Shaiq Iqbal

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Education

- **Indian Institute Of Technology Dharwad** — Karnataka, India
  B.Tech in Computer Science; CGPA: 9.3 — *Aug 2018 – Jun 2022*

Experience

- **Zenith Capital (Quant Trading Firm)** — Mumbai, India
  Senior Software Engineer — *Dec 2024 - Present*
  - Developed low-latency order execution systems in C++17, reducing tick-to-trade latency by **40µs** through lock-free data structures and kernel bypass networking (DPDK).
  - Built a high-frequency market data handler capable of ingesting and normalizing **5M+ messages/sec** from multiple exchanges, with bounded jitter under heavy bursts.
  - Created a real-time **PnL** attribution dashboard with WebSockets and ClickHouse, enabling traders to drill down to instrument-level profits with sub-second refreshes.
  - Partnered with quants to productionize deep learning models (LSTM for price forecasting, CNN for order book imbalance), containerized with TensorFlow Serving, and deployed on GPU-backed Kubernetes clusters.
  - Contributed to infra-level optimizations, including kernel tuning (CPU pinning, huge pages, **NUMA-aware** memory allocation) for deterministic performance under load.
- **Google** — Bengaluru, Karnataka
  Software Engineer — *Jul 2022 - Dec 2024*
  - Contributed to **Google Kubernetes Engine** (GKE) by designing a new node auto-healing mechanism that reduced downtime for workloads by **22%** across customer clusters.
  - Developed a distributed load balancer control plane in Go handling **30M+ requests/sec**, improving request distribution fairness and cutting p95 latencies by 18%.
  - Implemented a gRPC-based service mesh extension for internal teams, adding advanced traffic shaping (circuit breaking, weighted routing).
  - Developed a kernel bypass datapath prototype **(DPDK + userspace TCP stack)** for GCP VMs, evaluated for specialized HPC workloads.
  - Collaborated with the **Google Borg** team to optimize container networking overhead, cutting pod-to-pod latency within clusters by **15%** through shared memory channels.
  - Authored internal RFCs on QUIC-based service meshes and NUMA-aware container scheduling, influencing roadmap discussions across Google Cloud Networking.

Projects

- **LatencyLab – Ultra-Low-Latency Trading Simulator**: Built a C++/Go simulator for order book replay and strategy benchmarking at nanosecond resolution. Used lock-free queues, RDMA verbs, and DPDK to emulate exchange-level latencies. Enabled researchers to test strategies with 100x faster backtests compared to legacy tools. **Technologies**: C++17, Go, DPDK, RDMA, Redis, Aerospike — GitHub - Demo
- **Guard - Service Mesh Security Layer**: Created a QUIC-based service mesh prototype with mutual TLS, fine-grained RBAC, and dynamic traffic shaping. Benchmarked against Istio, demonstrating 15% lower overhead at scale. **Technologies**: Go, QUIC, Envoy, gRPC, Istio — GitHub

Skills

- **Programming**: Proficient in C++17/20, Go, Python, Rust. Experienced with JS/TS, PHP, SQL, Kotlin, Bash, CUDA
- **Quant**: Volatility surfaces, Options pricing (SABR, Heston), ARIMA, GARCH, HMMs
- **Systems & Frameworks**: gRPC, FastAPI, Spring Boot, QUIC, eBPF, DPDK, RDMA
- **DevOps Tools and Utilities**: Git, Docker, AWS, GraphQL, MongoDB, PostgreSQL, Aerospike, Redis, Kafka, Aurora, Kubernetes.

TEMPLATE