

# Sreekar Reddy Edulapalli

Sydney, NSW · +61 430 175 475 · [esreekarreddy@gmail.com](mailto:esreekarreddy@gmail.com)

[LinkedIn](#) · [GitHub](#) · [Portfolio](#)

## Professional Summary

AI Engineer and Full-Stack Developer with 2.8 years of enterprise experience at IBM, currently pursuing Master of Artificial Intelligence at UTS. Architected 25+ deployed web applications featuring multi-agent AI systems, RAG pipelines, and browser-based ML inference. Core expertise in Model Context Protocol (MCP), agentic AI orchestration, and LangChain/LangGraph workflows. Recognized as NSW Volunteer of the Year Award Nominee with 150+ community service hours.

## Technical Skills

**AI/ML & LLM Engineering:** Python, LangChain, LangGraph, RAG Architecture, Model Context Protocol (MCP), Agentic AI, Multi-Agent Orchestration, Prompt Engineering, Ollama, WebLLM, Transformers.js, Vision-Language Models

**Full-Stack Development:** TypeScript, JavaScript, React, Next.js 15, Node.js, Express.js, REST APIs, WebRTC, WebSockets, WebContainers, Framer Motion

**Cloud & DevOps:** AWS (Lambda, DynamoDB, API Gateway, S3), Azure, Docker, GitHub Actions, CI/CD, Vercel, Serverless Architecture

**Databases:** PostgreSQL, MongoDB, Neo4j, Supabase, IndexedDB, Graph Databases, Vector Search

**Testing & QA:** Playwright, Cucumber/Gherkin, Jest, Vitest, pytest, JMeter, Test-Driven Development

## Education

### Master of Artificial Intelligence

University of Technology Sydney (UTS)

Sydney, Australia

Feb 2025 – Dec 2026

- GPA: 6.75/7.0 (High Distinction Average)
- Coursework: Deep Learning, Natural Language Processing, Computer Vision, MLOps, Applied AI Search
- Applied Projects: Telecom routing optimization using A\* search (60% efficiency gain), Neo4j graph analytics, predictive modeling with Decision Trees and Random Forest

### Bachelor of Technology in Computer Science (IoT)

Jain (Deemed-to-be) University

Bangalore, India

Aug 2017 – Jul 2021

- GPA: 8.8/10.0 – Top 5% in Problem Solving, Object-Oriented Programming, and Applied Mathematics

## Professional Experience

### IBM

Software Development Engineer in Test – Client: Mercedes-Benz R&D India

Bangalore, India

Jul 2023 – Dec 2024

- Architected ML-powered test automation framework using Python, Playwright (TypeScript), and Cucumber/Gherkin, reducing QA cycle time by 40% and enabling 3x faster release cycles for Mercedes-Benz digital products
- Built scalable CI/CD pipelines with GitHub Actions and Docker, automating 200+ test scenarios across 15 microservices with zero manual intervention
- Pioneered adoption of in-house Generative AI tools for intelligent test case generation, improving test coverage by 35% while reducing false positives
- Led cross-functional team of 4 engineers; mentored junior developers on automation best practices and established code review standards adopted team-wide

### IBM

Application Developer – Client: Development Bank of Singapore (DBS)

Hyderabad, India

May 2022 – Jun 2023

- Developed high-performance RESTful APIs using Java 8, Spring Boot, and Microservices architecture for mission-critical banking applications processing daily transactions
- Optimized transaction processing pipeline by 20% (500ms → 400ms) through database query optimization, Redis caching, and connection pooling strategies
- Implemented comprehensive testing suite with JUnit, Mockito, and JMeter; managed zero-downtime deployments across Tomcat, Apache HTTP, and Wildfly servers using Jenkins CI/CD
- Collaborated with cross-functional QA and DevOps teams to enforce code quality standards, resulting in improved sprint velocity

- Delivered full-stack features using Next.js (frontend) and Express.js (backend), integrating AWS Lambda, API Gateway, and DynamoDB for serverless architecture
- Debugged critical backend issues in serverless functions; collaborated in agile team of 4 on feature ideation and scalable API design; maintained stable production deployments on Vercel

## Featured Projects

### Cortex – Multi-Agent AI Code Review System

[cortex.sreekarreddy.com](https://cortex.sreekarreddy.com)*Python, LangChain, Ollama Cloud API, Multi-Agent Architecture*

- Orchestrated 6 specialized AI agents (Architect, Sentinel, Optimizer, Maintainer, Verifier, Moderator) for automated code review covering architecture, security, and performance analysis with severity-ranked findings
- Designed evidence-based verification where Verifier cross-validates claims against actual code, preventing hallucinations
- Deployed robust error recovery with exponential backoff retry logic and per-agent failover for production reliability

