

Harsh Haresh Shah

Stony Brook, New York 11790

☎ (516) 434-1033

✉ harsh@harsh.software

🌐 [harsh-h-shah](https://harsh-h-shah.github.io)

🔗 [Harsh-H-Shah](https://github.com/Harsh-H-Shah)

🌐 harsh.software

EDUCATION

Stony Brook University

Master of Computer Science – CGPA: 3.71/4.0

Aug 2024 – May 2026

Stony Brook, New York

University of Mumbai

Bachelor of Engineering in Computer Engineering – CGPA: 9.05/10

Dec 2020 – May 2024

Mumbai, India

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript/TypeScript, SQL, Solidity, Bash/Shell, Dart

Frameworks: React, Node.js, Flask, Flutter, Spring Boot, PyTorch, Docker, Kubernetes, AWS, Azure, GCP

Tools: Linux/Unix, Git, CI/CD (GitHub Actions, Jenkins), Prometheus, Grafana, Kafka, gRPC, Prompt Engineering

Databases: PostgreSQL, MySQL, MongoDB, Redis, Vector Databases (Pinecone, Chroma)

PROFESSIONAL EXPERIENCE

Stony Brook University | Mechanismic Inc.

Graduate Software Research Assistant

Oct 2025 – Present

Stony Brook, New York

- Built a PCI-DSS compliant subscription system using Stripe and GCP Cloud Functions, handling billing for **1,000+ users**.
- Integrated tiered access control in the SnappyXO-Auth package, maintaining permission check latency under **100ms**.
- Reduced manual support workload by **45%** by automating the end-to-end license provisioning pipeline for subscriptions.

Meta | Major League Hacking

Production Engineering Intern

Jun 2025 – Sep 2025

Remote

- Deployed Flask application with Redis caching, Docker containers, and CI/CD via GitHub Actions on Digital Ocean VPS.
- Configured Linux infrastructure with Nginx load balancing and systemd service management to sustain **10k+ RPM traffic**.
- Implemented monitoring with Prometheus, Grafana, and Alertmanager, reducing incident detection time by **30%**.

Acapulco AI Services

Software Developer Intern

Oct 2023 – Mar 2024

Mumbai, India

- Led the building of ZapMap (EV platform) using Flask, Flutter, PostgreSQL with PostGIS, Docker, and GitHub Actions.
- Optimized routing by implementing a custom A* algorithm with OpenStreetMap data, improving ETA accuracy by **25%**.
- Designed microservices architecture and integrated third-party charging network APIs, achieving **99.5%** API reliability.

Aumsat Technologies

Software Developer Intern

Jun 2023 – Oct 2023

Mumbai, India

- Engineered a geospatial ETL pipeline in Python using GeoPandas and GDAL to process and standardize **500+ datasets**.
- Automated data ingestion and validation, reducing processing latency by **40%** and saving **10+** engineering hours per week.

PROJECTS

Threat Detection Prototype — MetaMask | Ethereum, Browser Security, TypeScript

Jan 2025 – Dec 2025

- Analyzed address poisoning and typosquatting attacks, identifying patterns across **175K+** malicious transaction attempts.
- Prototyped low-latency detection heuristics (Damerau-Levenshtein distance, transaction history) that reduced phishing risk by **70%** with only **30ms** overhead.

Alpha Trading — Real-Time Market Data System | React, WebSockets, AWS, LSTM

Dec 2023 – Mar 2024

- Built a real-time trading simulator consuming WebSocket feeds for **500+ NSE stocks**, with latencies under **100ms**.
- Integrated LSTM neural network for price trend forecasting, achieving **85% accuracy** on historical data.

Rashi Pay — Offline Payment Interface | React Native, Express.js, Bluetooth, RSA

Mar 2022 – Aug 2022

- Created an offline P2P payment app using BLE, enabling offline transactions **40% faster** than internet-dependent methods.
- Implemented end-to-end security with 2048-bit RSA encryption, with **10,000+** secure test transactions.

HONORS & RECOGNITIONS

Won Smart India Hackathon 2022 | among 30,000+ teams for developing RashiPay Offline Payment Interface.

Finalist, Harbinger 2.0 RBI Hackathon | Among 363 teams from 22 countries for a scalable blockchain solution.

Won HopperHacks 2025 and HackNYU 2025 | for accessibility applications.

Publication, CSA 2024 | "A Cloud-Based Architecture for EV Charge Station Finder with Efficient Scheduling."