

Tanish Malekar

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EDUCATION

MS in Computer Science, Stony Brook University, New York Aug 2025 - May 2027
Coursework: Advanced Database Systems, Data Science Fundamentals, Human Computer Interaction

BS in Computer Science, Vellore Institute of Technology (**GPA: 4.0**) Aug 2019 – May 2023
Coursework: Operating Systems, Database Systems, Computer Networks, Data Structures, Machine Learning, NLP

TECHNICAL SKILLS

Languages/Databases: Python, Java, C/C++, JavaScript/TypeScript, Go, SQL, HTML5/CSS3, MySQL, PostgreSQL, MongoDB, Pinecone, Redis, Elasticsearch

Frameworks/Technologies: Django, NodeJs, Spring Boot, FastAPI, Kafka, LangChain, React, Next.js, TailwindCSS

Cloud/Tools: AWS, Azure Cloud, Git, Linux, UNIX, Docker, Kubernetes, Helm, Logstash, Kibana, Grafana

EXPERIENCE

Bajaj Finserv Health Pune, India
Software Engineer Jul 2023 - Jul 2025

- Engineered a health camp booking platform using **React**, **Next.js**, **Django** and **PostgreSQL**, supporting **100k+** bookings across **15+ enterprise clients** (Meta, LinkedIn, Amex, etc.).
- Designed a **fault-tolerant** partial refund flow with circuit breakers and DLQs using **AWS SQS**, achieving **99.9% reliability** for **1K+ monthly transactions** and saving thousands by preventing full refunds.
- Enabled real-time search on **1M+ lab test records** by replacing cron-based sync between **MySQL-ElasticSearch** with event-driven **CDC** via **Kafka**, cutting sync latency from **2 hours to near real-time**.
- Implemented **ELK**-based observability with tracing, dashboards and alerts for **7+ microservices**, reducing average bug resolution time (MTTR) by **40%**.

Software Engineer Intern Jan 2023 - Jun 2023

- Built a virtual patient queue system with **Java** (Spring Boot) and **Redis** (Sorted Sets), featuring priority-based ranking; added **WebSockets** for real-time updates, supporting **900+ concurrent users**.
- Built **CI/CD** pipelines using **Jenkins** for 5+ microservices; boosted quality by achieving **85% unit test (PyTest)** coverage and integrating **SonarQube** to catch regressions pre-production.

Protal Vellore, India
Full Stack Developer Intern Jun 2021 - Aug 2021

- Led a 3-member team to develop a talent discovery platform with **React.js**, **NodeJs**, and **MongoDB**; containerized with **Docker** and deployed on a **Kubernetes** cluster on **AWS (EKS, EC2, ALB, S3)** for scalability.
- Presented to university's business incubation center, securing **\$6k dollars** in funding.

PROJECTS AND PUBLICATIONS

SafeSupportAI [[Github](#), [Website](#)] *Python, FastAPI, React, AWS Bedrock, Titan Text G1, LangChain, MongoDB*

- Built SafeSupportAI, an AI-powered platform for women safety with discreet SOS messaging via **steganography**, Mental Health **AI Avatar**, and **RAG**-based legal guidance, **winning HackRx 3.0 Hackathon (300+ teams)**.
- Implemented end-to-end AI workflows including text/image generation, severity detection and culprit matching, integrating **Amazon Bedrock**, **Titan Text G1**, **ElevenLabs TTS**, and **Atlas Vector Search**.

KisanConnect [[Github](#)] *Node.js, React, Express, MongoDB, Tailwind CSS*

- Built KisanConnect, a digital marketplace connecting farmers and consumers, which secured **2nd place at the VIT Web Development Hackathon amongst 100+ teams**.
- Developed features like farmer profiles, cart, orders, messaging and an admin dashboard using **React**, **Node.js**, **Express**, **MongoDB**, **Tailwind CSS**, and **JWT authentication**.

Privacy-Preserving Distributed Medical Inference [[Github](#), [Paper](#)] *Python, Homomorphic Encryption, Deep Learning*

- Designed a distributed privacy-preserving system for medical inference using **homomorphic encryption**, **RPC**, and **multi-threading**, improving efficiency while ensuring secure computation with only a **0.4% accuracy drop**.
- Accepted and published in the **Springer Book Series** "Lecture Notes in Electrical Engineering", ISSN: 1876-1119.

ACHIEVEMENTS

- 1st Place, HackRx 3.0:** Nationwide Hackathon by Bajaj Finserv amongst 300+ teams.
- 2nd place, VIT Web Dev Hackathon:** Official hackathon of Vellore Institute of Technology amongst 100+ teams.