

SHANMUKA REDDY GARUGU

B.Tech in Computer Science and Engineering | Indian Institute of Information Technology, D&M, Kancheepuram
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Professional Summary

CS undergraduate at IIITDM Kancheepuram skilled in building production-grade AI systems and full-stack applications. Hands-on experience with RAG pipelines, LLM integration, and multimodal ML, deployed end-to-end across cloud infrastructure. Seeking Software Development or Machine Learning Engineering roles to deliver real-world impact.

Education

Indian Institute of Information Technology, D&M
B.Tech in Computer Science and Engineering; CGPA: 8.48
Sarada Educational Institutions
Board of Intermediate Education; Percentage: 97.7%

Kancheepuram
2023 - 2027
Andhra Pradesh
2021 - 2023

Experience

Placement Cell Volunteer

Training & Placement Cell, Multi-Wing Contributor

IIITDM Kancheepuram

2024 - Present

- Managed structured outreach to 20+ companies, coordinating with HR representatives to drive on-campus recruitment participation and maintain hiring contact records.
- Oversaw end-to-end logistics for placement drives: venue setup, exam monitoring, and delegate hospitality, ensuring seamless recruitment experiences for visiting companies.
- Contributed to social media communications by designing placement achievement posts, strengthening institutional visibility across digital platforms.

Projects

RAG-Powered E-Commerce Support Agent | *React, Node.js, Python, OpenAI, Supabase, Redis* | GitHub | Live Demo

- Built a full-stack RAG application generating vector embeddings via OpenAI and serving real-time AI responses through Server-Sent Events with sub-second streaming latency.
- Engineered a Python web scraper (Playwright, BeautifulSoup) with headless Chromium stealth evasion to extract structured data from JavaScript-heavy storefronts including Myntra, Flipkart, and Ajo.
- Implemented BullMQ + Redis async job queue handling hundreds of URLs concurrently; designed multi-tenant pgvector knowledge base with Row Level Security ensuring strict per-user data isolation.

Multimodal AI Interview Performance Analyzer | *Next.js, FastAPI, Python, TypeScript, OpenAI* | GitHub | Live Demo

- Built an AI-powered mock interview platform that generates job-description-based and company-specific interview questions and runs timed interview practice sessions.
- Implemented a FastAPI-based analysis backend and transcript-driven scoring workflow to evaluate interview responses across content, delivery, and presence dimensions.
- Designed a detailed results experience with per-question transcript review, session-level feedback, temporary recording access, and actionable suggestions for improvement.

Automated DevOps Intelligence Platform | *FastAPI, Next.js, LangChain, PostgreSQL, Docker* | GitHub | Live Demo

- Integrated RAG pipelines (LangChain, pgvector) with a Next.js dashboard for natural language codebase Q&A across 1000+ repositories, eliminating manual code search.
- Engineered LLM-based PR review (GPT-4o), CI failure diagnosis via GitHub Webhooks, and dependency vulnerability scanning in a single DevOps platform.
- Built an LSTM Autoencoder for log anomaly detection and K-Means clustering for cloud cost optimization, with distributed tracing via OpenTelemetry and Jaeger.

Technical Skills

Programming Languages: C/C++, Python, JavaScript, TypeScript

Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, FastAPI, Flask, LangChain, PyTorch

ML & AI: Scikit-learn, OpenCV, NumPy, Pandas, RAG Pipelines, LLM Integration, Computer Vision

Databases: PostgreSQL, MySQL, MongoDB, Supabase (pgvector), Redis

Developer Tools: Git, GitHub, Docker, VS Code, MLflow, Vercel, AWS S3

Coursework & Interests

Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Systems, Computer Networks, Operating Systems, Machine Learning

Areas of Interest: Software Development, Machine Learning Engineering, AI Systems

Soft Skills: Problem Solving, Cross-functional Collaboration, Adaptability, Attention to Detail