

Sachin Kumar Singh

<https://sachinkumarsingh092.github.io>

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EDUCATION

- **Guru Gobind Singh Indraprastha University**

Bachelor of Technology (Information Technology)

New Delhi, Delhi

Aug. 2018 – June. 2022 (Expected)

EXPERIENCE

- **Linux Foundation (LFX) Mentorship**

Intern at CNCF (Cloud Native Computing Foundation)

SPIFFE/SPIRE

Feb 2021 - Present

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

- Working on SPIFFE/SPIRE (<https://spiffe.io/>) project to design and implement a health-check subsystem in SPIRE.
- SPIFFE, the Secure Production Identity Framework For Everyone, provides a secure identity, in the form of a specially crafted X.509 certificate, to every workload in a modern production environment.

- **Kubernetes**

Open Source contributor

Dec 2020 - Present

<https://kubernetes.io/>

- Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.
- Involved with implementing new features, writing tests and providing support for new releases in Kubernetes and Kubernetes-CSI.

- **Google Summer of Code'20**

Student Developer at GNU-Astro

The GNU project

May 2020 – August 2020

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

- Implemented a library and a CLI interface to inter-convert different distortion types present in different astronomical datasets providing uniformity when different software 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.

PROJECTS

- **URL Short** (<https://github.com/sachinkumarsingh092/urlshort>)

- A URL shortening tool that uses YAML files from users and makes custom paths from them.
- Can be used as a local binary or deployed on cloud using docker and kubernetes.
- Built using Golang, Docker, Kubernetes, Make, Google Kubernetes Engine (GKE).

- **Otaku-chat** (<https://github.com/sachinkumarsingh092/Otaku-chat>)

- A realtime chatting web application with multiple chat room functionality.
- Features include creating and joining multiple channels, saved sessions after closing the browser and deleting sent messages.
- Built using Flask, Javascript, FlaskSocketIO, jinja templating, Bootstrap CSS, PostgreSQL and hosted on Heroku.

- **Book Reviewer** (<https://github.com/sachinkumarsingh092/book-reviewer>)

- Book reviewer is a web application allowing users to register themselves and rate and review books from a large catalogue of books.
- Built using Flask, jinja templating, Bootstrap CSS, PostgreSQL, goodreads developer-API and hosted on Heroku.

ACHIEVEMENTS

- **Paytm Build for India Hackathon**

Won 1st runner-up prize for building a website to be used by educational organisations.

PROGRAMMING SKILLS

- **Languages:** C/C++, Python, Javascript, SQL, Shell scripting, Java, HTML, CSS, Golang, L^AT_EX, Make

- **Tools/Framework:** GNU/Linux, Git, Heroku, Docker, Kubernetes, Google Cloud Platform (GCP), Flask, Travis CI, REST API