# PROJECT PLAN DOCUMENT

| Project number | *Team 49* |
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| Project Title | *Wave Diaries: Your AI Companion* |
| Document | Project Plan |
| Creation date | *February 2,2025* |
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| Client | *Mr. Jazeel* |

## Brief problem statement

The problem focuses on employing the usage of Artificial Intelligence in aiding people suffering from mental health disorders such as clinical depression, stress, anxiety etc. The core objective is to build an AI-based model integrated with a speech to speech module enabling sentimental analysis of the user to effectively track his/her mood. The model further aims to generate therapeutic responses intended to help the patient mentally and psychologically thus reducing the reliance on psychiatrists and traditional drug driven treatments making the entire process cost-effective. The problem also highlights the sensitivity of the issue and targeting the right audience. The problem requires a sensitive solution committed to the needs of the user with very less marginality of error.

## Team Members

Our team consists of these members along with the roles assigned:

Aditya Gaur: Backend Development

Manit Roy: Working on AI technology and related ideas

Raunak Seksaria: Gamification and related technologies

Shivam Gupta: Frontend Development and documentation

## Team Communication

A WhatsApp group named DASS team 49 has been created for effective discussions and negotiations among team members. Team meetings will be held periodically (preferably after every 3-4 days) in our hostel rooms or workspace. We are planning to meet physically in-person each time for better communication.

## Development Environment

We are planning to develop the project in a MERN stack and AI journaling driven technical environment.

Our project requires the usage of both AI technology and MERN stack. Following is a detailed description of the technology that we intend to use and the required tools:

AI based audio journaling which is an advanced extension of Hope Log. To develop the AI journaling module (which is an integral part of our project in essence that it allows personalized audio prompts from the user), we need Node.js/Python for backend development, React/React Native for frontend development. We also need tools such as Google Cloud/Whisper for enabling

speech to text and text to speech translations. Audio processing technology, NLP (Natural language processing) and cloud platform technologies (AWS/GCP) are required. Hugging Face Transformers can be used for AI generated responses. Retrieval Augmented Generation (RAG) can be employed for vector-based retrieval. Certain other AI/ML tools might be used. Additionally, material UI and tailwind CSS can be used for styling various components of user interface. MongoDB will be the preferred database for handling user queries and storing user profiles.