



CentrixSupport

Your 24/7 Digital Wellness Companion

- **Problem Statement ID:** HWA02
- **Problem Statement Title:** Mental Health Support Chatbot
- **Problem Statement Theme:** Healthcare & Wellbeing Accessibility

By: **Team KubeCentrix**

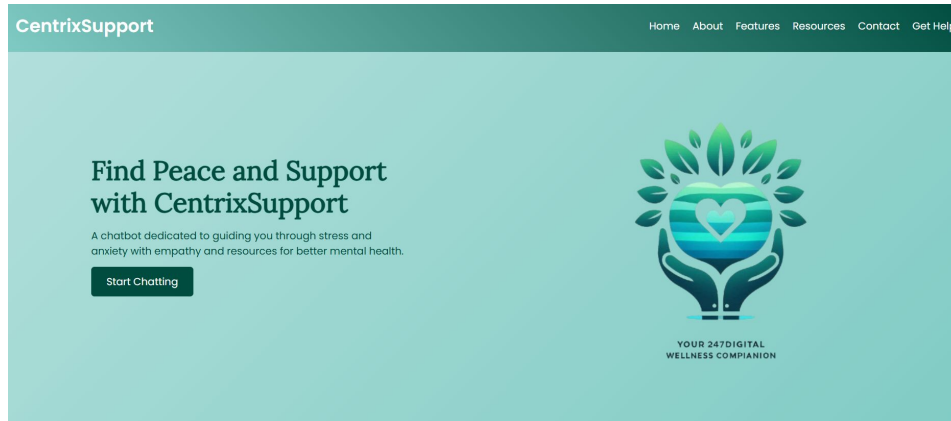
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Introduction

- Our project introduces an AI-powered chatbot designed to provide mental health support for individuals experiencing stress and anxiety. This chatbot offers empathetic responses, coping strategies, and professional guidance when needed. Additionally, it allows users to analyze their medical information or ask specific questions about their health reports.





Our Approach & Solution

Problem:

Millions face stress and anxiety but struggle to access reliable mental health support. Barriers like cost, discomfort with seeking help, and lack of immediate options make support challenging to obtain.

Existing

Therapy, mental health apps, and online resources are available but can be expensive, lack personalized responses, or fail to offer instant assistance tailored to individual needs.

Solutions:

Our

Solution:

We've developed an AI chatbot that delivers support within seconds. It offers:

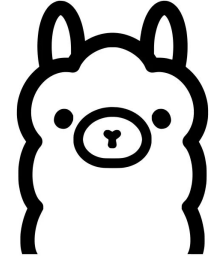
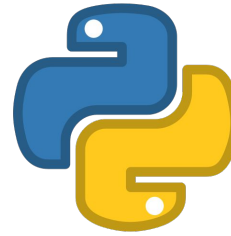
- **Instant, empathetic responses** to provide users with a sense of understanding and comfort.
- **Personalized self-help tools** and coping mechanisms to address immediate mental health needs.
- **Medical report analysis and guidance**, allowing users to ask questions about their health reports and receive tailored insights.



Tech Stack

Backend Technologies:

- Node.js
- Python 3
- Flask



AI & Data Handling:

- Ollama
- RAG (Retrieval-Augmented Generation)

Frontend Framework:

- React
- React Dependencies



Flask

Libraries & Tools:

