Priyanshu Soni

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Education

National Institute of Technology Karnataka — Karnataka,Surathkal
B.Tech in Electronics and Communication Engineering — *Dec 2021 – May 2025*

Experience

Software Development Engineer 1 — July 2025 – Present
Flipkart — *Bengaluru,Karnataka*

- Optimized Event Store read performance by implementing batching and caching mechanisms, reducing latency by 95% for data retrieval.
- Built automated access control workflows in Airflow, improving visibility into errors and system alerts.
- Built a CI/CD pipeline to automate build and deployment of Java agent JARs, leading to better version control.
- Implemented Kafka cluster guardrails to delay consecutive broker restarts, ensuring system stability.

Software Development Engineer Intern — January 2025 – July 2025
Flipkart — *Bengaluru,Karnataka*

- Worked on observability infrastructure for Java-based microservices using a custom Java agent.
- Refactored the internal logging framework within the agent to resolve conflicts and improve extensibility.
- Performed distributed load testing with Locust to benchmark agent overhead and quantify performance regressions in real-world applications.

Research Intern — May 2024 – July 2024
Indian Institute of Science — *Bengaluru,Karnataka*

- Integrated ResNet model into an existing model pipeline, improving accuracy by 3.7%.
- Fine-tuned the embedding extractor on 100 hours of speaker verification data, enhancing the accuracy of the speaker diarization pipeline.

Projects

Distributed Consensus System (Raft Protocol) & Fault-Tolerant Key/Value Store

- Built a fault-tolerant distributed consensus system in Go implementing the Raft consensus algorithm from the ground up.
- Implemented leader election, log replication, and heartbeat mechanisms to ensure consistency across replicated state machines.
- Developed a fault-tolerant key/value store on top of Raft supporting linearizable Get and Put operations.
- Integrated snapshotting and log compaction to manage Raft log growth and reduce memory footprint.
- Optimized message passing using RPCs and designed timeouts for robust handling of network partitions and node failures.
- Validated system correctness through stress tests with concurrent client requests, simulated crashes, and snapshot recovery.

SecureChat

- Developed a multi-threaded client-server architecture application in C++ for seamless inter-client communication within a LAN, achieving 100% message delivery without loss.
- Integrated encryption algorithms for message encryption, authentication mechanisms, and error handling protocols, ensuring data integrity and security.
- Implemented Mutex-based concurrency control mechanisms and other core system functionalities to ensure data safety.

Technical Skills

Languages: C/C++, Python, Golang, Java, Bash, SQL
Frameworks & Tools: Docker, Kubernetes, Git/GitHub, Spring Boot, Maven, Locust, Grafana
Machine Learning: PyTorch, TensorFlow, Kaldi
Systems & Platforms: Linux (Arch/Debian), Neo4j
Areas of Interest: Distributed Systems, System Architecture, Backend Development