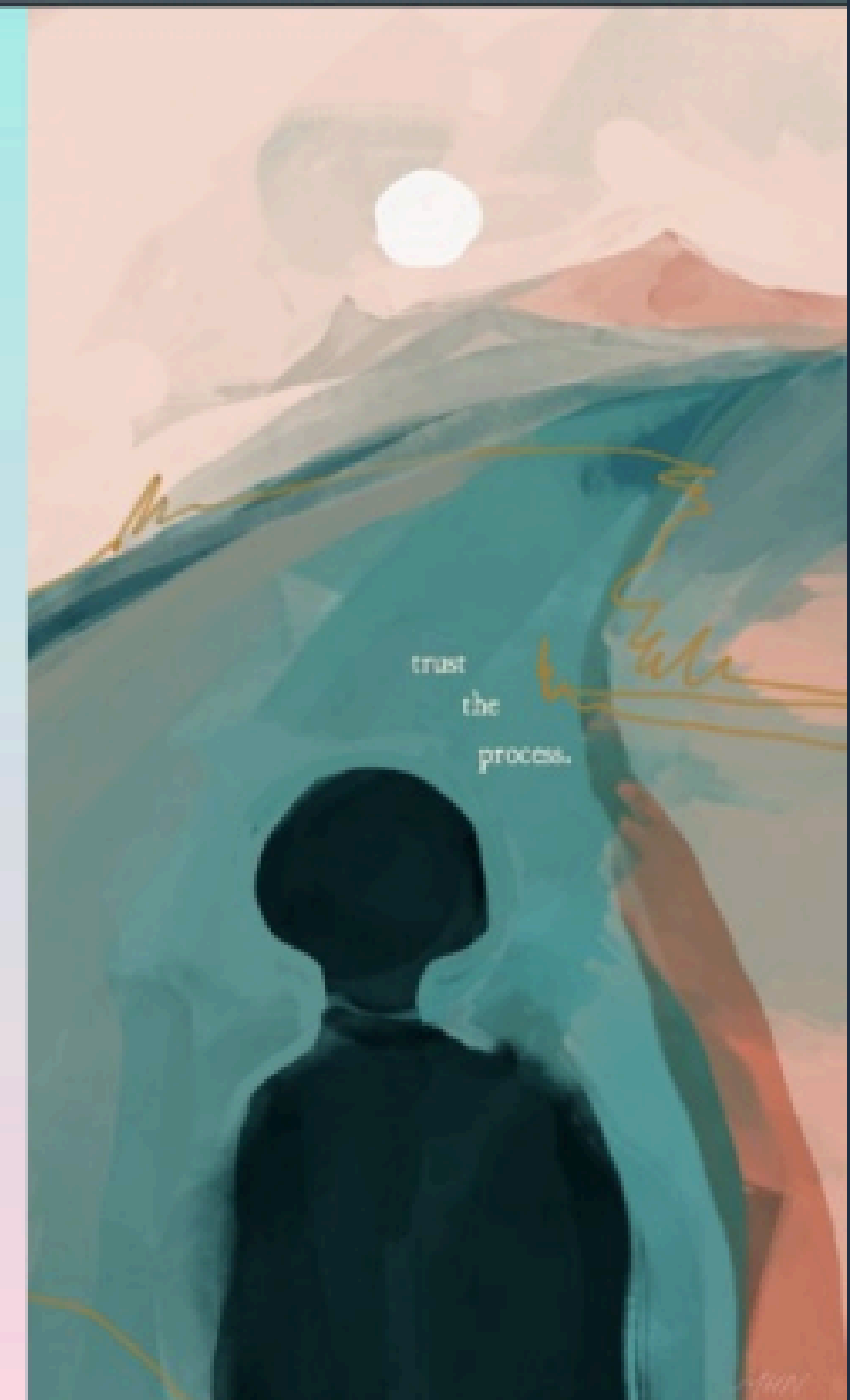
I am feeling sad

I'm sorry to hear that. Is there anything specific that is bothering or causing those feelings of sadness?

I just had a bad day today and I am feeling down

It sounds like things didn't go as planned for you today. Would you like to talk about what happened, or do you have any other thoughts or emotions you would like to express? I'm here to listen without judgment.

