

# Shubh Rai

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## EDUCATION

Indian Institute Of Information Technology Kalyani

B.Tech in Computer Science and Engineering

Dec 2021 - May 2025

CGPA: 8.20/10

## SKILLS

Languages	Python, TypeScript, SQL, C++, GoLang, Bash.
Frameworks	FastAPI, Vue.js, React, LangGraph, Next.js, Hono, Django, Playwright.
Data & Infra	MongoDB, Redis, ClickHouse, Neo4j, Dask, Prefect, Docker, Helm, AWS, Linux, Git.
Concepts	LLM Agents, MCP, RAG/Vector Search, REST APIs, RBAC, CI/CD, Air-Gapped Systems.

## EXPERIENCE

SDE - 1, ZySec AI (promoted from Intern, Jan 2025 – May 2025)

Jun 2025 - Present

Stack: Python, FastAPI, MongoDB, Vue.js, TypeScript, ClickHouse, LangGraph, Docker

Hyderabad, India

- **C3 — Multi-Tenant AI SOC/SOAR Platform (Sole Developer):** Designed and built ZySec's flagship security operations platform end-to-end: alert ingestion & triage, investigations & case management, SOAR playbooks with approval gates, and compliance reporting — turning SOC and leadership requirements into shipped product at team velocity via AI-assisted development (Claude Code, Cursor).
- **AI Task & Agent Engine:** Built an execution engine running **43 AI task types** (incident response, compliance audits, fraud detection, code review) across in-process, Dockerized (warm container pool), and remote-runner modes, with approval gates, heartbeats, and per-run AI decision logs (tokens, cost, latency).
- **Connector Ecosystem:** Shipped **105 integrations across 34 categories** (SIEM, EDR, ticketing, IAM, threat intel, AML/fraud) with credential rotation and a JWT bridge so tasks never hold customer credentials.
- **Security & Quality:** Implemented Casbin RBAC, JWT + MFA, tamper-evident audit logs, and replay-protected HMAC-signed webhooks; hardened for **air-gapped** deployments; 150+ backend + Playwright E2E tests.
- **Big Data (1B+ Records):** Architected a distributed data engine (**ClickHouse, Dask, Prefect**) processing 1B+ telecom & telemetry records, reducing query latency from minutes to milliseconds.

AI Data Engineer (Freelance), MavnAI

Jul 2024 - Aug 2025

Stack: Python, SQL, AWS, Bash

Remote, Project-based

- Delivered domain-specific training and evaluation datasets for **LLM fine-tuning**, improving model accuracy.
- Automated **ETL pipelines** (Python, SQL) with AWS-backed storage workflows, cutting manual preparation time.

## PROJECTS

Smriti: Intelligent Memory for AI Coding Assistants (TypeScript, Bun, SQLite, ONNX)

GitHub

- Built an open-source plugin giving AI assistants **persistent, cross-session memory** using hybrid relevance scoring — **vector embeddings** (sqlite-vec, ONNX), recency decay, and importance weighting.
- Engineered a crash-safe, stateless architecture: observation batching (**60% fewer API calls**), context masking (**70% token savings**); ships with a React dashboard, MCP server, CLI, and cross-IDE support.

VibeKit: AI-Powered Project Management SaaS + CLI (FastAPI, Vue.js, MongoDB)

vkcli.com

- Built a full-stack SaaS platform with an integrated CLI (**published on PyPI**) syncing sprints, tasks, and project config between the cloud dashboard and local dev environments via **real-time SSE**.
- Engineered bidirectional **GitHub integration** (OAuth, issue import, label sync), AI task editing with **intent detection**, and **AES-256 token encryption**.

## ACHIEVEMENTS & CERTIFICATIONS

- **Certifications:** Claude Certified Architect – Foundations (Anthropic, 2026); Hermes Agent: Build a Self-Improving AI Agent (Udemy, 2026).
- **Winner: Smart India Hackathon 2022** (Top 2% of 44,000+ teams); **Finalist: SIH 2023**; **Mentee: Amazon ML Summer School 2023 & 2024** (top 3,000 of 25k+ applicants).