

Karan Pratap Singh

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EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

INT. MSc PHYSICS
Jul 2015 - present

DOON INTERNATIONAL SCHOOL

Jul 2012- Jul 2014

LINKS

GitHub:@ karannaoh
LinkedIn:@ karannaoh
Portfolio:@ karannaoh

COURSEWORK

GRADUATE

Design Analysis of Algorithms
Intelligent Game Design (C#)
Computational Methods (MATLAB)
Programming And DataStructure (C)
Mathematical Methods
Machine Learning (Python)
IEEE approved OpenCV workshop

SKILLS

PROGRAMMING

Proficient

• Python • JavaScript • Julia • PHP

Experienced

C++ • CSS • \LaTeX • C#

TOOLS

• Git • GitHub • Kubernetes • Helm
• Docker • AWS • OpenAPI
• SwaggerUI • GraphQL
• Hasura

WEB TECHNOLOGIES

• Javascript • jQuery • React • Redux
• Nodejs • Flask • Guillotina
• Codeigniter

OTHER

• Unity 3D • MATLAB & Octave
• OpenCV C++ • MySQL & MongoDB

INTERESTS

Unix, Computer Networks and
Cryptography

EXPERIENCE

GOOGLE SUMMER OF CODE | PYTHON SOFTWARE FOUNDATION

May 2019 – Aug 2019 | Remote

- Contributed to **Guillotina** which is an **AsyncIO** server side framework.
- Added **Helm charts** for the quick deployment of Guillotina on **kubernetes**
- Upgraded Guillotina **Swagger** to **OpenAPI3**, which is a guillotina addon to automatically generate swagger interfaces for the endpoints defined with Guillotina
- Added 2 new addons to guillotina web **guillotina-heroku** & **guillotina-pubsub**
- **Tech-Stack** : Python, JavaScript, Kubernetes, Helm, OpenAPI | **GSOC BLOG**

HACKERRANK | SOFTWARE ENGINEERING INTERN

May 2018 – Jul 2018 | Bengaluru

- Contributed in **containerization** of HackerRank, optimise the build process by using **multi-stage docker build**, and the size of production images by 20%
- Integrated **Julia Lang** into HackerRank's **code generator API**, which now generates code for 20 languages and used by over **5 million** users of HackerRank
- POC:-Development of HackerRank on a remote **K8s** cluster using **Telepresence**
- **Tech-Stack** : Docker, Kubernetes, Telepresence, PHP (CodeIgniter), Julia, coala

SMARTER.CODES | SOFTWARE ENGINEERING INTERN

May 2017 – Jul 2017 | Chandigarh

- Designed and developed an algorithm to scrape **100K webpages** of wikipedia and several other blogs to collect data in a particular format to train chatbot
- Contributed in **system administration**, deployed various tools like Gitlab, Youtrack, Teamcity etc and configured automated regular backups
- **Tech-Stack** : Beautiful Soup, Flask, Docker, Nginx, AWS

RANKETHON | CHIEF TECHNOLOGY OFFICER

Oct 2015 – Nov 2017 | Kharagpur

- Led tech team of Rankethon which is one of the leading **EdTech startup** of India
- Developed and deployed various **websites and examination portals** of Rankethon, which are now being used by **10000+** people across India

POSITION OF RESPONSIBILITY

WEB TEAM HEAD | STUDENTS' ALUMNI CELL, IIT KHARAGPUR

Oct 2016 – Apr 2018

- **Led** the web team of Students' Alumni Cell in developing various portals and websites used by **10000+ students and 40000+ alumni** of IIT Kharagpur
- Made a huge contribution of over **120+ Commits** on different websites along with there **automated deployment and backups** on Linux based server

PROJECTS

NATIONAL AI RESOURCE PORTAL | MERN STACK

- Worked on **Authentication and Authorization** for 4 different type of users of NAIRP
- Developed **MERN** Stack App to Authorize and Authenticate actions performed by users

SPACE EXPLORATION | UNITY 3D

- Developed Unity3D game, **simulating laws of gravitation** for planetary bodies and satellites
- Users can interactively understand trajectories of massive objects under gravitational field

COMPETITIONS

IIT KHARAGPUR, GENERAL CHAMPIONSHIP OPEN SOFT | 2019

- **Captain** Bronze winning Team, Developed end to end **search engine** for Legal Court queries

ISRO, SMART INDIA HACKATHON | 2018

- Got selected for the **national level finals** SIH'18, developed **CBIR** APP for satellite images