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## Shivam Kumar Jha

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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

**8.38**/10.0 (Ongoing)

Experience

May 19 | Student Software Developer: Sample Platform

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.

- Improved regression testing and file diff algorithms, parallelized working of Kernel Virtual Machines to run multiple platforms in concurrency and curated automation scripts for updating test files and outputs.

May 19

Backend Engineering Intern: Income Tax Filing Tool

ClearTax, Bangalore

July 19

- Updated stale data in micro-services and API data-layers and synchronized ITR-2, ITR-3 and ITR-4 filing with Income Tax Department's new schema for 2018 fiscal-year ITR filing 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).

- Enabled A/B testing with GTM and Google Optimize; orchestrated Retool tools improving sign-up funnel results.

May 18 Aug 18 Student Software Developer: Project Nephos

CCExtractor, Google Summer Of Code 2018

- Authored CLI to automate recording, processing and uploading IPTV streams for University Of Nevarra, Spain.

- Using best practices for error handling, DBMS, FTP handling in Python, scheduling, modular configuration implementation, logging and DRY methods increased throughput by 400+% with 0 required restarts on failures.

Dec 18 Jan 19 Sofware Engineering Intern: VWO

Wingify, New Delhi

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

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

**Projects** 

• CloudCron, Co-Founder

Software as a Service (SaaS) platform to ease the setting up and execution of cron-tasks; led the tech-team 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; parses doctor's handwriting with character recognition.

• ConnectAll, Hack-A-BIT 2019

Developed in 36 hours during Hack-A-BIT 2019, ConnectAll is a platform that enables specially-abled to use technology with equal ease as everyone else and offers Zulip integration for corporate usage.

## **Technical Skills**

Languages

JavaScript (Node.js), Python, C, Golang, PHP, Java, Ruby

Libraries / Frameworks

Systems / Platforms

OpenCV, .NET Core, SpringBoot, Flask, Django, ASP.NET, Ruby on Rails

**DBMS** | MySQL, SQLite, MongoDB, PostgreSQL

Heroku, Azure, GCP, AWS, Pivotal Platform, Digital Ocean

Technologies / Sys Admin

Docker, REST, GraphQL, Protobuf, Blockchain, Nginx

Activities & Leadership

• **Team Member, InfoSec, Inter IIT Tech Meet**: Bagged fourth position (competing against all other 22 IITs) in Jeopardy Style Security CTF organised by Payatu in Inter IIT Tech Meet 8.0 held at IIT Roorkee.

- Head of Technology, IIT Technology Ambit: A magazine start-up delivering latest research and incubation digest right
  from IITs. Leading 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 at launch.
- Students' Technology Coordinator, Technology Gymkhana, IIT Kharagpur: The highest nominated technical position in the institute; responsible for GymKhana website maintenance, Institute's app development, students' grievance portal, etc.
- **Student Speaker, Pragma IIIT Allahabad**: Had the opportunity to share my experience regarding efficient methods of planning, programming for perpetual processes, avoiding overhead maintenance costs and denial of service.
- OpenSource Involvement: Mentored high school students for GCI 2018 and GCI 2019 under CCExtractor, top mentor for GSSoC 2018 and SoI 2019, IIT Dharwad. I've successfully conducted (as a technical team member) GirlScript Summer of Code 2019 and Kharagpur Winter of Code 2018. I was the Web Team Head for GirlScript Summer of Code 2020.
- 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, services, scrappers and bots.