

# **Project Abstract: NeuroMentor - A GenAI Mental Wellness Companion**

NeuroMentor is a Generative AI-based mental wellness companion designed to assist students, professionals, and job seekers in managing emotional wellbeing, combating burnout, and improving productivity. The system provides intelligent support through natural language interaction, voice input/output, image and document analysis, and real-time insights.

Built using Google Gemini Pro and LangChain, NeuroMentor integrates multiple tools:

- Context-aware chat using LangChain Agents with Gemini Pro.
- Voice support via SpeechRecognition and gTTS for hands-free wellness coaching.
- Gemini Vision-based image analysis (e.g., interpreting memes, motivational images).
- PDF question answering using Chroma vector store and Google embeddings.
- Web search with Serper.dev for real-time mental health queries.
- Mood tracking with Matplotlib and burnout detection based on recent conversation trends.
- Text-to-image generation with Hugging Face Diffusers and Stable Diffusion.

Each user session is saved by date and username, with mood analytics and top queries stored for pattern recognition. The app is built using Streamlit and supports deployment across cloud platforms like Streamlit Cloud or Hugging Face Spaces.

This project is a part of the Kaggle x Google GenAI Capstone 2025Q1 and showcases multi-modal generative AI, RAG, structured output, memory management, and real-world application of AI for wellness.

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