

EDUCATION

Integrated M.Sc. Physics, Indian Institute of Technology, Roorkee 2019 — 2024

TECHNICAL EXPERIENCE

Collaborator Mar 2021 — Present
Open Source Satellite

- Working with a team of international space experts, who are developing a fully open-source, highly capable, flexible, and affordable micro satellite platform. I am responsible for various tasks, using Machine Learning, MATLAB, and Simulation.

QInternship Jul 2022 — Aug 2022
QWorld, Project: QMap

- The main motive of this project was to bridge the gap between people by mapping the landscape of global quantum education.
- We implemented Quantum Rotten Tomatoes, collected resources in different languages, improved the website and app, simplified content on the website/app for new users.

ISRO'S Web-based Automatic Identification of Solar Bursts in X-Ray Light Curves Mar 2022 — Mar 2022
Inter IIT Tech Meet, IIT Roorkee

- Built a stand-alone web-based application using open-source to identify and categorize X-ray bursts.
- Deployed a statistical model to cover the parameters like the rise and decay time, peak flux, duration of bursts, etc.

Constellation Recognizer Project Oct 2021 — Jan 2022
Physics and Astronomy Club, IIT Roorkee

- This project was made of three phases – image pre-processing, template machine learning, and constellation pattern detection.
- Self-created the templates/data set for the algorithm and created a UI using Streamlit.

Bird Species Detector Project Oct 2021 — Oct 2021
Qiskit Fall Fest, IBM Quantum

- Completed this project as a part of the IITR Quantum Hackathon, organised by the Quantum Computing Group, IIT Roorkee and sponsored by IBM Quantum as a part of Qiskit Fall Fest.

Radio Telescope Phase I Apr 2021 — Jul 2021
Physics and Astronomy Club, IIT Roorkee

- Worked on the first phase of building a Radio Telescope (5m radius). Studied antenna theory and helped with many important mathematical calculations in the same.

SKILLS

Tools and Languages	Python, C++, MATLAB, Qiskit, Git, Jupyter-Notebook, TensorFlow, Wolfram Mathematica
Quantitative Research	Mathematical Modeling, MySQL, Statistics, Machine Learning
Additional Courses	Python Data Structures, Astrophysics, Data Science Maths Skills, Quantum Computing
Communication	English, Hindi, Sanskrit

ORGANIZATIONS

Physics and Astronomy Club, IIT Roorkee <i>Additional Secretary - Astronomy Wing</i>	Sep 2019 — Present
Amazon ML Summer School <i>Attendee</i>	June 2022 — June 2022
Under Graduate Teaching Assistant <i>Academic Reinforcement Program</i>	Apr 2021 — Jul 2021
GirlScript Winter of Contributing <i>Project Supervisor - Machine Learning</i>	Aug 2021 — Dec 2021

HONORS AWARDS

IIT Roorkee Heritage Foundation Excellence Award *Issued by IITR Heritage Foundation* Feb 2022
Was awarded the Annual Excellence Award for outstanding academic, co-curricular, and extra-curricular achievements.

Certificate of Quantum Excellence *Issued by IBM Quantum* Aug 2021
Successfully completed the 20 lectures and 5 lab sessions in the Qiskit Global Summer School 2021 with a percentage of 98.6.

IAAC Qualifier *Issued by International Astronomy and Astrophysics Competition* May 2021
Successfully passed the qualifying round of the International Astronomy and Astrophysics Competition, 2021. A special honour was awarded for submitting digitally typed solutions.