

# SRINATH SATULURI

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## EDUCATION

### University of Houston

Bachelor of Science in Computer Science, Minor in Mathematics

Houston, TX

Expected Dec. 2026

- Coursework: Data Structures, Algorithms, Operating Systems, Database Systems, Computer Architecture, Software Engineering, Web Development, Probability & Statistics

## EXPERIENCE

### Software Engineering Extern

Aug. 2025 – Present

Outamation

Houston, TX

- Built Python microservices (Flask, FastAPI) processing 8,000+ daily requests with 99.2% uptime, implementing comprehensive error handling and input validation on AWS infrastructure.
- Developed ETL pipeline ingesting 200+ mortgage documents daily from S3 into PostgreSQL, reducing analyst data access time by 85% through automated PDF extraction and transformation.
- Configured Docker containerization and CI/CD pipelines with automated testing, cutting deployment time from 45 to 12 minutes while maintaining zero-downtime releases.

### Math Tutor

Sep. 2019 – May 2023

Alpha Math Station

Houston, TX

- Tracked performance data for 50+ students across 1,000+ sessions, using metrics to adjust teaching strategies and improve average test scores by 18%.
- Developed personalized learning approaches by breaking down complex problems into clear steps, achieving 88% student retention rate over 4 years.
- Communicated progress to parents through regular updates and actionable feedback, maintaining strong parent satisfaction while managing 10+ concurrent student relationships.

## PROJECTS

### Real-Time E-commerce Analytics Platform | Python, SQLAlchemy, Celery, Redis

Sep. 2025 – Present

- Built an analytics platform using SQLAlchemy ORM to model complex payment and order relationships, reducing query times to sub-150ms across 50K+ test transactions through optimized joins and eager loading.
- Implemented Celery task queue with Redis broker to automate daily revenue reports and fraud detection, processing 2K+ records per batch and reducing manual reporting time from 2 hours to 8 minutes.
- Configured AWS infrastructure (EC2, RDS, CloudWatch, Lambda) with monitoring and auto-scaling capabilities, handling 300+ API requests/hour in development environment.

### Low-Latency Market Data Pipeline | C++, Kafka, PostgreSQL

Apr. 2025 – Jun. 2025

- Developed distributed system processing 12,000+ simulated market ticks per second using Kafka partitioning, achieving 99.5% message reliability with sub-8-second failure recovery.
- Optimized SQL queries with window functions and indexes, reducing analytics query time from 380ms to under 120ms (68% improvement).
- Built comprehensive test suite with 82% code coverage, preventing data quality issues through automated validation.

### WasteNot – Food Donation Platform | Node.js, Express, React, MongoDB

Dec. 2024 – Jun. 2025

- Built a full-stack platform connecting 40+ users and facilitating 65+ donations, designing MongoDB schema with geospatial indexes for location-based matching.
- Developed 15 RESTful API endpoints with JWT authentication and data validation, achieving 99.4% success rate across test traffic.
- Implemented real-time WebSocket matching system handling 25+ concurrent connections with sub-2-second latency.

## TECHNICAL SKILLS

**Languages:** Python, C/C++, JavaScript, SQL (PostgreSQL)

**Frameworks & Tools:** Flask, FastAPI, SQLAlchemy, Celery, Redis, React, Express.js, Docker, Git

**Cloud & Infrastructure:** AWS (S3, Lambda, EC2, RDS, CloudWatch), PostgreSQL, MongoDB, Kafka