# Indraneel Sarode

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# Summary

MS Software Engineering student focused on enterprise architecture and distributed systems. Built and documented REST services (FastAPI/Next.js), CI/CD with GitHub Actions, and system integrations (Slack/AI services). Comfortable producing C4/UML diagrams, OpenAPI specs, runbooks, ADRs, and release notes. Availability: Summer 2026.

#### Education

San Jose State University

Jan 2025 - Dec 2026

Master of Science in **Software Engineering** GPA: 3.56/4.0

San Jose, CA, USA

University of Pune

Aug 2020 - Jun 2024

Bachelor of Engineering in Computer Engineering GPA: 3.87/4.0

Pune, India

Pune, India

### Internships

# Software Engineer Intern

Jan 2024 - Jun 2024

Coditas Solutions LLP

• Shipped a LangChain-based RAG service for PDF/YouTube/web with source-linked citations; on a seeded corpus, median

answers consistently included 1 relevant citation. • Built RAG-on-SQL: NL \rightarrow SQL translation with schema-aware prompts and guardrails (read-only classification, query linting,

retries); malformed queries were auto-corrected or routed to a clarifying question in staging. • Benchmarked vector DBs/retrievers and tuned chunking/overlap; hybrid retrieval with lightweight re-ranking improved factual grounding in evaluator spot-checks versus baseline.

Versioned the Python (FastAPI) REST API ( $v1\rightarrow 1.1$ ) and published release notes + implementation plan (rollout/rollback, health checks); added caching/connection pooling to cut p50/p95 latency under like load.

Built a Next.js observability dashboard (requests, latency bands, citation rates) so stakeholders could self-serve; reduced manual report tickets.

### **Projects**

# Aiventory Link | FastAPI, Next.js, Gemini API, MCP client-server

2025

- Designed a FastAPI + PostgreSQL backend with JWT auth and typed Pydantic models for products, orders, and inventory; implemented validation and pagination for clean CRUD.
- Delivered a Next.js admin dashboard centralizing product/order workflows with server-side search, filters, and bulk actions to streamline operations.
- Implemented an async MCP client-server with Gemini for natural-language lookups (e.g., "stock for SKU 123?"), including tool routing, parameter checks, and safe fallbacks.
- Hardened security with **RBAC** and rate limiting; added **audit logs** for sensitive actions and **request IDs** for traceability.
- Containerized with **Docker** and wired **CI/CD** (multi-stage images, env configs) for build/test/deploy, enabling smooth rolling updates behind a reverse proxy.
- Shipped OpenAPI 3.0 spec, **RBAC policy doc**, and runbook (alerts, dashboards, on-call steps) for the inventory backend.

#### BookIt Link | Next.js, React, Docker, AWS EC2

2025

- Delivered a Next.js/React portal for browse-reserve; reduced the demo booking flow from 7-4 steps with validated forms and REST integrations.
- Deployed a **Dockerized** stack on **AWS EC2** behind a reverse proxy; containers **auto-restart on failure** and pass health checks in staging.
- Implemented JWT auth and route-level RBAC; customer/manager/admin dashboards provide guarded API access with audit
- Documented JWT/RBAC routes and access patterns; wrote integration notes for frontendbackend handoffs.
- Worked in short sprints with daily check-ins; tracked issues to closure and documented integration decisions to unblock frontend⇔backet

### Perplexity-2.0 Link | Demo | Next. js 14, TypeScript, FastAPI, LangGraph, Google Gemini, SSE

2025

- Architected a full-stack AI chatbot with **Server-Sent Events** for progressive, word-by-word **streaming**; added **stage indicators** (search  $\rightarrow$  read  $\rightarrow$  write) to reduce perceived latency.
- Built an agentic LangGraph workflow with conditional tool-calling; integrated Tavily web search + Gemini to autogenerate queries and synthesize source-grounded answers.
- Implemented stateful conversations with MemorySaver checkpointing across sessions; exposed a FastAPI REST API with streaming + **CORS** and containerized it for deployment (**Docker** $\rightarrow$ **Render**).

#### Technical Skills

Languages & Frameworks: Python, JavaScript/TypeScript, Java, C++, FastAPI, Node.js/Express, Next.js/React, Flask, Tailwind CSS, Bash, HTML/CSS

Integration & APIs: REST, Webhooks, OAuth2/OIDC, JWT, RBAC, API gateways/reverse proxy, Versioning & changelogs Platforms, Ops & Observability: Docker, CI/CD (GitHub Actions), AWS (EC2, S3, Lambda, ECS), Grafana, Prometheus, OpenTelemetry (basic)

Data & ML: PostgreSQL, MySQL, MongoDB, DynamoDB, Pandas, NumPy, PyTorch, Keras, Vector DBs

Architecture & Documentation: C4 model, Sequence diagrams, ADRs (Architecture Decision Records), OpenAPI/Swagger, Interface catalogs, Implementation plans, Release notes, Runbooks, Mermaid/PlantUML