

# Aditya Somaiya

631-428-7738 | [adisomaiya.sa@gmail.com](mailto:adisomaiya.sa@gmail.com) | [linkedin.com/in/aditya-somaiya](https://www.linkedin.com/in/aditya-somaiya) | [github.com/aditya-somaiya](https://github.com/aditya-somaiya)

## EDUCATION

### Stony Brook University

*Master of Science in Computer Science (GPA: 3.97/4)*

Stony Brook, NY

August 2023 – May 2025

- Courses: Network Security, Advanced Algorithms, Big Data Algorithms, Distributed Systems, Visualization

### University of Mumbai

*Bachelor of Engineering in Computer Science (GPA: 8.9/10)*

Mumbai, India

August 2017 – May 2021

- Courses: Operating Systems, Data Structures, Object Oriented Programming, Database Management Systems

## EXPERIENCE

### Software Engineer Intern

*Her Heard (MIT Sandbox-backed startup)*

May 2024 – August 2024

Cambridge, MA

- Increased user engagement by 12% by creating interactive features including WebSocket-powered real-time chat in a **ReactJS** web app.
- Implemented **Google Analytics 4** with custom event tracking, user funnels toward recommended doctors, and segmentation, boosting feature adoption and retention.
- Improved query speed by 10% by adding indexes in **MongoDB** and applying caching for frequently accessed data.

### Software Engineer

*LTIMindtree Limited*

June 2021 – July 2023

Mumbai, India

- Led migration of a legacy revenue management system to a **ReactJS** + **Spring Boot** web app, achieving 80% unit test coverage and improving maintainability.
- Constructed a reusable, high-performance table UI component with dynamic sorting and pagination in **Javascript**, reducing front-end rendering time by 10%.
- Enhanced **Java Spring Boot** microservices and optimized **PostgreSQL** queries, ensuring efficient API functionality and data consistency.
- Debugged and resolved 150+ production issues, contributing to a 20% drop in SLA breaches and improved customer satisfaction scores.
- Deployed and managed apps using **Jenkins**, automating CI/CD pipelines and minimizing deployment errors.

## PROJECTS

### Consensus Protocols - Fault-Tolerant Distributed Banking System | *Golang, RPC, Paxos, PBFT, 2PC*

- Architected secure, fault-tolerant distributed banking system using customized **Paxos** and **PBFT** variants in Go; processed 10,000+ transactions per second with 99% uptime across server clusters using RPC and goroutines.
- Orchestrated a partitioned, shard-replicated transaction system featuring both intra-shard (**Paxos**) and cross-shard (**2-phase commit**) protocols that improved transaction success rate by 35% and reduced data inconsistencies.

### Advanced Network Defense Tools | *Golang, Cryptography, Kali Linux, TCP/IP, SSH*

- Developed a secure proxy in **Golang** using AES-256 GCM encryption and **PBKDF2** for key derivation, enhancing protection for public **TCP** services by securely tunneling client-server communications.
- Created a **TCP** service fingerprinting tool that performs SYN scans and identifies open ports, using **TCP** and **TLS** probes to gather and categorize service data, improving detection of misconfigurations and vulnerabilities.

### SmartHome Savant Project | *LLM, LightGBM, SHAP, RAG, Gemini Vision, LLama, LoRA, PyTorch*

- Built energy anomaly detection and forecasting system using **LightGBM**, **SHAP** analysis, and ChangeFinder algorithm, integrating LLM explainability for smart home optimization.
- Implemented **RAG** architecture with vector embeddings and fine-tuned quantized LLMs (**Gemma/LLama**) via **qLoRA**; integrated **Gemini Vision** multimodal solution for device placement optimization.

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, SQL, JavaScript, HTML/CSS, R, Golang, TypeScript, Kotlin, Perl  
**Frameworks:** Flutter, Android, D3.js, Node.js, Flask, JUnit, MongoDB, Spring Boot, TCP/IP, JSON, Angular  
**Developer Tools:** Git, Docker, AWS EC2, PyCharm, IntelliJ, Agile, Kubernetes, Ubuntu Linux, Unix  
**Libraries:** Pandas, NumPy, Matplotlib, Scapy, Jest, Redux, Webpack