

Sandesh Sampath Kumar

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SUMMARY

Backend Engineer experienced in building **high-scale distributed systems** using **Java, .NET Core, Python**, and **AWS**. Demonstrated impact delivering **8x throughput improvements**, **10x transaction scale**, **\$16M+ client revenue**, **95%+ test coverage**, and **55% faster development iteration**. Strong foundation in **microservices**, **cloud-native architectures**, **reliability engineering**, and **observability**.

EDUCATION

Northeastern University | Boston, USA

Master of Science in Computer Science

Expected May 2026

GPA: **4.0/4.0**

Jyothy Institute of Technology | Bengaluru, India

Bachelor of Engineering in Computer Science

Aug 2021

GPA: **8.66/10**

TECHNICAL Skills

Languages: Java, C#, Python, JavaScript, TypeScript
Backend: Spring Boot, .NET Core, Node.js, REST APIs, Microservices, Async I/O
Cloud & Infra: AWS (Lambda, API Gateway, Step Functions, EC2, RDS, S3), Azure, Docker, Kubernetes, Terraform
Data & Practices: PostgreSQL, SQL Server, MongoDB, Redis, CI/CD, TDD, Observability
Frontend: React, Angular, HTML5, CSS3, Bootstrap, Tailwind

EXPERIENCE

Software Engineer Intern | Backend, Distributed Systems

First Help Financial

May 2025 – Dec 2025

Boston, MA

- Implemented **serverless backend services** using **AWS Lambda, API Gateway, Step Functions, CodeBuild**, and **DocumentDB** for high-volume financial workflows.
- Built a reproducible **AWS-local development environment** (SAM + LocalStack) reducing development and debugging time by **55%**.
- Developed **Python libraries** for structured logging, API templates, and automated fault-handling; achieved **95%+ unit test coverage**.
- Strengthened reliability by refining **retry logic, timeout strategies**, and **idempotent execution** across multi-step workflows.

Application Developer | Backend & Distributed Systems

Thoughtworks

Sep 2022 – Aug 2024

Bengaluru, India

- Built distributed **.NET Core** microservices on **Azure** using clean architecture and SOLID design principles.
- Scaled an enterprise ordering platform to support **8x higher throughput** and **10x global transaction growth**.
- Built a developer onboarding portal reducing client integration time by **60%** and enabling **\$16M+ in revenue**.
- Boosted system performance by **3x** via profiling, parallel execution, optimized SQL, and refined connection pooling.
- Integrated **Application Insights** for distributed tracing, centralized logging, and real-time operational dashboards.
- Delivered **15+ backend features** in collaboration with architects, product teams, and cross-functional engineers.

Systems Engineer | Java, Spring Boot, Angular

Tata Consultancy Services

Aug 2021 – Aug 2022

Bengaluru, India

- Implemented backend functionality for enterprise banking systems using **Spring Boot, JPA/Hibernate**, and **SQL**.
- Improved API and database performance by **20%** via targeted query optimization and response-path refinements.
- Developed and integrated **Angular** UI components with Spring Boot APIs for smooth end-to-end workflows.

PROJECTS

Career Advisor Backend | Python, FastAPI, Qdrant, RAG

Sep 2025 – Oct 2025

- Designed a **retrieval-augmented generation** backend using **FastAPI** and **Qdrant** for personalized resume feedback.
- Built deterministic pipelines for **chunking, embeddings, ranking**, and **caching** to ensure reliable LLM-driven responses.

CareerLink Platform | Node.js, React, PostgreSQL

Mar 2025 – Apr 2025

- Built backend logic for **job matching, RBAC**, and **secure authentication** with optimized PostgreSQL filters and indexes.
- Improved query responsiveness through efficient **pagination**, index-driven search paths, and prepared statements.

Image Processing Engine | Java, OOP, Concurrency

Sep 2024 – Dec 2024

- Developed a **modular image-processing engine** supporting sharpening, blurring, and color correction across multiple formats.
- Implemented **Factory, Builder, Visitor, Adapter**, and **Command** patterns with concurrent transformation pipelines.