AI-Powered Anxiety Management Platform

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Social Challenge

Current anxiety management tools are too generic, time consuming and attention seeking. It requires a lot of time to narrow down on actual problems. I aim to have a tool to aid both patients and therapists in the healing process by following a personalized approach.

Reference : https://www.psychologytoday.com/gb/blog/magical-enlightenment/202110/being-therapist-the-good-bad-and-ugly

Formal Problem Statement

AI-Powered Anxiety Management Platform for ***patients with anxiety*** so patients are **more engaged** in their progress and ***therapists*** can track **their** patient's progress in between their regular calls**.**

This is my take on how GenAI can help therapists and their patients take more out of their sessions.

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Interviewing Therapist

- I interviewed three therapists over email and collected the following insights:
- Personalized assignments tailored to a client's learning mode, such as **art, yoga, or writing tasks**, **enhance engagement and therapeutic outcomes**.
- It's crucial to work at the **client's pace**, consider their capacity and willingness, and account for demographic details.
- AI tools can support the therapeutic process by tracking progress, reminding clients of techniques, monitoring health metrics, and offering easier access to resources.
- While they cannot substitute for personalized sessions, but can complement them by aiding in planning and assignment creation.

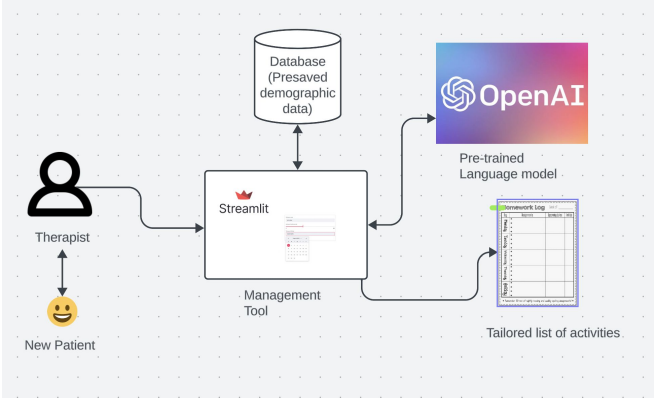
Need for the Product

Interviewed three therapist across geographical locations (California, Central America and India). Refer to the appendix for QandA

MVP

Given the time constraints and feedback from interview, I limited MVP to build a basic functional platform where the

1. Therapist can view and edit their client details
2. The system suggests personalized assignments



Tech Stack being used

- Gitlab : For version control : Repo link
- Streamlit(Python): A great choice due to its fast and interactive framework for data applications.
- Open AI API(ML) : To access state of the art Gen AI models. (OpenAI API offers free tier for 3 months for new user for signing up)

Key Learnings from My Hackathon Project & Future Development Plans

1. **OpenAI API Integration**:The OpenAI API is exceptional. The documentation provided a solid foundation to kickstart the integration.

Future Development: As the product gets adopted, refining the prompts will be crucial to harness the full potential of the fine-tuned model.

2. **Database Connectivity**: For the prototype, I utilized a local SQLite setup, enabling a dynamic user experience. I learned how to use this for the first time.

Scaling Considerations: As the product scales, transitioning to secure third-party database solutions will be pivotal for security and scalability reasons.

3. **Feature Enhancements**:

Monitoring Tool: Adding a feature to track and observe the progress of previous assignments can significantly enhance recommendation quality.

User Experience: The current system prioritizes therapists. Introducing a patient login could empower patients to monitor their progress and get a more tailored experience.

Name Ambiguity: There's a need to address and support multiple patients with identical names to avoid any data overlap or confusion.

4. Code Quality & Testing:

Testing: The system requires further integration and unit-test code to bolster test coverage and ensure a robust, error-free experience.

Hey, there

Sahana Venkatesh

I did my masters in electrical engineering from USC. I am currently living in UK. I have lived 3 different countries (India, US and UK) :) and I believe I carry their values in me.

I am currently a Senior Machine Learning Engineer at Jaguar Land Rover.

Reference : https://www.psychologytoday.com/gb/blog/magical-enlightenment/202110/being-therapist-the-good-bad-and-ugly

Appendix

Interviewing therapists

Questions	Thoughts on more personalized assignments?	If so, what elements would make them more engaging for patients?	When starting sessions with a new client, what specific information would assist in tailoring their therapeutic assignments more effectively?	Based on the idea of an AI-driven personalized therapeutic tool, how do you perceive its potential in enhancing the therapeutic experience for both you and your clients?
Therapist 1	Personalized assignments help in client engagements and outcomes.	Engagement for patients depends on their learning mode. Recommendations can include creative activities like art, physical ones like yoga, or writing tasks with clear prompts.	Assessing their willingness to work outside of sessions and their capacity in terms of time, energy, and finances..	An AI-driven therapeutic tool could assist in reminding clients of skills or techniques, effectively tracking their progress over time.
Therapist 2	Yes, tracking responses to particular situation culd be powerful.		Demographic details like the individual's age, city, ethnic and cultural background, languages they know, academic history and brief of family history.	An AI-driven therapeutic tool could enhance therapy by monitoring vital health metrics like heart rate variability, sleep, and mood, and recommending interventions. It can also facilitate easier access to mental healthcare resources for clients.
Therapist 3	Yes and technology could reduces the cognitive burden of coming up with specific assignment.	Work at client's pace and calibrate the process consistently with feedback.		While AI cannot replace personalized sessions, a well-developed AI tool could assist in creating improved plans and assignments for patients.