

Ruturaj Mohite

✉ Bangalore, India

✉ mohite.ruturaj15@gmail.com

✉ gr455

✉ ruturaj-mohite

Education

International Institute of Information Technology
Bachelor and Master of Technology in Computer Science
GPA: 3.58/4. Master's thesis ↗

Bangalore, India
2019 - 2024

Experience

- Google** **Bangalore, India**
July 2024 - Present
Software Engineer III
Part of the Google Store Launch Management team.
Team **engineered from scratch** the publishing infra that validates and publishes content for Google's commercial websites.
 - Designed and implemented Content Validation Engine and Launch Controller from scratch which validates content and its dependencies by computing a dependency graph and orchestrates launches.
 - 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.**Fast tracked promotion** to SWE III in 1 year and 3 months.
- Mercari, Inc.** **Tokyo, Japan**
Feb 2024 - Mar 2024
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** **Bangalore, India**
May 2023 - Aug 2023
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 Google).
 - Designed a service to detect replication inconsistencies across distributed Spanner instances.**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.
- vSOS** ↗ 2025
A 32bit Kernel + Bootloader for x86.
 - Implemented Bootloader, ISRs, Memory Management, Paging, Device Drivers etc.
- 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. Read the thesis ↗. Read the paper ↗

Publications

- R. Mohite, B. Thangaraju, "Enhancing Container Security with Per-Process Per-Container Egress Packet Filtering Using eBPF" ↗

Skills and Interests

OS Kernels, Algorithms, Containerization and Virtualization, Distributed Systems, Databases

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)