SOHAM RAVINDRA LOKHANDE

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Education

University of California, Irvine   2021 - 2025
Bachelor of Science in Computer Science - **GPA: 3.94 (Cum Laude)**

Experience

Founding Software Engineer, *TakeBridge* (*San Francisco, CA*)   May 2025 – Jan 2026
- Led 0→1 build of a**n** Agentic automation platform consisting LLM agents + human-in-the-loop operator delivering in Agile weekly sprints.
- Architected a multi-agent orchestration stack in Python (FastAPI) using LangChain + tool/router layer for multimodal workflows, enabling reliable task decomposition, state handoff, and tool execution.
- **Reduced LLM/API inference spend by 70%** by implementing shared multi-agent context/state with LangChain and running self-hosted multimodal inference on vLLM.
- Improved platform reliabiliy and recoverability by building a FastAPI control plane that provisions user-scoped AWS EC2 sandboxes, persists state in PostgreSQL, and stores artifacts in Cloudflare R2, **cutting stored state size by 50%**.

Software Engineer Intern, *Cognitus (IBM Company)* (*Dallas, TX*)   June 2024 - Sep 2024
- Architected and shipped features in a Python FastAPI + SQLAlchemy microservice of an AI powered CLM platform used by **10+ SAP federal contracting clients**, driving delivery in Agile sprints with GitLab PR reviews.
- Engineered and validated mission-critical 30+ REST APIs on PostgreSQL + Redis, and operationalized Docker/Docker Compose integration testing aligned to GitLab CI/CD, **reducing workflow/UI inconsistencies by 25%**.
- Designed a multilingual (i18n) API messaging framework via middleware + message-key standardization, enabling localized responses across **30+ endpoints for 5+ international clients.**

Volunteer Software Engineer, *DMV Music Alliance* (*Washington, DC*)   May 2025 - Present
- Led development of user-facing PHP/JavaScript web platforms, serving **100+ monthly active users**, including a Job Board that **improved recruiting turnaround by 35%.**
- Architected automation and data-ingestion pipelines processing 100+ records using Python, Zapier, and REST APIs/webhooks, **cutting manual operations by 80%**.

Bioinformatics Research Assistant, *University of California, Irvine* (*Irvine, CA*)   *Jan 2024 - Aug 2024*
- Deployed EdgeLake (open-source decentralized edge database) on biological IoT edge devices, **reducing organoid detection query latency 40%,** and built a data visualization pipeline that **cut cross-experiment comparison time by 80%.**

Projects

TakeBridge – Human-in-the-Loop Agentic Automation Platform link   **Python | LangChain | LLM | AWS EC2 | Docker**
- Built a B2B SaaS that automates repetitive back-office business workflows across multiple apps, **saving 6+ hours of manual effort** per workflow run.
- Orchestrated LLM agents that combine MCP tool adapters + computer-use (GUI) actions, with a human-in-the-loop operator console and live streaming execution.
- Ran workflows in isolated AWS EC2 sandboxes with PostgreSQL + R2 state/artifacts, and self-hosted inference on vLLM.

ASRA - Market Research Automation GenAI Agent link   **Python | Next.js | LangGraph | ChromaDB | Docker**
- Built a multi-agent GenAI research system that turns startup ideas into evidence-backed market reports from **50+ sources/run**.
- Implemented embedding retrieval (OpenAI embeddings + ChromaDB) with an **80% relevance gate** to filter noise and improve signal quality.
- Added memory/context controls to **reduce token usage by 50%** while preserving research coverage.

GenResume - Job-Specific Resume Recommendation Engine link   **Python | PostgreSQL | React | AWS | RAG | OAuth 2.0**
- Built a GitHub-OAuth web app that ranks repositories into job-specific bullets, **cutting resume tailoring time by 80%.**
- Designed a Tree-sitter + pgvector semantic ranking pipeline, reaching 85% accuracy aligning evidence to job requirements.
- Deployed on AWS with a production backend (PostgreSQL) and React UI.

Technical Skills

Languages: Python, Java, C++, C, JavaScript, SQL (MySQL, PostgreSQL, SQLite), NoSQL, R, HTML, CSS, TypeScript
Developer Tools: Git, AWS, Postman, Docker, Kubernetes, Azure, Jira, GCP, Linux, vLLM, UML
Libraries/Frameworks: FastAPI, Flask, Tomcat, React, Next.js, SQLAlchemy, Tailwind CSS, NumPy, Pandas, Redis, Node.js, JWT, OAuth 2.0, LangGraph, Generative AI, NLP, OCR, Matplotlib