

PROJECT PLAN DOCUMENT v2

<i>Project number</i>	Team 49 ¹
<i>Project Title</i>	Wave Diaries
<i>Document</i>	Project Plan
<i>Creation Date [v1]</i>	February 2, 2025
<i>Modification Date [v2]</i>	February 13, 2025
<i>Created By</i>	Shivam Gupta (2023101062) (v1), Raunak Seksaria (2023113019) (v2)
<i>Client</i>	Mr. Jazeel Jabbar, HopeLog(Startup)

Brief problem statement

The problem focuses on aiding people suffering from mental health issues such as depression, stress, and anxiety. The core objective is to build an AI-based model, integrated with a speech-to-speech module which can track the user's mood, and empathetically respond to alleviate the distress that the user might be facing. The model's context-aware therapeutic responses can act as an alternative to treatment by professional psychologists where money, time and opportunity can all be constraints for patients. It can also act complementary to the treatment, and help the user tackle issues on-the-go in real-time, while the patient's personal therapist can review these conversations. The problem requires a personalized, sensitive solution committed to the needs of the user with very little margin of error available.

Team Members

Our team consists of these members along with the roles assigned (P: Primarily responsible, S: secondary responsibility):

Aditya Gaur: Server Side(P), DevOps(P)

Manit Roy: AI/ML(P), DevOps(S)

Raunak Seksaria: Scrum Master (P), AI/ML(S), UI/UX(S)

Shivam Gupta: UI/UX(P), Server Side(S)

Team Communication

A WhatsApp group has been created for effective discussions and negotiations among team members. There is also a slack team for more official communications. Team meetings will be held in-person approximately once a week in our hostel rooms.

¹ Aditya Gaur (2023101052), Manit Roy (2023113022), Raunak Seksaria (2023113019), Shivam Gupta (2023101062)

Development Environment

1. A Trello Board has been created for task management.
2. VSCode is the primary editor which we shall be using.
3. MERN stack-based web-app
 - a. MongoDB
 - b. Express.js
 - c. React (might use Next.js or Remix: react based Frameworks(undecided))
 - i. Figma
 - ii. Material UI/ Tailwind
 - d. Node.js
 - e. Associated Tools:
 - i. Typescript
 - ii. ESLint
 - iii. Postman
 - iv. JWT
4. GEN AI technologies (including for Automatic speech-to-text):
 - a. LangChain: Whisper
 - b. Groq
 - c. Gemini
 - d. GPT 4o
 - e. Smallest.ai
 - f. Hugging Face
5. Python and python libraries required:
 - a. PyTorch/ TensorFlow
 - b. NumPy
 - c. Pandas
 - d. NLTK
 - e. SpaCy
 - f. PyAudio
6. Deployment:
 - a. StreamLit
 - b. Docker
 - c. AWS

Milestone Schedule

Milestone	Due Date	Release	Deliverable?
Create SRS	16/2/25	R1	No
Do preparatory work (learning technologies required)	28/2/25	R1	No
Automatic Speech Recognition, speech-to-text, genAI API call along with multilingual support	15/3/25	R1	Yes
Create working responsive frontend (design need not be perfect)	15/3/25	R1	Yes
Do backend routing with basic security features	15/3/25	R1	Yes
Improve Security features and login methods	15/4/25	R2	Yes

<i>Personalized and well thought-of UI design</i>	15/4/25	R2	Yes
<i>RAG, sentiment Analysis and fine tuning</i>	15/4/25	R2	Yes
<i>Deployment on AWS</i>	15/4/25	R2	No