# SHUBHANG VAGVALA (NO SPONSORSHIP REQUIRED)

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### Summary

M.S. CS candidate (May 2025) with 3 years' industry experience in backend and full-stack engineering. Skilled in Java, Go, Spring Boot, React, Kafka, Redis, PostgreSQL, AWS, and Docker. Proven track record improving throughput, latency, and reliability on high-traffic systems; delivered LLM-powered automation and observability improvements.

## **Education**

### **University of Massachusetts Amherst**

Feb 2024 – May 2025

M.S. in Computer Science, GPA: 3.97

Coursework: Machine Learning, Artificial Intelligence, Distributed Operating Systems, Software Engineering

### **Experience**

MediBuddy Jun 2022 - Jan 2023 Bengaluru, India

Software Engineer

- Scaled Spring Boot/Java microservices across mobile and web; optimized DB indexing, connection pooling, and caching to improve API throughput by 60% and reduce failures by 12%.
- Built asynchronous, Redis-backed APIs and workers (queues, idempotency, retries, backpressure); cut server response times by 30% and improved horizontal scalability.
- Shipped an Al-powered FAQ assistant with OpenAl and prompt-engineering guardrails; reduced support resolution time by 35% and boosted customer satisfaction.
- Delivered order-management features with Spring Boot + React serving 500k+ users; improved API latency from  $2s \rightarrow 0.3s$  and reduced cancellations by 20%.
- Integrated Google Maps APIs (geocoding, routing/ETA) with jitter handling and server-side caching; improved delivery accuracy by **15–20%**.

Swiggy Jun 2021 - May 2022 Software Engineer Bengaluru, India

- Built real-time pricing microservices in Go with Kafka and gRPC; applied circuit breakers, exponential backoff, and TTL caches to reduce latency by 25% and improve pricing consistency by 20%.
- Designed resilient Kafka pipelines (partitioning, consumer groups, schema versioning) with feature toggles and consumerflag checks; maintained a 99.5% SLA for business-critical services.
- Automated nightly inventory audits via Databricks jobs over CDC-replicated Hive tables; batched messages to Kafka with validation/reconciliation, eliminating 45% of ETL inconsistencies.
- Built internal Grafana dashboards and observability (SLOs, traces, actionable alerts/runbooks); reduced on-call triage time by 10%.

#### **Projects**

#### College Alumni Networking & Mentorship Platform

- Built a career guidance platform with the MERN stack, TypeScript, Google APIs, SendGrid, and Redis; implemented authentication, real-time scheduling, and notifications. Supported 600+ sessions, reduced coordination overhead, and improved student access to mentors.

## User-Item Interaction Recommender Pipeline

 Engineered a recommendation system with distributed pipelines processing 61M+ interactions; implemented ingestion with Spark, feature transformations, and optimized batching for training/inference. Integrated collaborative filtering, content-based, and deep learning models for scalable personalization.

#### Technical Skills

Languages: Java, Go, Python, TypeScript, JavaScript (ES6+), SQL

Frameworks/Tech: Spring Boot, React, Node.js, gRPC, REST APIs, JWT/OAuth

GenAI/ML: OpenAI APIs, LangChain, RAG, FAISS/pgvector, PyTorch

Cloud/DevOps: AWS, Docker, Databricks, CI/CD (GitHub Actions, Jenkins), Vercel, Supabase, Git

Data Engineering: Kafka, Redis, PostgreSQL, MongoDB, Apache Hive, Spark, ETL Pipelines

Testing & Monitoring: Unit/Integration Testing, Postman, Grafana, SLOs/Tracing, TDD

Practices: Agile/Scrum, Microservices, System Design, Prompt Engineering