SHUBHANG VAGVALA

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SUMMARY

Software Engineer with an M.S. in Computer Science and experience building scalable backend systems, cloud services, and GenAI applications. Skilled in performance optimization, distributed systems, microservices, and full-stack development. Open to impactful roles in backend, full-stack, or GenAI engineering.

WORK AUTHORIZATION

US Citizenship - No Sponsorship Required

EDUCATION

University of Massachusetts Amherst   *Feb 2024 – May 2025*
Master of Science in Computer Science, GPA: 3.97
Coursework: Machine Learning, Artificial Intelligence, Distributed Operating Systems, Algorithms in Data Science

EXPERIENCE

MediBuddy   *Jun 2022 – Dec 2023*
Software Engineer   Bengaluru, India
- Engineered and scaled backend microservices using **Spring Boot** and **Java**, increasing API throughput by **60%** and reducing order failures by **12%**.
- Deployed **asynchronous Redis-backed APIs**, cutting server response time and CPU load by **30%**, improving performance under high traffic.
- Introduced an AI-driven FAQ assistant using **OpenAI LLMs** and **prompt engineering**, lowering support resolution time by **35%** and enhancing user satisfaction.
- Delivered A/B-tested front-end features in **React.js/Redux**, boosting user interaction through real-time promotional content delivery.
- Integrated **Google Maps APIs** for dynamic route tracking, streamlining logistics and improving delivery efficiency by **15–20%**.

Swiggy   *Jun 2021 – May 2022*
Software Engineer   Bengaluru, India
- Authored and maintained pricing microservices using **Go**, **Kafka**, and **gRPC**, reducing latency by **25%** and improving pricing consistency by **20%**.
- Designed fault-tolerant data pipelines with **Kafka consumers** and toggles, sustaining a **99.5% uptime SLA** across services.
- Automated inventory audits using **Databricks** and **Apache Hive**, cutting daily ETL inconsistencies by **45%** and reducing manual effort.
- Constructed internal **Grafana** dashboards and observability metrics, improving on-call response times and issue traceability by **10%**.

SELECTED PROJECTS

AI-Powered Research Paper Q&A Assistant   *Feb 2025 - May 2025*
- Built a document Q&A assistant for academic papers using **LangChain**, **FAISS**, and **OpenAI APIs**, with a **RAG** pipeline for chunking, vector search, and prompt engineering; deployed via **FastAPI** and **Streamlit**.

BERT Powered Product Recommendation Engine   *May 2024 - Jul 2024*
- Implemented an NLP-based recommendation system using **PyTorch**, **BERT**, and **HuggingFace Transformers**; analyzed **10M+** product reviews, boosted cold-start performance, and showcased pipeline deployment techniques.

Real Time Scheduling & Communication Platform   *Feb 2022 - May 2022*
- Developed a real-time scheduling platform using the **MERN** stack, **Google APIs**, **SendGrid**, and **Redis**; supported **50+** concurrent sessions with consistently low latency (**<500ms**) and integrated scalable multi-service architecture.

E-Commerce Microservices Architecture   *March 2021 - May 2021*
- Crafted and containerized microservices using **Spring Boot**, **React**, and **MongoDB**; demonstrated scalable service communication, RESTful design, and modular deployment.

TECHNICAL SKILLS

Languages & Frameworks: Java, Go, Python, JavaScript (ES6+), SQL, Spring Boot, Node.js, React, gRPC, REST APIs, Express.js

GenAI & ML: OpenAI, HuggingFace Transformers, LangChain, BERT, PyTorch, Scikit-learn, FAISS

Cloud & DevOps: AWS, Azure, Docker, Kubernetes, Databricks, CI/CD, Jenkins, GitHub Actions

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

Other: Agile/Scrum, TDD, Microservices, System Design, Prompt Engineering, Observability (Grafana)