Tanish Malekar

Portfolio | +19342552859 | tanishmalekar32@gmail.com | LinkedIn | GitHub

EDUCATION

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

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

TECHNICAL SKILLS

Languages/Databases: Python, Java, JavaScript/TypeScript, C/C++, HTML5/CSS3, SQL, MySQL, PostgreSQL, MongoDB, Pinecone, Redis, ElasticSearch
Frameworks/Technologies: Django, FastAPI, NodeJs, Spring Boot, Kafka, LangChain/LangGraph, React, Next.js, TailwindCSS, Scikit-learn, TensorFlow, Pandas, NumPy, LLMs, RAG, Distributed Systems, Consensus Algorithms
Cloud/Tools: GCP, AWS, Azure Cloud, Git, Linux, UNIX, Docker, Kubernetes, Helm, Logstash, Kibana, Grafana

EXPERIENCE

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

- Developed an agentic doctor-routing system (**Python, LangChain, GPT-4o**) that analyses symptoms, checks insurance coverage, and auto-matches patients to in-network doctors, **replacing 15+ manual agents**.
- Built a **RAG-based** insurance-bene ts assistant (**text-embedding-005, pgvector**) to deliver instant coverage and eligibility answers, **reducing support queries by 45%**.
- Launched a health camp booking platform (**React, Next.js, Django, PostgreSQL**), handling **100k+ bookings** for **15+ enterprise clients (Meta, LinkedIn, Amex etc.)**.
- Constructed a virtual patient queue system (**Java (Spring Boot), Redis (Sorted Sets)**) with **WebSockets** for real-time updates, supporting **900+ concurrent users**.
- Set up **ELK**-based observability (tracing, dashboards, alerts) for **7+ services**, reducing MTTR by **40%**.

Software Engineer Intern — **Jan 2023 - Jun 2023**

- Enabled real-time search on **1M+ lab tests** by replacing cron-based **MySQL-ElasticSearch** sync with **Kafka CDC**, cutting latency from **2 hrs to near real-time**.
- Designed a fault-tolerant refund ow with **AWS SQS** (DLQs, circuit breakers), ensuring **99.9% reliability** for **1K+ monthly transactions**.
- Built **CI/CD** pipelines (**Jenkins**) for **5+ services**; improved quality with **85%+ test coverage** and **SonarQube**.

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

- Led a 3-member team at an **early-stage startup** to build a talent discovery platform (**React, Node.js, MongoDB**) from scratch, deployed on **AWS Kubernetes (EKS, EC2, ALB, S3)**.
- Presented to university's business incubation center, securing **$6k in funding**.

PROJECTS AND PUBLICATIONS

SafeSupportAI [**Github**] *Python, LangChain, FastAPI, Gemini-1.5-Flash, MongoDB, React, Three.js*

- Built SafeSupportAI, an AI platform for women safety with **3D AI therapist**, **steganography**-based SOS and **RAG** legal bot; **won HackRx 3.0 (300+ teams nationwide)**.
- Implemented multimodal AI work ows for text/image generation, severity detection, and culprit matching using **Google Vertex AI, Gemini-1.5-Flash, Ideogram 3.0, LangChain, text-embedding-005,** and **Atlas Vector Search**.

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

- Created KisanConnect, a digital marketplace connecting farmers and consumers, which secured **2nd place** at the **VIT University's Premier Hackathon** amongst **100+ teams**.
- Developed end-to-end features including cart, orders, farmer pro les, messaging and an admin dashboard using **React, Node.js, Express, MongoDB, Tailwind CSS**, and **JWT authentication**.

Privacy-Preserving Liver Disease Prediction [**Github, Paper**] *Python, Homographic Encryption, gRPC, Deep Learning*

- Designed a distributed privacy-preserving system for medical inference using **homomorphic encryption, gRPC**, and **multi-threading**, 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**: O cial hackathon of VIT University amongst 100+ teams.