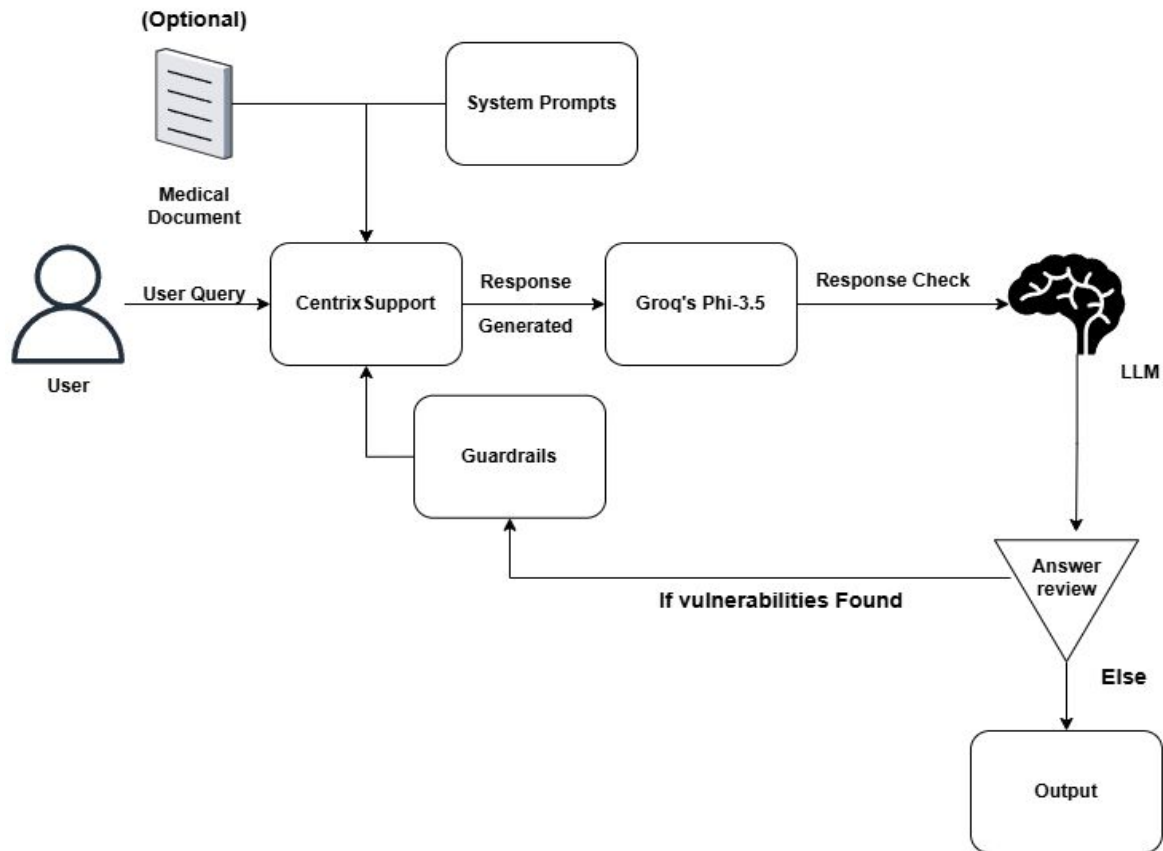
- ChromaDB
- Python Requirements (requirements.txt) and NPM Modules (package.json) for smooth setup.

Version Control & Collaboration:

- GitHub
- Continuous Integration



Architecture





Unique Features

- **Empathetic, Real-Time Responses:**
 - Experience immediate, caring support designed to make you feel genuinely understood and supported, especially in times of stress or anxiety.
- **Scalability:**
 - Built to grow and adapt to meet the needs of more users over time, ensuring reliable support as demand increases
- **Personalized Coping Strategies:**
 - Tailored techniques, like guided breathing and grounding exercises, help you manage emotions in a way that suits your unique needs.
- **Clear Health Report Insights:**
 - Get clear, easy-to-understand answers to your health report questions, supporting both mental and physical wellness.
- **Guidance to Professional Support:**
 - When extra assistance is needed, we connect you with trusted professional resources, bridging the gap between self-help and expert care.
- **Feasibility:**
 - Practical, achievable features that align with current technology, ensuring a smooth user experience without overwhelming system requirements.



Business Potential and Sustainability

1. Expanding Market Demand: Rising global awareness around mental health has created a strong demand for accessible, affordable support tools, especially in underserved areas.

