

Ruturaj Mohite

📍 Bangalore, India

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Education

International Institute of Information Technology
Bachelor and Master of Technology in Computer Science
GPA: 3.58/4

Bangalore, India
2019 - 2024

Experience

Google

Software Engineer III

Part of the Google Store Launch Management team.

My team designed content publishing infrastructure that validates and publishes content for Google Store and other Google commercial websites.

- Designed and implemented Content Validation Engine from scratch which validates content and its dependencies by computing a dependency graph.
 - Collaborated in design and implementation of the launch controller, which orchestrates content's publishing.
 - Designed performance critical Spanner DB schema required by the publishing infrastructure.
 - The only junior engineer on the database council of my org who are authorized to approve database related changes.
- Promoted to SWE III in 1 year and 3 months.

Mercari, Inc.

Software Engineering Intern

Part of the Mercari Japan Region Trust and Safety team.

- Designed and implemented age restriction for item listings on the Mercari Marketplace.
- Improved development infrastructure for TnS services - Set up service routing, dev monitors, etc.

Technologies: Go, gRPC, Kubernetes, Async Service Communication

Google

Software Engineering Intern

Part of the Google Store Launch Management and Publishing team.

- Designed and implemented a service to index and verify published releases during New Product Introductions (Made By).
- Designed a service to detect replication inconsistencies across distributed Spanner instances during publishing of a release.
- Reduced late change buffer time **from order of hours to order of seconds** before NPI.

Technologies: Java, Distributed Cache Systems, gRPC

Projects

CircuitVerse Simulator ↗

2021-Present

CircuitVerse is an open source digital logic simulator. Try now at circuitverse.org/simulator ↗

- Implemented testbench engine and circuit contention detection.
- Many fixes in resolution engine, subcircuits, circuit loading, etc. Also some backend features and fixes.
- Led Google Summer of Code projects related to engine performance, version control, and testing.

CircuitVerse is used by **over 100k users and many universities**. It's also a part of Google Summer of Code.

Omnipresence ↗

2025

A distributed, durable key-value store. Etcd's cousin.

- Implemented the Raft consensus algorithm for the replication engine.
- Implemented write-ahead logs, message queue, and key-value store client.
- Datastore implementation is swappable and decoupled from the replication engine.

Contain: A container process level packet filter ↗

2024

eBPF based kernel level filter for Linux that filters packets based on container and process level policies

- Implemented a BPF_PROG_TYPE_CGROUP_SKB program and kprobes to filter socket connections for each process
- Implemented a daemon using kprobes to detect containers at runtime

Skills

- **Tools and Technologies:** Go, Java, C++, Linux, Docker, Kubernetes
- **Relevant Coursework:** Cloud Computing, Software Engineering, Data Structures and Algorithms
- **Areas of Interest:** Distributed Systems, Web and Network Security, Cloud Computing, Operating Systems

Leadership and Achievements

- Google Summer of Code Organization Admin, Maintainer at CircuitVerse ↗ (2022, 2023, 2024)
- Full travel grant & scholarship to attend Open Source Summit EU 2022
- Dean's Merit List Scholarship (2020)