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# Shivam Kumar Jha

BRH Hall of Residence, IIT Kharagpur West Bengal, India - 721302

## **Academics**

**2017-2022** GPA

B.Tech + M.Tech (Dual Degree) in Computer Science and Engineering, IIT Kharagpur

8.52/10.0 (Ongoing)

Experience

Jul 20 | Backend Intern: Praja

Aug 20 - Fabricated architecture and implemented *fan-out write* based global and personal activity feed using Elasticsearch atop Ruby on Rails backend - reducing average feed generation time from 6 seconds to 320 milliseconds.

Skillbee, Noida

Praja.buzz, Bangalore

May 20 Jul 20

- Implemented caching and optimized retrieval of analytic data, reducing average time from 1.3 min to 224 ms.

- Analyzed Node.js heap usage pattern and implemented practices to reduce memory footprint, modularised WhatsApp chatbot flow, improved docker inter-container networking, created scripts to automate mundane tasks, etc.

May 19 | Student Software Developer: Sample Platform

FullStack Intern: Skillbee IPI Connect

CCExtractor, Google Summer of Code 2019

Aug 19

- Implemented code sanity checking mechanisms, increase unit-test coverage from 60.2% to 90.1%, implemented database migration methods and improved time estimation algorithm' accuracy with DB schema modification.

May 19 | Backend Engineering Intern: Income Tax Filing Tool

ClearTax, Bangalore

Jul 19 - Updated ITR-2, ITR-3 and ITR-4 filing to 2018-19 fiscal-year schema while retaining backward compatibility.

- Improved DevOps using IIS Manager, Scalyr, Spinnaker and TensorFlow (with OpenCV and Keras) to setup up better logging, improved automation and Income Tax Department's captcha solver (achieving 94.3% accuracy).

Dec 18 Jan 19 Sofware Engineering Intern: VWO

Wingify, New Delhi

- Dockerised core components of VWO reducing migration and production setup time by roughly 80%.

- Optimized data queries and reliability with UX changes reducing the campaign creation dropout rate by 30%.

May 18

Student Software Developer: Project Nephos

**CCExtractor, Google Summer Of Code 2018** 

Aug 18

- Authored head-less tool to automate recording, processing and uploading IPTV streams for University Of Nevarra, Spain and others - increasing throughput by over 400+% with no human intervention required to handle failures.

# **Projects**

#### • CareShare, Backend Developer

Developing with Singaporean health startup Zealth-AI, a platform for doctors and hospitals to keep track of discharged and asymptotic Covid-19 patients with multi-lingual support aimed at Indian patients. Currently, the product is being used by 50+ hospitals including prestigious ones like *PGI Rohtak* and *All India Institute Of Medical Science (AIIMS)*.

### • CloudCron, Co-Founder

Software as a Service (SaaS) platform to ease the setting up and execution of cron-tasks; developer with stack comprising of GCP (AppEngine, CloudSQL, PubSub, CloudScheduler), Python, PostgreSQL, Kubernetes API and more.

## DigiCon, OpenSoft 2018 IIT Kharagpur

Gold winning entry to the Inter-Hall Opensoft, IIT Kharagpur; generates digital prescription from doctor's handwritten.

#### • ConnectAll, Hack-A-BIT 2019

Developed in 36 hours, ConnectAll is a platform that enables specially-abled to easily interact with conventional tech.

# **Technical Skills**

Languages
Libraries / Frameworks
Data Storage / Handling
Systems / Platforms
Sys Admin / Technologies

JavaScript (Node.js), Python, C, Golang, PHP, Java, Ruby OpenCV, .NET Core, SpringBoot, Flask, Django, ASP.NET, Ruby on Rails

MySQL, SQLite, MongoDB, PostgreSQL, Elasticsearch Heroku, Azure, GCP, AWS, Pivotal Platform, Digital Ocean

Docker, REST, GraphQL, Protobuf, Blockchain, Nginx

#### Activities & Leadership

- OpenSource Involvement: Mentored Make SwagLyrics Great Again and Sample Platform in GSoC 2020 and high school students for GCI 2018 and GCI 2019 under CCExtractor, top mentor for GirlScript Summer of Code (GSSoC) 2018 and SoI 2019, IIT Dharwad. I've successfully conducted Kharagpur Winter of Code 2018, GSSoC 2019, and GSSoC 2020.
- **Team Member, InfoSec, Inter IIT Tech Meet**: Bagged fourth position (competing against other 22 sister IITs) in Jeopardy Style Security CTF organised by Payatu in Inter IIT Tech Meet 8.0 held at IIT Roorkee from 20 22 December 2019.
- **Head of Technology, IIT Technology Ambit**: Lead a team of 6 developers to provide sustainable and easy-to-maintain services for digital distribution with complete open-source solutions, estimated to serve 2000+ users on monthly basis.
- Maintainer, MetaKGP IIT Kharagpur | Executive Member, KOSS IIT Kharagpur: Responsible for promoting and maintaining open-source culture and tools (campus-centric) such as knowledge wiki, APIs, timetable manager, scrappers and bots.