

# Siddharth Ramachandran

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## Education

### Northeastern University

Master of Science in Computer Science GPA: 3.82/4.0

Boston, MA

September 2024 – May 2026

### Anna University

Bachelor of Engineering in Computer Science GPA: 3.7/4.0

Chennai, India

August 2018 – July 2022

## Technical Skills

**Languages:** Java, TypeScript, JavaScript, Python, SQL, HTML/CSS

**Databases:** PostgreSQL, MySQL, MongoDB, Redis

**Frameworks:** ReactJS, FastAPI, Flask, Angular, Spring Boot, Node.js

**Cloud and DevOps:** AWS (EC2, S3, RDS, CloudWatch, IAM), Docker, Git, CI/CD, REST APIs, Microservices

## Experience

### Full Stack Engineer Co-op — React, Node.js, Supabase, AWS, Stripe

Boston, MA

Kelnah Inc

January 2026 – May 2026

- Developed full-stack bereavement platform using React, Node.js, and Supabase, enabling families to create memorial pages with real-time updates and notifications across 3 user types.
- Designed multi-tenant database with row-level security and role-based access control, deployed on AWS (S3, RDS, CloudWatch) ensuring secure data isolation for funeral homes and families.
- Built condolence marketplace with Stripe payment integration and vendor APIs, enabling seamless order management and fulfillment tracking.

### Software Engineer — Java, PostgreSQL, Redis, REST APIs

Chennai, India

Alphion Corporation

December 2023 – July 2024

- Built RESTful APIs with JWT authentication and role-based authorization for telecom EMS platform, enabling secure management of 1,000+ ONT/OLT network devices.
- Reduced API response times by 35% through problem-solving and debugging slow PostgreSQL queries, adding Redis caching layer for frequently accessed device data.
- Developed automated monitoring scripts to detect system deficiencies in upstream/downstream sync, reducing production incidents by 25% and improving system scalability.

### Member Technical Staff — Java, OAuth 2.0, PostgreSQL, AWS/Azure/GCP

Chennai, India

Zoho Corporation

August 2022 – July 2023

- Built backend services for ManageEngine Cloud Security Plus, a SIEM platform providing security monitoring and threat detection for AWS, Azure, and GCP environments.
- Applied OAuth 2.0 and SSO authentication flows throughout the software development lifecycle, ensuring FIPS compliance for enterprise security requirements.
- Improved system observability through implementation of advanced logging techniques, reducing average debugging time by 30% and enabling 2x concurrent user capacity.

### Project Trainee — Java, JProfiler, SQL

Chennai, India

Zoho Corporation

October 2021 – May 2022

- Improved API response times by 25% through query optimization and caching, enabling 2x concurrent user capacity.
- Used JProfiler for debugging and testing to identify and resolve performance bottlenecks, improving throughput by 15%.

## Projects

### Distributed Log Processing System — FastAPI, Python, Redis, PostgreSQL, Docker

- Built high-throughput log analytics platform processing 10,000+ logs/second with multi-threaded design and implementation using batch database inserts.
- Applied producer-consumer pattern with Redis Streams for distributed message queuing enabling horizontal scaling.
- Designed storage layer with optimized indexing and batch writes achieving 100x performance improvement.

### Sentiment Aura — React, FastAPI, OpenAI API, Deepgram, WebSockets

- Built real-time speech visualization app analyzing spoken input for emotional sentiment, rendering dynamic Perlin noise art.
- Applied WebSocket streaming pipeline integrating Deepgram transcription and OpenAI sentiment analysis with sub-2-second latency.

### Image Enhancement Tool — Java, SwingUI, MVC Pattern, JUnit

- Developed desktop application supporting 15+ image operations across 8+ formats using MVC pattern and object-oriented programming.
- Wrote 60+ unit and integration tests achieving 92% code coverage through testing methodology with JUnit framework.