Type your message... Send Clear Book

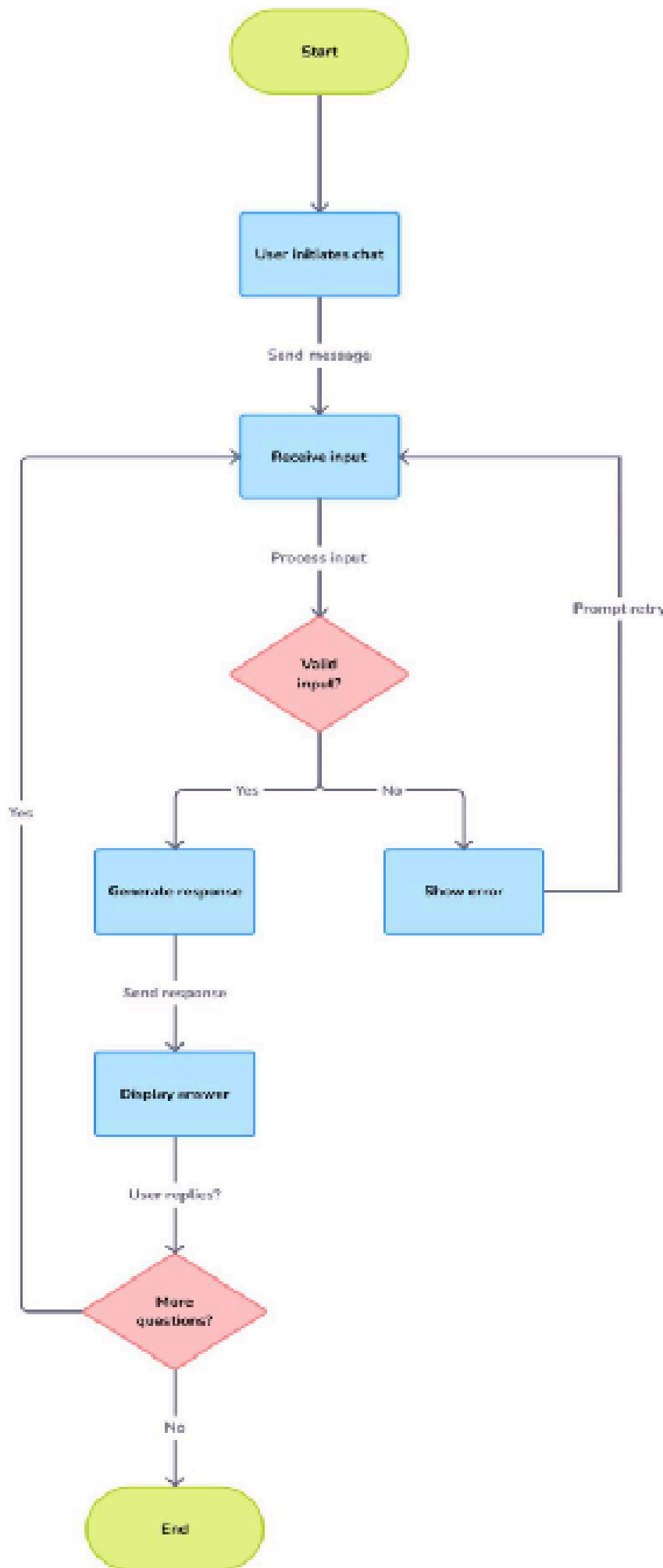


Chatbot Interface(UI/UX)

Chatbot Workflow

Our chatbot follows a structured process to provide real-time assistance efficiently:

1. User Initiates Chat – The user sends a message to start the conversation.
2. Receive & Validate Input – The system receives the input and checks if it is valid.
 - If valid, it proceeds to generate a response.
 - If invalid, an error is displayed, and the user is prompted to retry.
3. Generate Response – The chatbot processes the valid input and formulates an appropriate response.
4. Display Answer – The system sends back the response to the user.
5. Further Interaction Check – If the user has more questions, the chatbot continues the conversation. If not, the session ends.



