MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Debashis Majumder

Roll No.: 38732523007
BTech in Artificial Intelligence
Alipurduar Government Engineering and Management College

+91-7001095441
dm2707@ai.agemc.ac.in
debashisxmajumder@gmail.com
GitHub
Website
LinkedIn Profile

Education

•West Bengal Council of Higher Secondary Education *2023*
Physics, Chemistry and Mathematics Percentage: 65.04

•Alipurduar Government Engineering and Management College *2027*
BTech in Artificial Intelligence CGPA: 7.06

Technical Skills and Interests

Languages: English, Hindi, Bengali
Programming Languages: Python, C++
Frameworks: FastAPI, Flask, NumPy, Matplotlib, Pandas, Scikit-Learn, Streamlit, OpenAI, OpenCV
Other Skills: SQL, Machine Learning, HTML, CSS, Docker, Git, Linux
Soft Skills: Collaboration, Problem-solving, Communication, Time Management, Result-oriented, Hard Working, Team Player

Projects

•Wireless Data Transfer (WDT)

Developed a secure, Flask-based wireless file transfer system with QR-code access and admin control.

- Designed and developed a production-ready wireless file transfer system for local networks.
- Implemented general and secure file upload modes, including QR-code–based secure access.
- Built a Flask-based web interface for uploading, downloading, and managing files.
- Added time-based file expiry with automated background cleanup using multithreading.
- Implemented admin panel with authentication, session handling, and activity logging.
- Integrated detailed audit logging (CSV ledger) for uploads, downloads, and deletions.
- Designed for cross-device access (mobile, desktop) within a local Wi-Fi network.

•Retrieval-Augmented Generation (RAG) AI Assistant

Built a Retrieval-Augmented Generation (RAG)–based AI assistant that allows users to query documents intelligently.

- Used Python, FastAPI, ChromaDB, LangChain, and OpenAI APIs to process and embed documents, store them in a vector database, and retrieve relevant context for grounding LLM responses.
- Performed document ingestion, text chunking, and embedding generation to ensure efficient semantic search and accurate retrieval of relevant information.
- Developed a retrieval pipeline with a RetrievalQA chain, combining semantic search results with OpenAI's LLM to generate precise and reliable answers.
- Deployed the solution with Docker and FastAPI endpoints for real-time querying (`/query`, `/query_with_sources`) and health checks, making the system scalable and production-ready.

Certificates

•Certificate for Python for Data Science, AI and Development from Coursera