### SR Terminal – Browser-Based AI Development Environment

[terminal.sreekarreddy.com](https://terminal.sreekarreddy.com)*Next.js, WebLLM (WebGPU), WebContainers, Monaco Editor, XTerm.js*

- Built complete IDE in browser with AI coding assistant using Microsoft Phi-3 (3.8B parameters) running 100% on-device via WebGPU with sub-second inference times
- Launched Node.js 18 runtime using WebContainers for sandboxed code execution with full npm package support
- Integrated Monaco Editor with multi-tab XTerm.js terminal; IndexedDB caching for instant model loading after initial download

### SR Mesh – Local-First 3D Knowledge Graph

[mesh.sreekarreddy.com](https://mesh.sreekarreddy.com)*Transformers.js, React Three Fiber, IndexedDB, D3-force-3d*

- Developed browser-based semantic search using all-MiniLM-L6-v2 embeddings (384 dimensions) with zero data transmission
- Crafted intelligent text classifier categorizing content into 9 types using rule-based NLP with priority pattern matching
- Deployed K-means++ clustering for automatic semantic grouping with 3D force-directed visualization; 95%+ test coverage (55 Vitest tests)

### Mirage – Vision AI Sketch-to-Code Engine

[mirage.sreekarreddy.com](https://mirage.sreekarreddy.com)*Qwen3-VL Vision-Language Model, tldraw, WebContainers, Vite*

- Created sketch-to-code system using VLM that analyzes wireframe drawings and generates production-ready React/Tailwind components
- Devised chain-of-thought vision prompting for systematic color extraction, spatial layout analysis, and element inventory
- Integrated WebContainer-powered Vite runtime for instant live preview with hot-reload; chat interface for iterative refinement

### GhostLine – Zero-Knowledge P2P Video Calling

[ghostline.sreekarreddy.com](https://ghostline.sreekarreddy.com)*WebRTC, PeerJS, Web Crypto API, SHA-256*

- Designed privacy-preserving P2P video calling with SHA-256 hashed peer discovery (signaling server has zero visibility)
- Established visual fingerprinting (SAS-style verification) for cryptographic MITM prevention; ephemeral 2-minute code expiry

### sreekarreddy.com – Full-Stack Digital Platform

[sreekarreddy.com](https://sreekarreddy.com)*Next.js 14, React, Supabase, Nodemailer, Tailwind CSS*

- Architected full-stack digital platform with 100/100 Lighthouse scores; custom newsletter system using Supabase + Nodemailer with double opt-in and rate limiting
- Constructed commenting system with bcrypt password hashing, reCAPTCHA spam protection, and comprehensive JSON-LD SEO (800+ lines structured data); MDX content pipeline treating filesystem as CMS

See all 25+ deployed projects: [sreekarreddy.com/projects](https://sreekarreddy.com/projects)

## Certifications

---

**AI/ML:** Anthropic Model Context Protocol (2025), Anthropic AI Fluency (2025), Google AI Essentials (2024), IBM AI Foundations Specialization (2024), IBM watsonx Essentials (2024), IBM Trustworthy AI & Ethics (2024)

**Cloud:** AWS Certified Cloud Practitioner (Valid 2026), Azure AI Fundamentals, Azure Data Fundamentals, IBM Certified Technical Advocate – Cloud v4, IBM Certified Advocate Plus – Cloud v2, Neo4j Certified Professional (2025)

**Data:** Google Data Analytics Professional Certificate – 8 courses (2024)

**Other:** AICD Foundations of Directorship (2025), Mental Health First Aider (Valid 2028)

*View all 55+ certifications:* [sreekarreddy.com/certifications](https://sreekarreddy.com/certifications)

## Leadership & Community Impact

---

- **UTS Council – Postgraduate Student Representative** (Jun 2025 – Present): Elected to university's highest governing body as voting member on strategic decisions affecting 45,000+ students including budget allocation, academic policy, and campus development
- **UTS AI Society – Assistant Secretary & Outreach Coordinator** (Mar 2025 – Present): Organized 5+ technical workshops (70+ attendees each) on LLMs, LangGraph, and Neo4j; drove membership growth through content strategy
- **NSW Volunteer of the Year Award – Adult Nominee** (Aug 2025): Nominated by Centre for Volunteering NSW; 150+ hours across Study NSW Airport Welcome Desk, Australian Red Cross, The Big Lift, Code Club Python teaching
- **UTS SOUL Award Graduate** (Dec 2025): Completed 133.5 hours of verified social impact action and leadership development workshops
- **IBM Champion Learner Gold Award** (2023, 2024): Top 6% globally; 350+ learning hours in 2024, 200+ in 2023; earned 40+ technical badges
- **GRE:** 330/340 (Quantitative: 170/170, Verbal: 160/170)

*More:* [Volunteering](#) · [AI Explorations](#) · [Uncharted Fragments](#)