Smart Response Handling

Handling responses that can overwhelm users or exceed interface limits

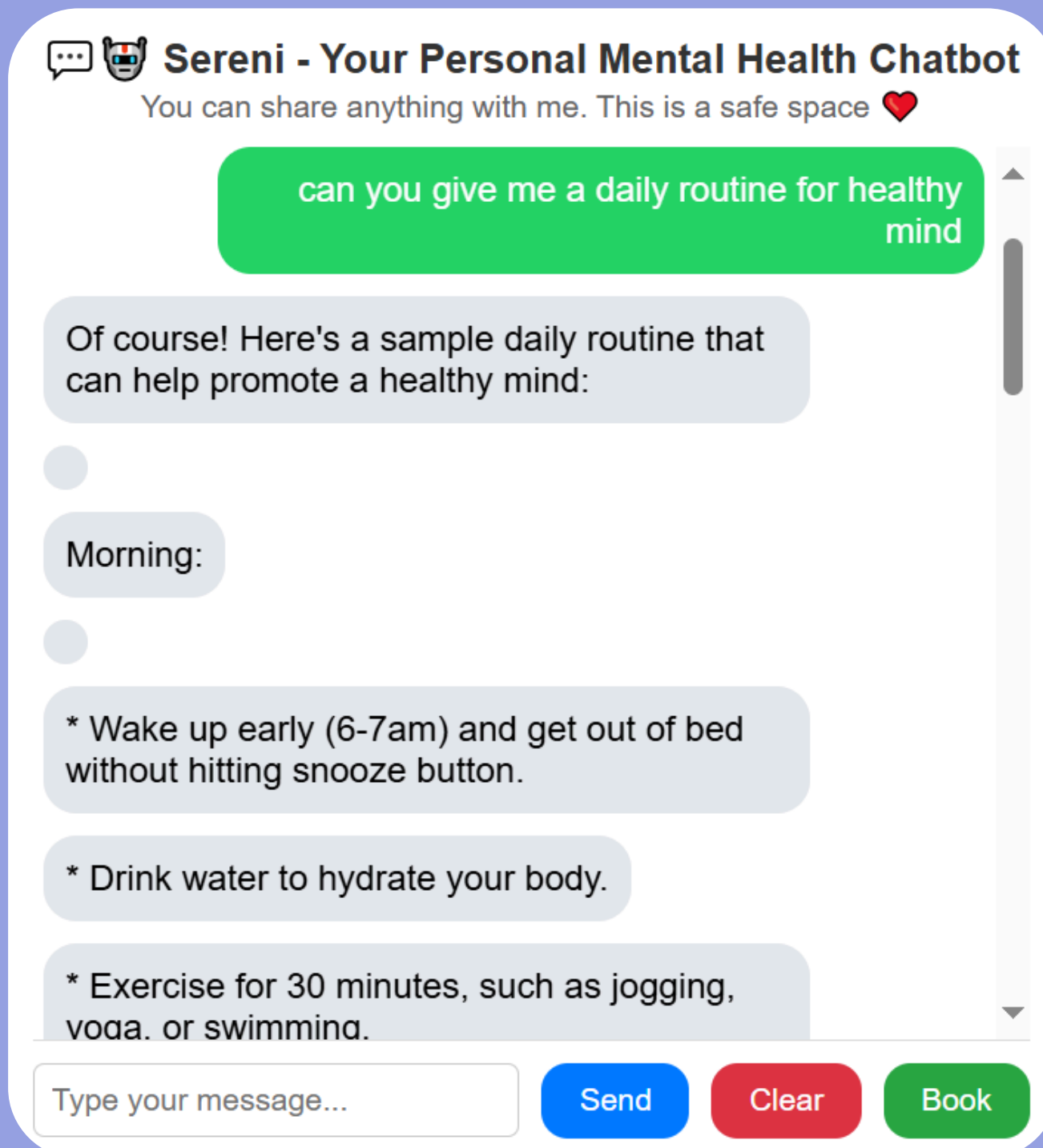


Fig. Live chat view with smart response handling



Backend Enhancements:

- Streaming Output for faster, real-time replies.
- Continuation Logic: Adds "..." if response is incomplete, then auto-completes it.
- Token Management:
- GPT-2 tokenizer trims chat history to stay within 1000 tokens.
- Avoids overload and crashes.



Frontend Features:

- Dynamic Chat Bubbles: Separates user and bot messages clearly.
- Line-by-line Display: Ensures neat formatting of multi-line replies.



Outcome

- Prevents model crashes.
- Delivers full, coherent responses.
- Feels more natural and human-like.

