

# Rajiv Harlalka

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## Education

Indian Institute of Technology Kharagpur

Integrated M.Sc (CGPA: 9.08/10)

Kharagpur, India

2020 – 2025(Expected)

## Work Experience

### Houseware

Remote

Backend Intern

Aug 2023 - Oct 2023

- Implemented organization management endpoints on the app for administrators to manage access to active users
- Revamped **DBT models** to effectively account for incremental changes for Snowflake and BigQuery warehouse

### Mello

Bengaluru, India

Backend Intern

Feb 2022 - Dec 2022

- Engineered the principle backend core and infrastructure that serve in **1000+** active users on the mobile application
- Implemented **write-through caching** using Redis and asynchronous request handling to reduce response time by 20%
- Built a CI/CD pipeline for **minimal downtime deployment** of different environments on AWS ECS using Docker
- Introduced internal tools for improved user communication, admin-side registration tracking and on-site user verification

## Projects

### 2023 Google Summer of Code student w/PostgreSQL

May 2023 - Aug 2023

- Contributor in the development of the **pg\_statviz**, a minimal PostgreSQL statistics monitoring extension, to snapshot several static and dynamic statistics without restarting a running database.
- Packaged the extension & command line utility, for Linux distributions based on Debian and Red Hat Enterprise Linux
- Implemented a **Continuous Integration pipeline** to run regression tests on all supported versions of PostgreSQL
- Engaged in writing articles and discussions in the Postgres community on platforms such as Postgres Mailing Lists, IRC

### Go Space: Open Source Project

Jun 2022 - Jul 2022

- Developed a Slack bot to upload/delete images published on slack channels on imgur to save workspace storage space
- Used GoFiber with Goroutines to implement **concurrent upload** of image for better response time and reliability
- Deployed the application which got utilized by workspaces reducing the average monthly storage usage by over 40%

## Competitions

### Inter IIT Tech Meet 11.0

Jan 2023

- Member of Gold winning team for Path Planning for Last Mile Delivery by Grow Simplee during InterIIT Tech Meet' 23
- Led the development of **REST & gRPC services** which served the frontend and path optimization servers with data
- Improved handling of long asynchronous tasks by decoupling them using RabbitMQ reducing response time by 20%
- Implemented co-ordinate encoding leveraging the Geohash feature by Redis reducing distance computation time by 40%

### Inter IIT Tech Meet 10.0

Mar 2022

- Member of Gold winning team for Large Scale System Design Hackathon by Mercari during InterIIT Tech Meet' 22
- Worked in a team of 8 to develop a scalable **event-based microservices** architecture for Hospital Management System
- Built microservices for booking appointments, prescription generation and inventory management on hospital data

## Technical Skills

Programming Languages	Python, C/C++, Golang, Javascript, Typescript, SQL, Bash, Perl
Frameworks & Databases	Node.js, ReactJS, PostgreSQL, MySQL, SQLite, MongoDB, Redis
Tools & Platforms	Linux, Git/GitHub, Docker, Nginx, AWS EC2, gRPC, RabbitMQ

## Positions of Responsibility

### Kharagpur Open Source Society

Advisor

May 2022 - Current

- Conducted **Kharagpur Winter of Code** (KWOC), a month-long program aimed at introducing college students to OSS
- KWOC 2022 saw **2000+** participants, with **2.1M+** lines of code changed and **1000+** pull requests raised
- Organized hands-on workshops and tutorials to familiarise students with Python, Git, Shell Scripting and Linux
- Headed a group of 5 members to revamp the backend architecture of KWOC'22 with improved error resolution