

Projects

- **Doctor Appointment Scheduler** (Mar '26 - Apr '26) - Architected and deployed a scalable, production-level Multi-Agent System for appointment scheduling. Designed the Agent Orchestration and coordination, integrating intelligent doctor matching and calendar scheduling (task hand-off/execution). Implemented robust Tool Calling and Execution using Composio for calendar actions and Google Maps MCP. The scalable Backend Engineering architecture utilizes a RESTful API (FastAPI) served on Google Cloud Run for containerized deployment, integrating Google Cloud SQL and Vertex AI.
GitHub - https://github.com/arijitde92/Doctor_Appointment_Scheduler
Live Link - <https://doctor-appointment-app-173427564927.asia-south1.run.app/>
- **Job Application Agent** (Apr '25 - May '25) - Developed a real-world Multi-Agent System for automation, utilizing Crew AI for advanced workflow orchestration of specialized agents. Engineered Shared State/Memory by integrating Google BigQuery (vector store) and Vertex AI (embeddings) for consistent, scalable semantic search and storage across agents. Implemented custom tools (LinkedIn/GitHub scrapers) and leveraged LangChain for core system logic, all built in Python.
GitHub - https://github.com/arijitde92/Job_Application_Agent
- **Online Assignment Submission Portal** (Oct '24 - Nov '24) - A Flask + MySQL WebApp for submission & evaluation of C programming assignments built in a docker container. Teachers can create assignments whereas students can view assignments, submit code & get it evaluated with an in-built GCC compiler.
Live link - <https://subsequent-heath-arijit-home-3b9d0400.koyeb.app/>
Github - https://github.com/arijitde92/Online_Programming_Assignment_Portal
- **Spiritual Chatbot** (Jan'24 - Feb'24) - An LLM chatbot that personifies a Hindu God. Uses OpenAI GPT-3.5 turbo model APIs and Langchain for creating prompt templates. Attempted prompt engineering techniques to make chatbot stay within context and purpose. The front end was built using streamlit while python was at backend.
Live link - <https://spiritualchatbot.streamlit.app/> Github - <https://github.com/arijitde92/SpiritualChatBot>
- **3D Brain Analysis and Visualization App** (Jul'24 - Aug'24) - A Flask Application that can segment the hippocampus or a brain tumor from a 3D brain MRI scan. The segmentation models are built using Hippocampus Segmentation Factory (HSF) for Hippocampus Segmentation and a 3D Attention UNet model for brain tumor segmentation.
Github - https://github.com/arijitde92/Brain_Seg_App

Education

- PhD, Jadavpur University, Kolkata, India. 2019-2024
- M.Tech. Computer Science & Engineering, Jadavpur University, Kolkata, India. GPA - 8.83 2016-2018
- B.Tech. Computer Science & Engineering, Techno India, Kolkata, India. GPA - 8.81 2010-2014

Open Source Contributions

- Contributed to [AI-Code](#) as part of Social Summer of Code (**SSoC**) 2024 & [DL-Simplified](#) as part of Social Winter of Code (**SWoC**) 2023 Hackathons.
- Contributed to [nexB](#) and [TheAlgorithms](#) repositories pertaining to both feature enhancements and documentations.

Certifications

- Deep Learning, a 5-course specialization, by Deeplearning.ai. Verify [here](#).
- MCPS: Microsoft Certified Professional, Microsoft Certification No.: 1042C4-5DHF30