Sai Jyothi Kumar Surla

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PROFESSIONAL SUMMARY

Full-Stack Software Engineer with **3+ years** of experience architecting scalable distributed web platforms and production-grade **Agentic AI** systems. Proven track record building high-throughput microservices and responsive enterprise web applications using **TypeScript, Angular, React, Python (FastAPI), and ASP.NET Core**, powering **400,000+** enterprise users. Experienced in **Agile/Scrum, Test-Driven Development (TDD), CI/CD pipelines**, and secure RESTful API design.

EXPERIENCE

COGNIZANT | Associate Software Engineer

June 2023 – Present | Bangalore, India

- Led full-stack development for the enterprise AI Fluency Dashboard (Angular, ASP.NET Core), scaling platform capacity to **400,000+ associates** (40k–80k daily active users); drove ~**42% of associates** to improve fluency scores post-launch with zero UI-defect escalations across 8 production releases.
- Architected and deployed an in-dashboard Socratic AI coach that scaled query volume from **12k to 48k daily queries**, optimizing inference throughput by passing query-relevant data payloads and retrieving FAQ context via tokenizer-based top-K matching instead of raw full-context prompts.
- Reduced security prompt token overhead by ~**90%** by migrating input validation logic from LLM prompts into server-side application code, preventing prompt injection while strictly respecting model context windows.
- Spearheaded a PM/Portfolio Analytics dashboard exposing high-throughput REST APIs (ASP.NET Core / C#); engineered frontend caching, asynchronous processing workers, and server-side data aggregation consumed by cross-functional Cognizant services.
- Refactored legacy Angular/TypeScript codebase by standardizing controllers and eliminating redundant data layers, reducing code volume by ~**40%** and resolving 50+ high-severity defects under **Agile/Scrum sprints and code reviews**.
- Hardened platform security by remediating SAST/DAST vulnerabilities in file upload pipelines and securing API gateways with Apigee tokens; evaluated 100k+ enterprise ideas using Azure OpenAI with Responsible AI guardrails.

FOCUS EDUMATICS | Online Tutor (Mathematics, Science & English)

Dec 2022 – May 2023 | Remote, India

- Delivered interactive 1-on-1 online tutoring sessions across Mathematics, Physics, Chemistry, and English, explaining core concepts and analytical problem-solving methods.
- Managed student progress tracking, session notes, and personalized learning feedback to support academic improvement.

PROJECTS

VS CODE LEARNING AGENT | Socratic AI Tutor Extension — **GitHub Code**

TypeScript, React 18, Vite, SQLite3 (WASM), VS Code Extension API, Gemini / Groq LLMs

- Architected a decoupled full-stack VS Code extension featuring a React 18 Webview interface and TypeScript extension host, communicating via asynchronous bi-directional message protocols.
- Designed a persistent offline Question Bank and diagnostic state store using embedded SQLite3 (WASM) with schema migrations, supporting sub-10ms query execution, paste-to-quiz ingestion, and instant code rollback snapshots.
- Built a 3-tier progressive Socratic hint engine (Guiding Questions -> Pseudocode -> Targeted Pinpoint) and an adaptive diagnostic suite, integrating native `vscode.lm` APIs and fallback LLMs (Gemini 3.7 / Groq) with prompt guardrails.
- Implemented a real-time Agent Workflow Graph and multi-tier context inspector in Vite/React, rendering live state transitions, topic coverage metrics, and in-context prompt distillation.

SALARY MANAGEMENT PLATFORM | Full-Stack HR Analytics — **Live Demo ▪ GitHub Code**

Next.js 15, FastAPI, Python, PostgreSQL, SQLAlchemy ORM, JWT / RBAC, Docker, GitHub Actions

- Developed a high-performance HR analytics and payroll web platform using Next.js 15 (App Router) and FastAPI, managing **10,000+ seeded employee records** with server-side pagination and sub-15ms filtered search and aggregation endpoints.
- Designed and indexed normalized relational schemas with SQLAlchemy ORM, securing endpoints using JWT authentication with Role-Based Access Control (RBAC).
- Established an automated CI/CD pipeline via GitHub Actions executing TypeScript type-checking, Pytest test suites (**TDD**), and continuous deployment to Render (FastAPI) and Vercel (Next.js).

TECHNICAL SKILLS

- **Languages:** TypeScript, JavaScript (ES6+), Python, C#, SQL
- **Frontend Development:** Angular, React 18, Next.js (App Router), Vite, Tailwind CSS, Zustand, Redux, RxJS
- **Backend & APIs:** FastAPI, ASP.NET Core, Node.js, Express, RESTful APIs, Microservices, JWT / OAuth2, Apigee
- **Databases & Caching:** PostgreSQL, SQLite3 (WASM), MySQL, Redis (Caching), SQLAlchemy ORM, EF Core
- **Cloud, DevOps & Testing:** Docker, GitHub Actions (CI/CD), Google Cloud Platform (GCP), Azure, Linux, Pytest, Test-Driven Development (TDD)
- **AI Engineering & Practices:** Agentic AI, RAG Architectures, Prompt Engineering, Multi-LLM Orchestration, Agile / Scrum, Code Reviews

EDUCATION

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, SRI CITY | Bachelor of Technology in Electronics and Communication Engineering

June 2018 – June 2022 | Sri City, India

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Computer Networks, Operating Systems.

AWARDS & CERTIFICATIONS

- **AWS Cloud Quest: Generative AI Practitioner** — Amazon Web Services / Credly 2026
  Demonstrated hands-on proficiency in foundation models, LLM application architecture, vector search, and prompt engineering on AWS.
- **Platform Warrior Award** — Cognizant Jul 2025
  Recognized for outstanding leadership and technical contribution to the enterprise AI Fluency Dashboard.
- **Google Cloud Fundamentals: Core Infrastructure** — Google / Credly May 2024
  Verified credential covering cloud infrastructure, IAM security, compute engines, storage, and containerization.
- **Guinness World Records Participant Certificate** — Cognizant VibeCoding AI Event Sep 2025
  Participated in building enterprise-grade generative AI applications during Cognizant's global hackathon.