Sentiment Detection and NLP processing

Example:

User:

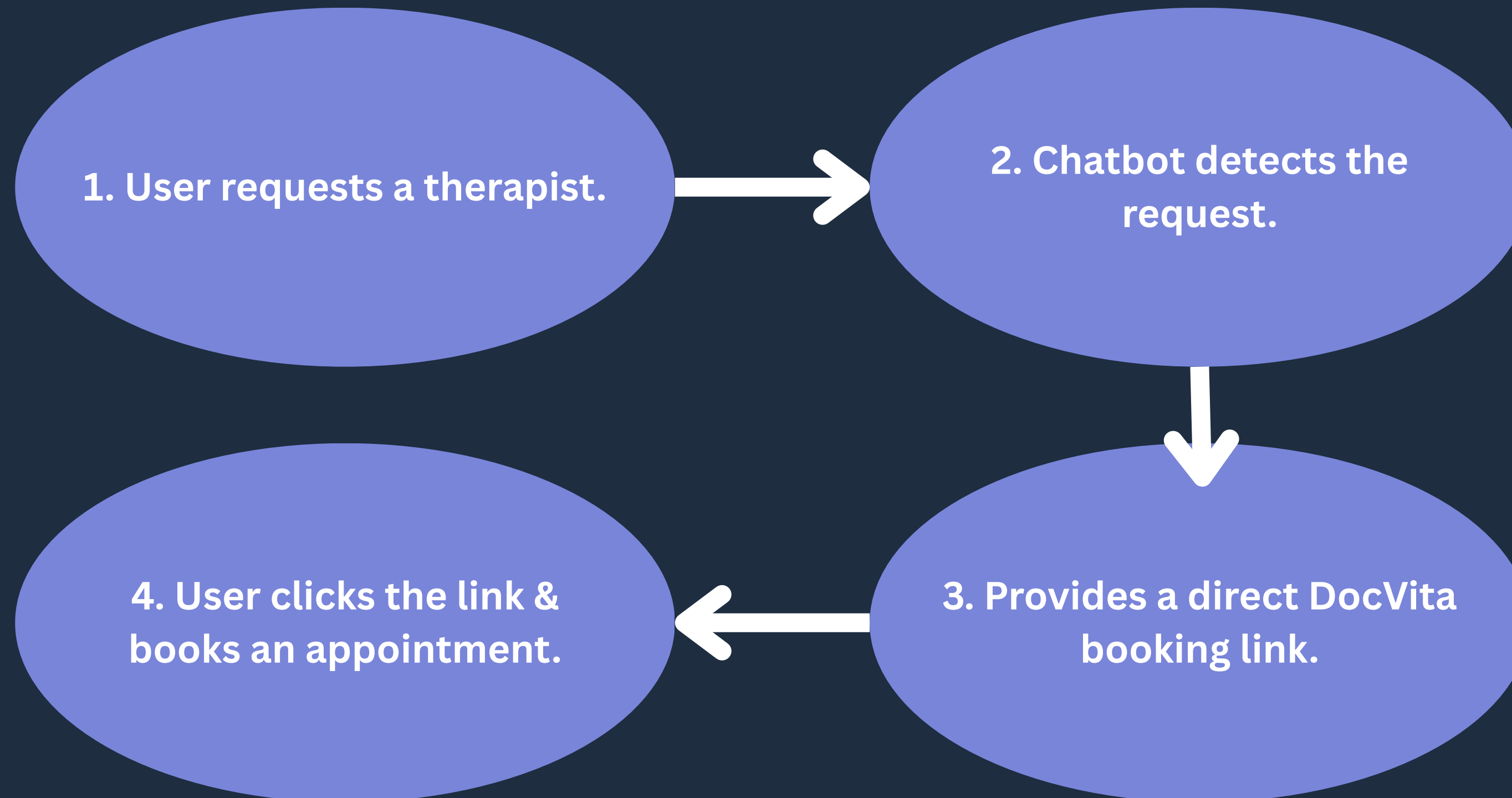
I feel very sad and depressed

Chatbot:

I'm here for you. Would you like to talk about it?

- **Emotion Recognition:** Identifies user emotions based on detected keywords.
- **Adaptive Responses:** Adjusts chatbot replies to match the user's mood.

Therapist Booking Process



Testing and Performance Analysis

**Chatbot
Response
Accuracy:
91%**

**Booking
Functionality:
Smooth
DocVita
integration**

Response Time:

