EDUCATION

IIT Roorkee

B.Tech in Electronics and Communication Engineering CGPA: 8.46

Senior Year Expected May 2020

SKILLS

Languages

- Golang
 Rust
 C/C++
- Javascript Node.js Python Bash

Technologies

- Git React.js Redux Express
- Linux · Chrome Developer Tools
- Docker

ACTIVITIES

Open Source

- TiKV: Worked on removing unnecessary dependencies and features, contributed to documentation for several components.
- Hashicorp Packer: Contributed various small patches and bug fixes.
- Gophercloud: Contributed patches to volumeextensions API for Openstack cloud.

Hackathons

Wikimedia Hackathon, 2019

 Showcased and developed features to increase the utility of Wikieducation Dashboard for Wikimedia Czech Republic Community.

Alumni Relations Cell

IIT Roorkee

 Led the development team to revamp
 the current Alumni Portal into a modern single page
 React/Redux app.

COURSEWORK

- Data Structures and algorithms
- Object Oriented Programming
- Computer Networks
- Database Management Systems
- Computer Architecture
- Discrete Structures
- Theory of Computation

EXPERIENCE

Nutanix | Software Developer Intern

May 2019 - July 2019 | Bangalore, India

- Developed a load testing framework for the AOC of Xi-Epoch monitoring platform.
- Designed an Async architecture allowing simulations more than 10000 of collectors.
- Integrated more than 20 load tests with AOC release cycle to benchmark with different configurations.

Wikimedia Foundation | GCI & Outreachy Mentor

November 2018 - to date

- Steered the WikiEducation project, outlining project goals and incorporating the feature requests from the community.
- Mentored and reviewed work of interns working on the WikiEducation Project.

Google Summer of Code | Software Developer

May 2018 - August 2018 | Remote(Link)

- Developed Article Finder tool for WikiEducation dashboard, allowing instructors and students search through the massive Wikipedia database.
- Integrated four different Wikimedia APIs with the Article finder, presenting different metrics to compare article quality and scope of contribution.
- Migrated the project away from legacy components such as Bower and McFly and automated the development setup process with bash scripts.

PROJECTS

Cargo-feature-analyst | Open Source March 2019 – to date

- Developed and published a Cargo plugin crate to analyze the features of a Rust Project.
- Inspired by the Cargo tree plugin, it helped large rust projects(eg. TiKV) to get rid of unused features and improve compilation times.

RISCy Processor | IIT Roorkee

August 2017 – November 2017

• Designed and implemented a 32-bit RISC processor using Self Developed instruction op-codes, utilized pipelining to improve the performance.

Network Intrusion Detection System | IIT Roorkee

August 2019 – to date

- Investigating real-time network intrusion detection systems on top of configurable hardware like FPGA.
- Experimenting with detection of various forms of network intrusion with adaptable hardware logic.

LEADERSHIP

Vice President | Geek Gazette, IIT Roorkee September 2016 – to date

• Spearheaded a team of members working in editorial, design, finance and web cells, making technical content accessible to the community of IIT Roorkee through the medium of print and web.

GSoC Org Admin | Wikimedia Foundation

January 2019 - August 2019

- Organised Community meetings to help new developers get started with Wikimedia Foundation projects.
- Reviewed and provided feedback for proposals of GSoC participants.

GitHub github.com/psinghal20

psinghal20