Laxmi Sai Maneesh Reddy Jupalle

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SUMMARY

Computer Science graduate student at the University of Illinois at Chicago with 5+ years of experience in distributed systems, full-stack development, and enterprise software support. Hands-on experience building GenAI systems including RAG pipelines, LLM-driven applications, and vector-database–backed retrieval workflows. Strong background in debugging production systems, working across APIs and cloud platforms, and designing scalable, distributed architectures.

EDUCATION

University of Illinois at Chicago (UIC) **Aug 2024 – May 2026**
Master of Science in Computer Science (GPA: 3.80) Chicago, IL
Coursework: Distributed Systems, Artificial Intelligence, Machine Learning, Data Science, Networking, DBMS, DevOps, GenAI.

Jain (Deemed to be University) **Jul 2018 – Jul 2022**
B.Tech in Computer Science and Technology in Artificial Intelligence (GPA: 3.72) Bengaluru, KA
Coursework: Machine Learning, Deep Learning, NLP, HCI, Data Structures, DSA, Distributed Systems, DBMS, Data Science, AI

RESEARCH EXPERIENCE

AI-Driven Academic Research Assistant **Dec 2024 – Jan 2025**
Independent Research Project – University of Illinois at Chicago

- Investigated multi-LLM architectures for automated academic literature analysis, designing a system capable of extractive and abstractive summarization, citation-aware retrieval, and contextual question answering over research corpora.
- Implemented and evaluated a full-stack research prototype (React, TypeScript, Node.js, Supabase) with JWT-based authentication and row-level security, enabling real-time iterative exploration of uploaded papers through conversational AI interfaces.

WORK EXPERIENCE

University of Illinois at Chicago **Chicago, IL**
Graduate Assistant – GenAI Team Jan 2026 – Present

- **Architecting** an end-to-end RAG-based clinical AI system using Python, Azure AI Foundry, and open-source LLMs (LLaMA, Mistral) with vector-database retrieval to automate medical justification reports for assistive technology equipment.
- **Developing** secure, HIPAA-compliant data workflows to process, anonymize, and validate patient records from protected file servers, grounding AI-generated clinical documentation in verified inventory and patient datasets.

VMware by Broadcom **Bengaluru, KA**
Software Engineer, Workspace ONE Aug 2022 – Jul 2024

- **Resolved** 250+ production-impacting cases monthly involving REST APIs, certificates, XML payloads, and profile-based configurations across Apple–VMware MDM integrations, maintaining strict SLA and uptime requirements.
- **Performed** deep log aggregation and configuration audits to isolate failures in distributed enterprise environments, reducing mean time to resolution across P1/P2 severity incidents.
- **Authored** reproducible Jira cases with detailed logs and environment metadata, streamlining handoff to engineering teams and reducing escalation cycles by 40%.
- **Created** comprehensive knowledge base articles and internal runbooks for recurring enterprise issues, enabling faster onboarding of new engineers and reducing repeat escalation volume across the team.

TECHNICAL SKILLS

Programming Languages : C++, Python, Java, JavaScript, TypeScript, Rust, SQL
Frameworks & Libraries : React, Django, TensorFlow, PyTorch, Scikit-Learn, LangChain, LangGraph, Hugging Face
AI & Data : RAG, Generative AI, Data Analysis, PowerBI, Tableau
Cloud & DevOps : AWS, Azure, Docker, Jenkins, Git, Linux
Languages : English, Telugu, Kannada, Hindi, Japanese

PROJECTS

Golden Bridge: Ambulance Pre-Arrival System (*1st Place, Microsoft-Sponsored Hack with Chicago*) **Dec 2025**

- **Architected** a multi-agent orchestration system using LangChain and GPT-4 for intelligent triage automation with coordinated diagnostic, severity scoring, and treatment agents.
- **Engineered** real-time streaming using Pathway, Kafka, FastAPI, and WebSockets for sub-second latency EMS data transmission, deployed on Azure using Docker.

Insurance Document Intelligence Platform **Jan 2025 – May 2025**

- **Built** a web-based LLM-powered document analysis system using GPT-Nano/Gemini Flash APIs with vector and graph search (Qdrant, Neo4j) to extract, compare, and simplify insurance documents.
- **Designed** a scalable modular architecture with Extract, Query, Analyze, and Compare pipelines to enable structured decision-making through integrated LLM workflows.

PUBLICATIONS

Diabetic Retinopathy Detection using ML **Jan 2022 – Jun 2022**

- Built a CNN-based diabetic retinopathy detection system; received **International Best Researcher** recognition.
- www.ijariit.com/manuscript/diabetic-retinopathy-detection-using-machine-learning/