Rohun Gowda

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Education

University of Michigan, Ann Arbor **Graduation Date: April 2025**
Bachelor of Science in Computer Science GPA: 3.5

Technical Skills

Programming Languages: C++ , Java , Python , JavaScript , Ruby , SQL , C# , C , Typescript , HTML , CSS
Databases: MySQL , Snowflake , Elasticsearch , AWS OpenSearch DB , PostgreSQL , MongoDB , Oracle , Redis , Big Query , Dynamo DB
Technology: Spring Boot , React.js , Angular , Kafka , Django , Node.js , Express.js , Ruby on Rails , Next.js , Flask , FastAPI , Pytorch , Keras , OpenCV , Jenkins , Docker , Kubernetes , Amazon Web Services , Microsoft Azure , Salesforce , Google Cloud , Unity , Git , Linux , Tailwind CSS
Programming Concepts: Data Structures and Algorithms , Web Development , Distributed Systems , Database Systems , Computer Security , RESTful API , Microservices Architecture , Test Driven Development , Object Oriented Programming , Cloud computing , CI/CD Pipelines , Agile

Work Experience

Uncanny | Lead Software Engineer : *Client: Salesforce* **November 2024 – Current**

- Engineered a scalable full-stack Social Competitive Analysis Platform using Java, Python, React, and Tailwind CSS to ingest and process real-time data from X API, storing embedded contextual documents in a Qdrant Cloud database.
- Implemented modular data pipelines with AWS Lambda functions to process data into Qdrant Cloud, S3 Buckets to temporarily hold data for processing, and AWS SQS to manage document stream, allowing for interchangeable KPI components for evolving data types.
- Produced a scalable application that supports customizable data sources and AI -powered analytics, enabling seamless adaptation to evolving client needs while delivering actionable insights through robust data ingestion, processing, and analysis.

La-Z-Boy | Software Development Intern **May 2024 – August 2024**

- Deployed a scalable Retrieval-Augmented Generation system by transforming structured data from Snowflake into vector databases, enabling semantic search and real-time LLM-driven analysis through AWS Knowledge Base and Titan AI.
- Orchestrated full-stack cloud migration of application using FastAPI for backend, Streamlit for frontend, and Docker with AWS Elastic Kubernetes Service to achieve high-availability, autoscaling, and enterprise grade resilience across backend and frontend services.
- Strengthened system performance and data integrity by leveraging AWS S3 for distributed storage and AWS OpenSearch as a vector index over the data buckets, ensuring on average 92.8% top-k accurate document retrieval and relevant, tailored LLM inferences.

Walmart | Software Engineer Intern **May 2023– August 2023**

- Revamped a Warehouse Data Analytics Dashboard, improving live KPI metrics on Inventory Management and reducing dashboard latency caused by existing Big Query integration, empowering supply chain teams with faster, more reliable operational insights.
- Engineered high-performance Elasticsearch queries to aggregate large-scale data and restructured Spring Boot backend by developing secure Rest APIs, which connected to a React frontend with Redux-Saga for state management and real-time user experience.
- Led full deployment of dashboard on Kubernetes, reducing response time from 13 seconds to 3 seconds and achieving scalable, reliable system actively used in live warehouse environments to monitor and optimize operational flow and logistics.

Ongoing Project

OrbitStore NoSQL Database **December 2024 – In Progress**

GitHub: *github.com/rohungowda/OrbitStore*

- Developing a Key-Value distributed NoSQL database in C++, leveraging Log-Structured Merge Trees and arena memory management to deliver low-latency, high-throughput storage with fine-grained locking and direct disk I/O through OS memory paging.
- Boosting concurrent performance by engineering thread-safe multithreading, complex data structures and algorithms, and dynamic read/write memory buffers, optimizing minimal contention and efficient memory use for large-scale workloads.
- Architecting horizontal scaling and real-time consistency by leveraging TCP/UDP socket layer, distributed sharding through consistent hashing, and a gossip rumor mongering protocol for fault tolerance, replication and synchronization across nodes.