Rishabh Bharota

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PROFILE

Software Engineer with 3+ years of experience building scalable, event-driven backends in Golang, Kafka and PostgreSQL, now focused on AI engineering: building RAG systems, LLM integrations and agentic workflows.

WORK EXPERIENCE

ZopSmart **Bangalore, India**
Software Development Engineer II *April 2025 – Present*

- Designed ERDs, API contracts, and data models to consolidate legacy systems into a modernized platform serving ~2M requests/day.
- Built an asynchronous event-publishing library using a worker-pool pattern to parallelize publishes, decoupling services and raising publish throughput 4× from 25 to 100 events/sec.
- Designed generic event models following Domain-Driven Design that 3 domain teams adopted as their common publishing schema, standardizing event structure across domains under at-least-once delivery.
- Built an extensible JSON diff library to capture attribute-level changes, enabling downstream services to track event history.
- Introduced per-PR feature-environment deployments, eliminating contention for shared dev/test environments and letting testers validate changes in isolation.
- Added GraphQL client support to the internal Golang framework.
- Built Databricks jobs to reconcile migrated data against legacy source tables, validating ~500 attributes across 5M products and surfacing discrepancies during the modernization effort.
- Engineered agentic workflows with Claude Code that ingest OpenAPI contracts and design documentation to generate draft PRs for Go microservices at ~70% baseline accuracy, cutting service scaffolding from 4–5 hours to 30–40 minutes.

Software Development Engineer I *August 2023 – March 2025*

- Developed and maintained microservices in Golang and PostgreSQL with a layered architecture, including migrations and unit tests.
- Eliminated recursive PostgreSQL queries by introducing a hierarchy key per node and moving tree assembly to the service layer, improving p99 from 2.5s to 500ms.
- Automated CI/CD pipelines using GitHub Actions and Harness, streamlining build, test, and deployment workflows.
- Consolidated 12 REST endpoints into 4, simplifying maintenance and reducing client integration surface.
- Enhanced observability with Datadog alerts, exclusion policies, and dashboards, plus Grafana service metrics.

PROJECTS

Sports Info: RAG Sports Assistant **Python | Streamlit | Gemini | SQLite**

- Built a multi-user sports assistant that answers questions grounded in live fixtures and news from 7 sources, citing articles per fact and declining when the context lacks an answer.
- Implemented hybrid retrieval combining local embeddings with keyword search, boosted for the teams and drivers a user follows and de-duplicated across feeds; covered by a pytest suite.

Durable Delayed Job Queue **Golang | gRPC | Redis | PostgreSQL**

- Built a durable delayed job queue exposing a gRPC API, with PostgreSQL as the system of record and a Redis sorted set scored by execution time as the scheduling index.
- Implemented at-least-once delivery with retries, a dead-letter queue for exhausted jobs, and a sweeper that backfills due jobs from PostgreSQL into Redis so nothing is lost if an enqueue half-fails.

EDUCATION

Jaypee University of Information Technology **Solan, India**
B.Tech, Computer Science (Specialization: Machine Learning) | CGPA: 8.7 *Graduation Date: June 2023*

SKILLS

- **Languages:** Golang | Python | SQL | C++.
- **Backend and Data:** RESTful APIs | gRPC | GraphQL | PostgreSQL | Redis.
- **Infrastructure and DevOps:** Docker | Kubernetes | Azure Cloud | Databricks | Kafka | GitHub Actions | Harness.
- **Monitoring and Observability:** Datadog | Grafana | Dynatrace.
- **Architectures and Systems:** Microservices | Domain Driven Design | Spec Driven Development.
- **Methodologies and Tools:** Agile (Scrum) | Test Driven Development | CI/CD | Jira.
- **Core Fundamentals:** Data Structures and Algorithms | DBMS | Operating Systems | System Design.
- **AI and LLM Engineering:** RAG Pipelines | LLM Integration (Gemini, Claude) | Agentic Workflows | Prompt Engineering.

ACHIEVEMENTS

- **Company Awards (ZopSmart):** Received the Magnificent Mars award for introducing processes that boosted productivity, and the Shining Sun award for consistent availability and rapid resolution of high-priority production bugs.