

Amitha Isuru

[Backend/Full-Stack Engineer](#) | AI Systems | rkamithaisuru@gmail.com | (+94) 715922751 | [LinkedIn](#) | [GitHub](#)

PROFESSIONAL SUMMARY

Software Engineer with 1+ years of professional software engineering experience developing production-grade AI systems and enterprise web applications. Proven expertise in backend architecture (FastAPI, PostgreSQL, AWS), AI/ML integration (OpenAI RAG, vector stores), and DevOps practices. Shipped 3 complex projects end-to-end with focus on performance, scalability, and user impact. Published IEEE research in computer vision. Seeking backend/full-stack roles where deep system design meets AI innovation.

CORE COMPETENCIES

Backend & APIs FastAPI, RESTful APIs, Pydantic, PostgreSQL, MySQL, Database Design
AI/ML Integration OpenAI API, RAG Architecture, Vector Stores, LLM Agents, Chat Integration
DevOps & Cloud AWS (EC2, Lightsail), Azure (Blob Storage, Static Web, OpenAI), Vercel, Docker, Nginx, PM2, vicorn
Frontend & CMS React, Next.js, Supabase Realtime, HTML/CSS, WordPress, Elementor
Tools & Practices Git, Jira, GitHub Copilot, Claude Code, CI/CD Concepts, Computer Vision, Formal Verification

PROFESSIONAL EXPERIENCE

Software Engineer | April 2026 – Present

Quantum Tunnel Design (PVT) Ltd

- Delivered CRM system enhancements including lead capture, SMS thread integration via Convirza, lead merging, and AI-powered follow-up automation using Node.js, Next.js, Supabase, and Azure OpenAI.
- Migrated Business Insight Platform infrastructure from AWS to Azure, improving cloud alignment and deployment maintainability for the AI-powered sustainability analytics system.

Associate Software Engineer | Sept 2025 – March 2026

Quantum Tunnel Design (PVT) Ltd

- Architected and deployed Business Insight Platform, an AI-powered sustainability analysis system using OpenAI GPT-5.1, RAG with OpenAI vector stores, and thread-based context management; supports 3-year historical report analysis and is actively used by 10+ enterprise clients.
- Built Timesheets enterprise application serving 200+ employees; designed REST APIs with FastAPI and PostgreSQL; implemented automated email scheduling using crontab and CXO weekly reports; deployed on AWS EC2 with PM2/Uvicorn.
- Developed core CRM features including lead capture, SMS thread integration via Convirza, lead merging, and AI follow-up workflows using Node.js backend and Next.js frontend.
- Collaborated directly with clients on requirements, UAT, and deployment; managed full SDLC from design through production using Git and Jira.

Technical Engineering Intern | April 2024 – October 2024

Synopsys Lanka (Pvt) Ltd

- Led regression cleanup for Unified Compiler R&D team: analyzed and resolved 10+ JIRA issues in VCS compiler verification; fixed SystemVerilog handling, clock synchronization, and signal initialization bugs.
- Integrated VCS support into VC-Static formal verification tool; strengthened verification workflows across hardware validation pipeline using Verdi, GDB, Perforce, and TCL.

EDUCATION

B.Sc. Engineering (Hons) in Computer Engineering | 2025

University of Sri Jayawardenepura | *Second Class Upper Division* | *GPA: 3.43/4.00* | *Minor: Data Management*

- Key Coursework: Data Structures & Algorithms, NLP, Computer Vision, Machine Learning, Software Engineering.

FEATURED PROJECTS

CRM System – Sales & Lead Management | *Lead capture and AI-powered follow-up automation* | Feb 2026 – Present

- Purpose: Lead capture, SMS thread integration (Convirza), lead deduplication, and AI-powered SMS follow-up scheduler that continues until appointment scheduled; reduces manual sales workload.
- **Tech Stack:** Node.js (backend), Next.js (frontend), Supabase (PostgreSQL, realtime subscriptions, cron scheduler), Azure OpenAI chat agents, Vercel (serverless deployment).

Stride – Quotation & Invoice Manager | [Preview](#) | April 2026 – Present

- Purpose: Simplicity-first quotation-to-invoice-to-PDF platform for furniture, wrought iron, and construction firms; supports per-item advances and reusable snippets; planning commercialization.
- **Tech Stack:** FastAPI (backend), React (frontend), Supabase (PostgreSQL, auth, email), Railway (deployment); developed with Claude Code and GitHub Copilot.

Senti – Personal Money Management App | [Preview](#) | April 2026 – Present

- Purpose: Manages actual cash on hand, bank account, and savings bucket with predefined categories (income, expenses, withdraw, lend etc.) and custom tag support; real-time cash position tracking and financial visibility.
- **Tech Stack:** FastAPI (backend), React (frontend), Supabase (PostgreSQL, auth), Railway (deployment).

Timesheets Enterprise Application | *Enterprise time tracking and CXO reporting* | Sept 2025 – March 2026

- Purpose: Real-time employee time tracking with intuitive dashboards and automated weekly CXO reporting with aggregated insights.
- **Tech Stack:** FastAPI (backend), React (frontend), PostgreSQL, crontab jobs for scheduling, AWS Lightsail (QA), AWS EC2 (production), Nginx, PM2/Upicorn process managers.

Business Insight Platform | *AI-powered sustainability analytics*

Sept 2025 – Jan 2026

- Purpose: Analyzes 3-year financial and sustainability reports; outputs carbon emissions, employee turnover, business case impact analysis (objectives, risks, opportunities) to guide C-suite decisions.
- **Tech Stack:** FastAPI (backend), React (frontend), OpenAI GPT-4 Turbo + vector stores (RAG), thread-based context management, PostgreSQL, AWS EC2, Azure Static Web Apps, Nginx.

Seatify – Real-Time Occupancy Monitoring System | *Computer vision project* | [git repo](#) | Apr 2024 – June 2025

- Purpose: Real-time restaurant/cafe seat availability detection using computer vision; improves customer experience and operational efficiency via dynamic staff allocation.
- **Tech Stack:** YOLO v8 (object detection), OpenCV (image processing), dynamic layout analysis, MySQL (data pipeline); collaborative research with 3 members.
- [Published IEEE Xplore \(ICARC 2026, 31 March 2026\)](#)

CERTIFICATIONS & RECOGNITION

- [IEEE Publication](#): Real-Time Restaurant/Cafe Occupancy Monitoring System (31 March 2026, ICARC 2026)
- Leadership: Principal keyboard player; trained and coordinated orchestra for Viramayak Live in Concert 2023
- Chess: Zonal Championship 2015 U19 – First Runner-up; Team Championship – First Place

REFERENCES

Ms. Akarshani Amarasinghe

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