

# Sachin Kumar Singh

<https://sachinkumarsingh092.github.io>

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## EXPERIENCE

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### • Canonical (Creators of Ubuntu)

Software Engineering

<https://canonical.com/>

Remote

September 2022 - present

- Working on [MicroK8s](#), a lightweight Kubernetes distribution for IoT and Edge, under the Cloud engineering team.
- Working on development and maintenance of various features and projects, including Cluster API MicroK8s [control-plane](#) and [bootstrap](#) providers, [dual-stack enablement](#), [charm MicroK8s](#), and [Ceph integrations](#).

### • VMware

Software Engineering Intern

<https://www.vmware.com/>

Bengaluru, India

February 2022 - August 2022

- Worked under Tanzu Edge team on Kubernetes Cluster API Provider [BYOH](#) that enables Kubernetes Cluster management on bare-metal hosts.
- Implemented an end-to-end feature for secure host provisioning and registration, based on bootstrap token authentication.

### • HackerRank

Software Engineering Intern

<https://www.hackerrank.com/>

Bengaluru, India

June 2021 - December 2021

- HackerRank is a technology hiring platform that is the standard for assessing developer skills for over 2,000+ companies around the world.
- Worked with the community and the DevOps team on infrastructure and backend, improving internal tooling and developer experience.

### • Linux Foundation (LFX) Mentorship

Intern at CNCF (Cloud Native Computing Foundation)

<https://mentorship.lfx.linuxfoundation.org/mentee/8375a914-cef9-4031-a718-d58d3fac013b>

SPIFFE/SPIRE

Feb 2021 - May 2021

- Worked on SPIFFE/SPIRE (<https://spiffe.io/>) project to design and implement a new health check subsystem in SPIRE.
- Implemented readiness and liveness checks for each subsystem to be aggregated and used for global health check of SPIRE.

### • Google Summer of Code

Student Developer at GNU-Astro

<https://summerofcode.withgoogle.com/projects/#4950581673721856>

The GNU project

May 2020 - August 2020

- Implemented a library and a CLI interface to inter-convert different distortion types present in different astronomical datasets providing uniformity when different tools are used in an analysis pipeline.
- Implemented a space-efficient index-based k-d tree for easy preprocessing of large astronomical datasets before matching.
- Implemented a multi-threaded matching algorithm to match objects (stars and galaxies) in a query dataset to a reference dataset.

## EDUCATION

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### • Guru Gobind Singh Indraprastha University

Bachelor of Technology (Information Technology), CGPA: 8.4

New Delhi, India

Aug. 2018 - June. 2022

## TALKS AND PRESENTATIONS

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### • FOSDEM'23

Topic: [Reconciliation Pattern](#), [Control Theory](#), and [Cluster API: The Holy Trinity](#)

### • Presentations about MicroK8s

Presentations on [Cluster API using MicroK8s](#) and [IPv4/IPv6 dual-stack](#) features during community hours.

## PROGRAMMING SKILLS

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• **Languages:** Golang, Python, C/C++, SQL, Bash, Java, HTML, CSS,  $\text{\LaTeX}$ , Make

• **Tools/Framework:** GNU/Linux, Git, Docker, Kubernetes, Flask, Travis CI, Jenkins, Terraform, AWS, GCP, Azure