

# Affan Arif Khamse

Software Engineer – Distributed Systems, Cloud Infrastructure & AI-Enabled Platforms | NYU CS 2025

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## Education

**Master of Science in Computer Science (GPA: 3.8/4.0)**

New York University

New York, USA

May 2025

**Bachelor of Engineering in Computer Engineering (GPA: 9.00/10.0)**

University of Mumbai

Mumbai, India

June 2023

## Technical Skills

**Programming and Scripting Languages:** Java, Python, JavaScript, C++, TypeScript

**Frameworks and Libraries:** Spring Boot, FastAPI, Flask, Django, ReactJS, LangChain, Node.js

**Cloud & Infrastructure:** AWS (EC2, DynamoDB, S3, Lambda, SQS, SES), Azure, Docker, Kubernetes

**Databases:** SQL (MySQL, PostgreSQL), NoSQL (MongoDB, DynamoDB), Redis, Firebase

**Testing & Monitoring:** JUnit, PyTest, Django Test, CloudWatch, Chrome DevTools

**DevOps & CI/CD:** GitHub Actions, Travis CI, Docker Compose, AWS SAM, Git, Swagger/OpenAPI

**System Design:** Microservices, Event-Driven, Distributed Systems, RESTful APIs, WebSockets

## Work Experience

**AI Software Engineer**

Novum AI

New York, USA

Jun 2025 – Present

- Architected an AI-powered call center assistant that provides real-time smart suggestions to representatives based on live transcription analysis, helping agents close deals faster and improve conversion rates
- Integrated **audio stream processing** with AssemblyAI for transcription and **AWS Bedrock** for sentiment analysis, delivering real-time and post-call analytics on customizable dashboards with **sub-900ms response times**
- Built **event-driven microservices** with **AWS SAM** and CI/CD pipelines, implementing **JWT authentication**, **RBAC**, and **WebSockets** for real-time updates across 50+ sessions
- Hardened APIs with encryption at rest and signed webhooks, eliminating all critical vulnerabilities found during pre-launch audit

**Software Engineer**

InquisAI (Startup Project)

New York, USA

Jun 2024 – Mar 2025

- Developed an AI assistant platform** using **LangChain**, **OpenAI Embeddings**, and **Chroma vector store**, achieving accurate document retrieval on 500+ internal test queries with semantic search
- Redesigned backend by migrating Flask to FastAPI with asynchronous processing and optimized database queries, reducing API latency by 30% through performance testing
- Led **Agile development** in a 3-person team, using Azure DevOps to manage sprints and implementing **CI/CD pipelines** for automated testing and deployment to AWS

## Projects

**Home Store – Multi-Tenant E-Commerce Platform**

Jan 2025 - Present

*Spring Boot, Spring Cloud, Eureka, Docker, PostgreSQL, React Router, Firebase, SwaggerUI*

[GitHub](#)

- Engineered a **microservices ecosystem** using **Spring Boot**, **Eureka service discovery**, and API Gateway, architected for horizontal scalability across multiple tenant instances
- Built **modular services** with clear separation of concerns for core functionalities (product, cart, order, store management), enabling independent deployment and scaling
- Containerized services** with **Docker/Docker Compose** and implemented **RESTful APIs** with SwaggerUI documentation, ensuring consistent testing and rapid iteration

**FlashBids - Anti-Sniping Auction Platform**

Sep 2024 - Dec 2024

*AWS EC2, DynamoDB, S3, Redis, WebSockets, CloudWatch, Flask, Python, REST APIs, DevOps*

[Demo](#) | [GitHub](#)

- Created a **real-time auction platform** using Flask and WebSockets to prevent last-second sniping, implementing a fair bidding mechanism with automatic time extensions
- Constructed a **scalable backend** using AWS EC2 with Auto Scaling and DynamoDB, designed to handle 1000+ of concurrent users through elastic infrastructure
- Engineered **non-blocking APIs** and Redis pub/sub event pipeline, achieving **30% improved latency** and sub-second response times verified with 25-30 concurrent users

## Leadership & Achievements

- Mentored 50+ NYU students** in C++ and Java as Teaching Assistant; several secured internships post-course
- Introduced company-wide **ESLint/Prettier setup** at Novum AI, improving code consistency and reducing review cycles by **40%**