

# Samarth Saxena

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## PROFESSIONAL SUMMARY

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Passionate Computer Science undergraduate with a strong focus on Generative AI and multi-agent systems. I gained hands-on experience building production-ready distributed applications and RAG pipelines during my internship at Siemens, and I recently led my team to 1st place at the ThinkBridge Hackathon. Comfortable with React, Python, and RabbitMQ, I'm actively looking for a remote AI Engineering internship where I can contribute to meaningful full-stack and agentic projects.

## EDUCATION

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### Vellore Institute of Technology

Bachelor of Technology in Computer Science (AI & Robotics); **CGPA: 8.37/10.0**

Chennai, India

Sept. 2023 – May 2027

## EXPERIENCE

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### Siemens Technology & Services [Link](#)

July 2024 – Feb 2025

Software Engineer Intern (Full Stack & AI)

Hybrid

- Built SkillX, a complete enterprise assessment platform used by 500+ daily users. Designed a clean 3-tier Role-Based Access Control system with Node.js, Express, and MySQL that reduced batch management work by 40%.
- Created a real-time AI malpractice detection system using TensorFlow.js and BlazeFace. Added head-movement tracking and strict fullscreen enforcement to flag suspicious activity in under 200ms.
- Strengthened backend security and performance with JWT authentication and optimized database connection pooling, keeping the platform at 99.9% uptime even during peak exam hours.
- Worked closely with cross-functional teams in a hybrid setup to ship updates smoothly and wrote clear API documentation to keep everyone aligned.

## PROJECTS

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### Distributed Multi-Agent Workflow System | *React 19, RabbitMQ, Python* | [Link](#)

- Built a reliable orchestration engine that turns plain English instructions into executable DAG workflows, allowing specialized AI agents to collaborate autonomously.
- Set up a solid asynchronous task queue with RabbitMQ and Python workers, using Dead Letter Queues and retry logic to make sure no data is ever lost during agent failures.
- Developed a flexible template system for seamless data handoff between agents (Scraper → Analyzer → Generator) and created a live React Flow dashboard with WebSocket updates to monitor everything in real time.

### AnnotatedAI – Hybrid RAG & Numerical Platform | *FastAPI, React, FAISS, LangChain* | [Link](#)

- Developed a robust RAG engine for technical PDFs that uses Maximal Marginal Relevance to pull diverse results and noticeably reduce hallucinations.
- Created a specialized numerical solver that combines Random Forest for question classification with SymPy for symbolic math, delivering clear step-by-step solutions for probability and statistics problems.
- Implemented a dual-highlighting system (rules + LLM) that accurately maps text chunks to exact PDF coordinates, resulting in a smooth “Chat-with-PDF” experience deployed on Vercel and Railway.

## TECHNICAL SKILLS

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**AI & Infrastructure:** RAG Pipelines, Multi-Agent Systems, LangChain, FAISS, RabbitMQ, Docker, AWS, Git/GitHub

**Languages:** Python, JavaScript, TypeScript, C++, Java, SQL (MySQL, PostgreSQL)

**Frameworks:** React.js, Next.js, Node.js, Express.js, FastAPI, TensorFlow.js, PyTorch

**Developer Tools:** VS Code, Postman, Railway, Vercel, Overleaf/LaTeX

## ACHIEVEMENTS & CERTIFICATIONS

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**1st Place, ThinkBridge Hackathon** [Link](#): Led a team of 4 to develop an AI solution and won first place out of 200+ competing teams.

**Oracle Certified Generative AI Professional (2025)** [Link](#): Officially certified in LLM fundamentals, prompt engineering, and building secure generative AI applications.