

# RISHABH JAIN

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My Portfolio

LinkedIn

GitHub

## EDUCATION

### Indian Institute of Technology, Ropar

July 2019 - May 2023

B.Tech Honors in Computer Science and Engineering

CGPA: 8.7

with Concentration in Artificial Intelligence, Merit Scholar

Honors focus: Federated Learning, Computer Vision

## WORK EXPERIENCE

### Arista Networks, Bengaluru, India

July 2023- present

Software Engineer, Pluribus Team

C, C++, Python, TACC

- Contributing to performance-centred overhaul of the **Arista Firewall** in the Arista **Extensible Operating System**

### General Electric Healthcare, Bengaluru, India

May 2022- July 2022

EID Intern (Software Engineering) | [Certificate](#)

PyTorch, Docker, FastAPI

- Implemented an end-to-end autonomous patient monitoring pipeline by improvising the **YOLOv6 algorithm**

## RESEARCH WORK AND PUBLICATIONS

### Video Transformer Based Bodily Behaviour Recognition

May 2023-July 2023

Supervised by Dr. Abhinav Dhall

@ LASII Lab IIT Ropar

- Secured **second place** in the Bodily Behaviour Recognition track of **ACM Multimedia 2023** Grand Challenges
- Co-authored “**MAGIC-TBR: Multi-view Attention Fusion for Transformer based Bodily Behavior Recognition in Group Settings**” accepted at the **ACM MM 2023** Conference | [dl.acm.org](https://dl.acm.org)
- Co-authored “**Multi-View Attention Fusion for Explainable Body Language Behavior Recognition**”, currently in review at **IEEE Transactions on Affective Computing**

### Spatio-Temporal Hotspot Detection in Microsoft Azure | BTech Thesis

August 2022-July 2023

Supervised by Dr. Viswanath Gunturi and Microsoft | [Thesis document](#)

@ IIT Ropar, Microsoft

- Formulated a framework to track **spatio-temporal patterns** of usage spikes(hotspots) in **Microsoft Azure Cloud Services** in India
- Co-authored “**Periodic Spatio-Temporal Colored Hotspot Detection in Azure Traffic Data**” currently in review at **GeoInformatic Journal**

### Epilepto WearOS Application

January 2022-May 2022

Supervised by Dr. Ashish Sahani | [Certificate](#)

@ Epilepto Systems IIT Ropar

- Contributed to novel data transmission algorithm in an **Android WearOS app** to monitor patients suffering from epilepsy
- Co-authored “**A General System for Dataset Generation from Smartwatch Sensors for Biomedical Research**” accepted at **COMSYS-2022** | [Springer](#)

## TECHNICAL SKILLS

**Languages:** C, C++, Python, Java, PostgreSQL, PostGIS, SQLite

**Tools and Libraries:** Git, Perforce, Bash, Docker, Flask, OpenCV, PyTorch, OpenAI Gym, Numpy, Pandas

## KEY PROJECTS

### Client Selection in Deep Federated Recommender Systems | BTech Honors Project

August 2022-July 2023

Supervised by Dr. Shweta Jain | [Thesis document](#)

Python, PyTorch

- Developed client subset selection strategies to optimise costs while training **deep federated recommender systems** on MovieLens datasets

### Efficient Image Super-Resolution (NTIRE CVPR Challenge 2023)

February 2023-May 2023

Supervised by Dr. Abhinav Dhall

Python, PyTorch

- Achieved a higher PSNR by improving the deep learning based image super-resolution RFDN baseline on DIV2K dataset

### Full Stack Employee Application Management Web Portal, IIT Ropar

January 2022-May 2022

Supervised by Dr. Puneet Goyal

Flask, React.js, PostgreSQL

- Implemented a **full stack web app** with user authentication and multi-stage application propagation as a part of **IIT Ropar's website**

## POSITIONS OF RESPONSIBILITY

### Club Head, Robotics Club IIT Ropar

October 2020-September 2022

[Certificate](#)

- Conducted club mentorship sessions for freshmen and led club projects in the techno-cultural fest Advitiya
- Participated in **ABU-ROBOCON Robotics Competition 2020**, qualifying for the national round of **DD-ROBOCON 2020** held at IIT Delhi