

RITHWIK SAI POSANI

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SUMMARY

Computer Science graduate with hands-on experience in full-stack development and system design. Proficient in Python, TypeScript, FastAPI, React, and PostgreSQL. Shipped 4 end-to-end projects with CI/CD, automated testing, and cloud deployment.

EDUCATION

Bachelor of Technology in Computer Science

SRM Institute of Science and Technology, Chennai | Aug 2021 – Jun 2025 | CGPA: 8.13 / 10

TECHNICAL SKILLS

Languages: Python, TypeScript, C, HTML, CSS

Frameworks & Libraries: FastAPI, React, Next.js, Tailwind CSS, HTMX, Pandas, NumPy

Databases & Tools: PostgreSQL, MongoDB, SQLAlchemy, Prisma, Docker, Git, GitHub Actions

Architecture & Patterns: REST API Design, SSR, React Query (TanStack), Zustand, CI/CD Pipelines

AI / ML: RAG Pipelines, LLMs, NLP, Computer Vision, Vector Search, Prompt Engineering

PROJECTS

NestAi — Privacy-First Document Search Engine

Python, FastAPI, PostgreSQL, Ollama, HTMX, Tailwind CSS

- Engineered a hybrid search system (BM25 + vector similarity) with strict source citations, achieving sub-second latency across 100+ documents.
- Improved response accuracy by ~40% by designing a cite-or-abstain validation policy with per-session diagnostics and traceability.
- Built a production-ready HTMX + Tailwind UI with quick actions, inline diagnostics, and real-time search feedback.

FridgeChef — Intelligent Kitchen Platform

Next.js 14, React Query, Zustand, FastAPI, SQLAlchemy 2.0, PostgreSQL, Google Gemini API

- Architected a Next.js 14 + async FastAPI application with SQLAlchemy 2.0 ORM, deployed to Vercel with 78% backend test coverage.
- Automated ingredient extraction by integrating a computer vision pipeline that processes user-uploaded images via multi-modal API.
- Implemented rate-limiting (SlowAPI), request logging middleware, and server-state caching with React Query for background refetching.

Splitly — Modern Expense Sharing Platform

TypeScript, Next.js, Express.js, Prisma, PostgreSQL, GitHub Actions

- Built a multi-currency platform with 4 split modes and a settlement algorithm achieving 100% accuracy in automated unit tests.
 - Designed reliable settlement logic maintaining accurate balances across groups with complete transaction history preservation.
 - Established CI/CD via GitHub Actions for automated testing and linting on every PR, improving velocity and code quality.
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CERTIFICATIONS

- AWS Academy Machine Learning Foundations** — Amazon Web Services
- Supervised Machine Learning: Regression & Classification** — Coursera (Stanford University)
- Networking Basics** — Cisco Networking Academy