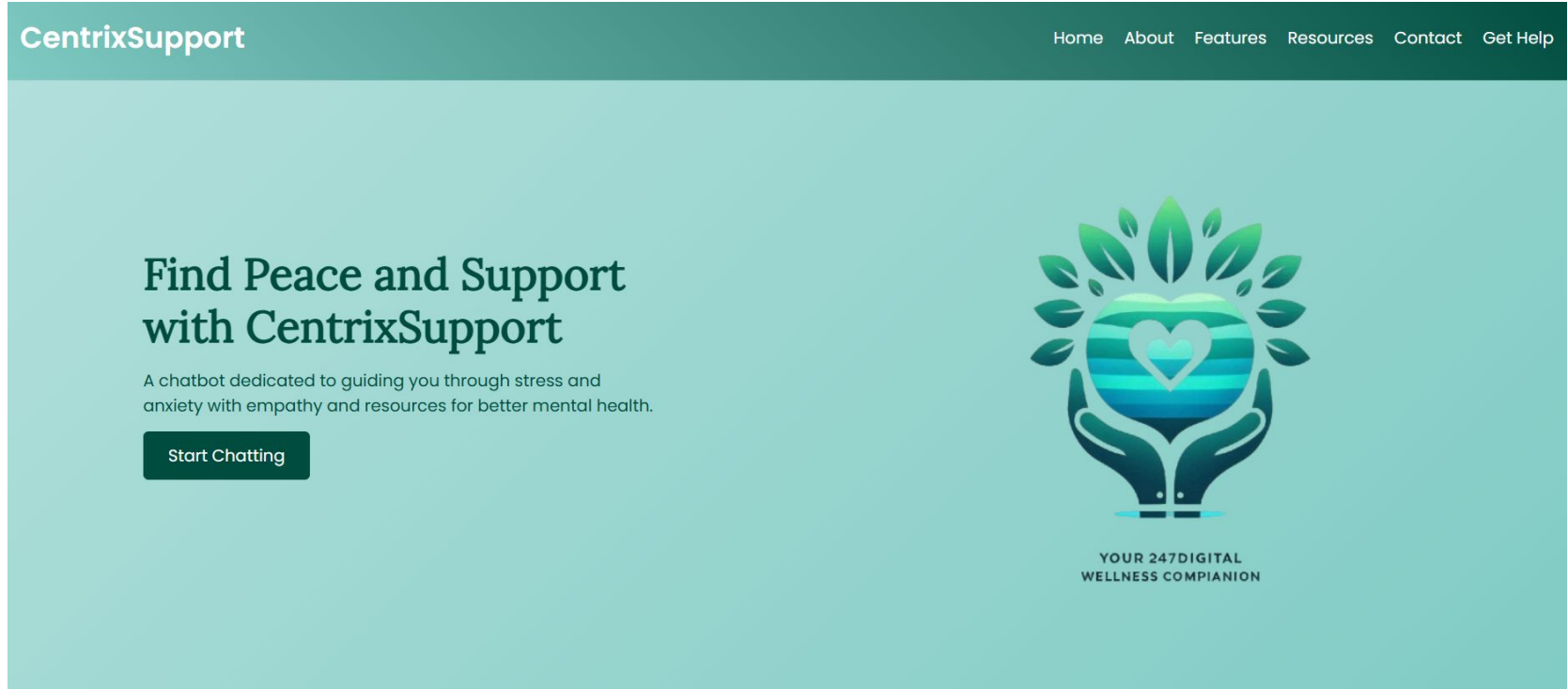
2. Revenue Streams

- **Subscription Model:** Offers premium features like deeper health insights and advanced coping tools.
- **B2B Partnerships:** Collaborates with companies, schools, and healthcare providers to support their communities' mental wellness.
- **Sponsored Content:** Thoughtful partnerships with mental health organizations and wellness brands.

3. Social Impact & Sustainability: Promotes mental health awareness, reduces stigma, and guides users to professional support when needed. Can integrate with healthcare systems to create a continuous mental health support network.




ScreenShots





ScreenShots

 **Important Disclaimer**

This chatbot is here to listen and support, but it's powered by AI and not a substitute for professional mental health help. For serious concerns or specific guidance, please talk to a licensed mental health professional. We're here to offer a friendly ear, but your well-being deserves personalized care!

☐ I understand and acknowledge this disclaimer

[Proceed to Chat](#)



ScreenShots

CentrixSupport: Your 24/7 Wellness Companion

Hello! I'm CentrixSupport and I'm always here to support you. How are you feeling today?

Document uploaded successfully! You can now ask questions about the document.

Give me the short summary of the report.

John Doe, a 30-year-old male, has been experiencing persistent feelings of sadness and hopelessness for several months. These symptoms have also manifested in increased fatigue, difficulty concentrating, and loss of interest in activities he used to enjoy. He notes work performance challenges and feels overwhelmed by daily tasks. John's mental health assessment was done on October 1, 2024, after his long-term relationship ended. He has no history of past treatment but does sometimes consume alcohol socially.

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Send



ScreenShots

CentrixSupport: Your 24/7 Wellness Companion

Hello! I'm CentrixSupport and I'm always here to support you. How are you feeling today?

For the past few days, I haven't been able to sleep well. My sleep keeps getting interrupted during the night, and I don't know what's causing it. Can you help me figure out the problem?

I'm so sorry to hear that you're struggling with sleep. It can be really frustrating and affect your daily routine. Don't worry, we can work together to try to figure out what's going on. First, can you tell me a bit more about your sleep pattern? Are you waking up feeling groggy or tired? Are you having trouble falling asleep or staying asleep? Are there any specific things that you're worried about or stressed about that might be keeping you up at night? Also, have you noticed any changes in your sleep habits recently, such as changes in your work schedule, traveling, or overall routine? Sometimes small changes can affect our sleep patterns without us even realizing it. Remember, I'm here to listen and support you. We can take this one step at a time, and I'll do my best to help you get a handle on this.



Upload PDF

Share your thoughts...

Send



Resources

Core Resources

- **LLM Model:** Llama 3-8b-8192
(Efficient language model for conversation and RAG)
- **Embeddings:** BAAI/bge-small-en-v1.5
(Powering vector-based similarity for mental health and report analysis)
- **Database:** [Chroma](#)
(Persisting embeddings for retrieval-augmented generation)



Supporting Libraries

- **LangChain:** Framework for RAG and chaining tasks
- **PyPDF2:** Extracting content from PDFs
- **Logging:** Simple logging for monitoring



Extra Reading and Guides

- [Mental Health AI Ethics](#)
- [AI Chatbot Development Basics](#)



Thank You for Your Time! 🚀

We're excited to share this journey with you and grateful for your feedback. Together, we aim to make mental health support more accessible and empathetic.

💡 Next Steps:

1. **Expand & Improve** - Adding more personalized strategies and refining features.
2. **Collaborate & Scale** - Looking to partner with experts for a wider reach.

🔗 Project Repository:

- [GitHub Link](#)