Naseer Hussain

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Work Experience

Next Tech Lab | **AI/Ml Engineer** *Oct 2024 – Present*

- Developing and prototyping **AI and ML models** as part of a QS-ranked, student-led R&D lab.
- Built **RAG applications** and Finetuned **Diffusion, Reasoning Models**.
- Collaborated in **Hackathons, internal demos, and rapid prototyping cycles**, improving inference speed and optimizing models

OpenSource Contributor | ***GSOC*** | ***Github, Gitlab*** *2024 – Present*

- Actively contributing in opensource projects like **openvino, Hive** and solving issues.
- Cleared first round of GSOC 2025 in **HSF organization**. Developed a containerized log analyzer
- Maintained clean, modular codebases with version control using **Git and GitHub**.

Projects

DIME (Distributed Infrastructure Management) | ***Python, FastAPI, Meta OpenEnv, Gymnasium, Llama-3.1*** ***[GITHUB LINK]***

- Engineered a high-fidelity distributed systems simulation RL environment utilizing the **Meta PyTorch OpenEnv** framework and **FastAPI** to train and benchmark LLM agents on complex SRE tasks.
- Modeled distributed systems dynamics by engineering a **discrete-time stochastic simulation** featuring Gaussian request arrivals, /quadratic CPU congestion penalties, and topology-aware cascading load redistribution.
- Architected an automated evaluation pipeline with a continuous step-level **reward function**, leveraging the **OpenAI API** to benchmark the real-time infrastructure remediation capabilities of frontier models like Llama-3.1-8B.

ACM AI (Adaptive Cognitive Memory)| ***Python, FastAPI, PyTorch, Langchain, Transformers*** ***[GITHUB LINK]***

- Built a syllabus-aware learning system integrated with **Google Classroom** that extracts course materials and organizes them into structured units and topics for personalized **flashcard-based** revision.
- Designed a **PostgreSQL**-centric pipeline for data normalization and document processing, including PDF/DOCX parsing, **token-based chunking**, and clean separation of structured storage vs. AI inference.
- Implemented a **hybrid LLM architecture** using local models **(Qwen)** for document classification and syllabus structure extraction, enabling reliable unit/topic inference while keeping core logic rule-driven.

Levoks (Full-Stack Visual Builder) | ***Next.js, Node.js, Zustand, Docker, JSZip*** ***[GITHUB LINK]***

- Architected a low-code **tri-canvas platform** enabling intuitive drag-and-drop generation of synchronized frontend UIs, backend microservices, and API routing logic.
- Designed a deterministic state management system using **Zustand** to serialize complex UI interactions, ensuring real-time synchronization between visual elements and underlying data models.
- Engineered an automated code generator that parses the global state tree to instantly export production-ready **Next.js** and **Express.js** codebases, complete with automated API bindings and **Docker** configurations.

Health Secure | ***NextJs, TypeScript, Django, Pinata, Smart Contracts*** ***[GITHUB LINK]***

- Built a **blockchain-enabled** medical records platform that allows patients to control data access while ensuring tamper-proof storage and verification of records.
- Implemented a decentralized data pipeline by storing documents on **IPFS (Pinata)** and recording **SHA256 hashes** on **Quai Network** smart contracts to ensure integrity and immutability.
- Designed a secure backend architecture using Django REST, **JWT authentication**, and role-based access for patients and doctors, with Health ID–based interoperability.

Skills

Programming Languages: C, C++, Python
Databases: PostgreSQL, MySQL, Vectordbs (Qdrant, Pinecone)
Backend & Services: Firebase, REST APIs
AI: LangChain, Langraph, Huggingface, LLM APIs (OpenAI, Gemini), RAG
ML Tools: Scikit-learn, Pytorch, Numpy, Pandas, Seaborn
Frameworks & Dev: React, Streamlit, Django, FastAPI
Cloud & DevOps: Kubernetes and Docker
Tools: Git, NGINX, Cloudflare

Achievements

- Winner of Hackathon **VibeCraft** by building **HealthSecure**, a decentralized blockchain-based platform for medical records.
- Winner of Hackathon **HackSRM**, a national level Hackathon. By building **Levoks**, a GUI and Node based editor for build fullstack web applications.

Education

SRM University, Andhra Pradesh **Aug 2024 – Jul 2028**
B.Tech CSE (AI & ML) | CGPA: 9.03