- 2-5 seconds per query for short response
- 10-15 seconds for long response

Privacy and security matters



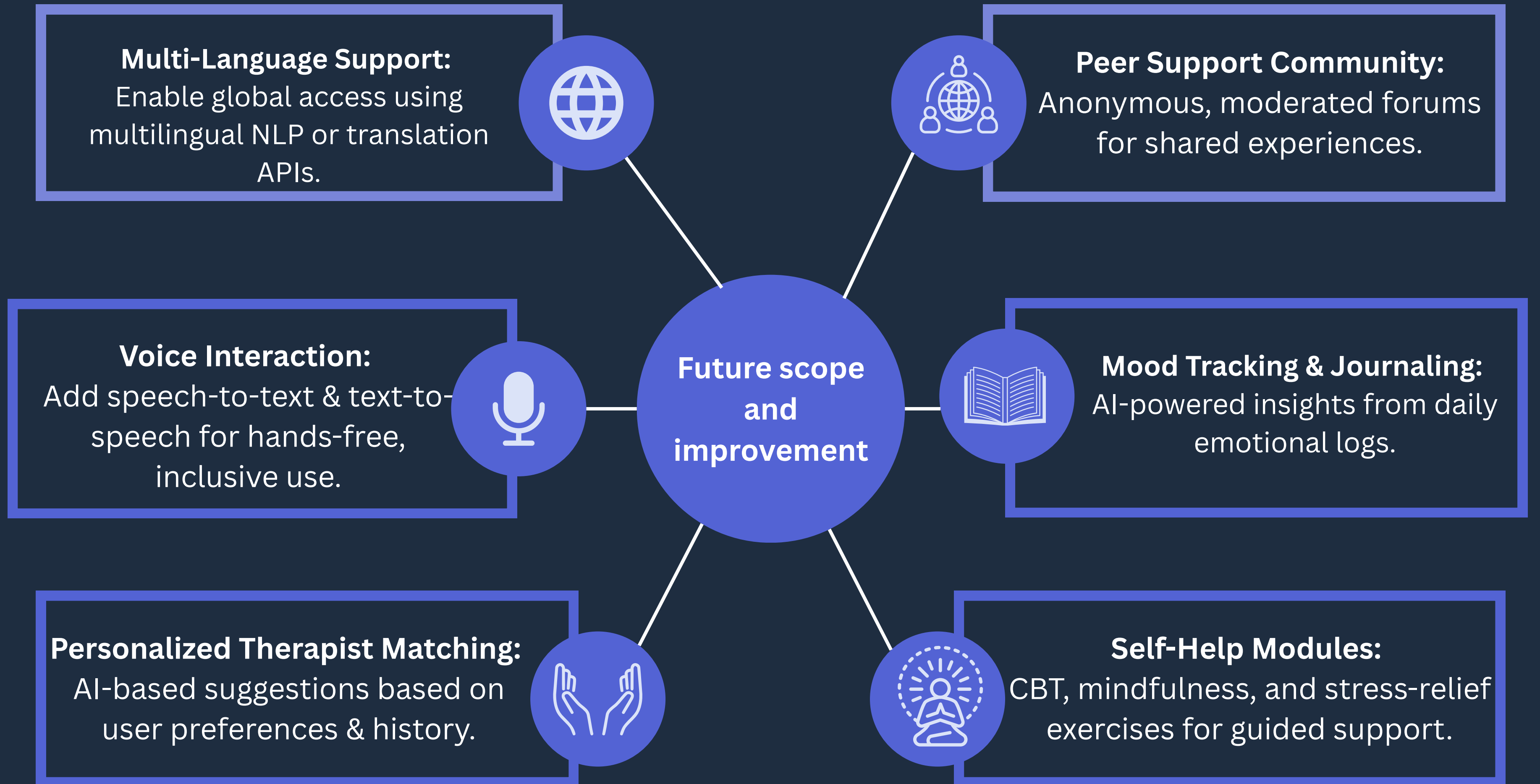
No User Data Storage – Conversations are not stored to maintain confidentiality.



Direct Therapist Booking – Secure integration with DocVita for seamless scheduling.



AI Ethics Compliance – Adheres to ethical AI principles, ensuring responsible chatbot interactions.

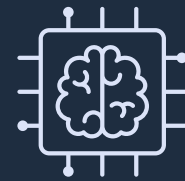


Conclusion

- In today's fast-paced world, mental health often takes a back seat. Our chatbot steps in as a compassionate companion—offering support, conversation, and comfort to those who may not have immediate access to help.
- What sets our project apart is the seamless therapist appointment booking feature, bridging the gap between emotional need and professional care.
- This isn't just a chatbot— **'Sereni'** is a **safespace**, designed to be there when someone needs a friend the most.



Bridges the gap between self-help & professional therapy.



Provides empathetic AI conversations.



Simplifies therapist booking by redirecting to therapist booking website(Docvita) in case of urgency.



Ensures privacy and accessibility for users seeking non-judgmental mental health support anytime, anywhere

Thank You!