

Ruturaj Mohite

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EDUCATION

International Institute of Information Technology
Integrated Master of Technology in Computer Science

Bangalore, India
2019 - Present (expected 2024)

EXPERIENCE

Layer5

Open Source Developer

Jan 2022 - Present

🔗 layer5.io

- Working on Meshery, a service mesh management plane
- Working on the CLI of Meshery interfacing with Kubernetes clusters and Docker containers
- Improved the core functionality of the CLI's system commands

CircuitVerse

GSoC Org Admin and Former GSoC Student

Jun 2021 - Present

🔗 circuitverse.org

- Implemented testing engine and interface to allow automated testing of simulated circuits as a part of GSoC
- Maintaining security and simulator related code
- Greatly improved the stability of the simulation engine (bug reports **decreased by 50%**)
- Found and fixed multiple security vulnerabilities ranging from stored XSS to a full account takeover CSRF

CircuitVerse currently has **over 80,000 users** and **over 3 million page hits**

PublicLab

Open Source Developer

Jan 2020 - Aug 2020

🔗 spectralworkbench.org

- Migrated project to newer Rails version in planned incremental steps
- Fixed CI/CD and containerization related bugs
- Improved test coverage from 65% to 80+%

SpectralWorkbench currently has **over 20,000 users**

PROJECTS

very Simple Operating System 🔗

2020 - 2021

A simple 32-bit operating system for x86 systems.

- Implemented a basic bootloader to switch into protected mode and load kernel into memory
- Implemented VGA and keyboard drivers
- Implemented a shell to interact with the kernel
- Implemented a custom C standard library used across the kernel

Secure Elections 🔗

2020

Web application to host secure elections focused on voter anonymity and vote integrity

- Used a salted SHA-256 hash check to verify vote integrity without compromising the vote itself
- Implemented vote logic and setup SSO authentication via OAuth

Used by over **500 users**

DirectTransfer 🔗

2021

A parallel file transfer application

- Used sockets over TCP to carry out peer to peer data transfer
- Implemented network and process parallelization
- Designed a system that allows for dynamic port management for multiple ongoing transfers

SKILLS

- **Languages:** Python, Javascript, C, C++, Java, Ruby, Bash, MySQL
- **Tools and Technologies:** Linux, Docker, Git, Kubernetes, Rails
- **Areas of Interest:** Scalable Systems, Web and Network Security, Cloud Computing, Operating Systems

PORs AND ACHIEVEMENTS

- Core Member of Zense and Zense Infosec 🔗
- Top 20 In India on CTFTIME 🔗 (2020)
- Dean's Merit List Scholarship recipient (2020)