Raina Middha
UG (V Year I Semester)
IMSc Applied Mathematics
Contact No: 91-9352169717
Email: raina_m@ma.iitr.ac.in
Registration No: 19312024/2024

Indian Institute of
Technology
Roorkee

VERIFIED

Area of Interest

Problem Solving, Data Structures & Algorithms, Software Development

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2023	Int. M.Sc. 4th Year	Indian Institute of Technology, Roorkee	8.343
2019	Intermediate (Class XII)	Shiksha High School, Bikaner (CBSE)	88.40 %
2017	Matriculate (Class X)	Delhi Public School, Bikaner (CBSE)	10.000

Internships

Software Engineer Intern | UiPath Inc   May 2023 - July 2023
- **API Development & Integration:** Developed APIs to generate debugging report for customer-trained models on UiPath AICenter. Integrated 3rd party APIs, sourced data from databases and AWS. Crafted a client for a third-party API.
- **User Interface Enhancement:** Implemented a user-friendly feature by adding a download button to the UI of ML Pipelines and ML Skills pages of AI Centre, Uipath product. Streamlined report access, improving user experience.
- **Software Testing & Technology Stack:** Ensured the feature product quality by writing unit tests, integration tests, and end-to-end tests. Utilized Java Spring Boot for backend development and TypeScript for frontend implementation.

Google Summer of Code | Red Hen Lab, Los Angeles, CA   June 2022 - September 2022
- **Automated TV Show Segmentation:** Contributed to develop algorithms to detect TV show boundaries in unannotated recordings autonomously. Integrated facial recognition for clustering individuals and identifying anchors from others.
- **Enhanced Scene Boundary Detection:** Worked on advanced methods like ECR technique and frame difference analysis to elevate accuracy.
- **Efficient Keyframe Extraction:** The singular value decomposition (SVD) is used in our system to present an efficient solution for detecting different types of transitions.

Research Intern | Tata Institute of Fundamental Research (TIFR), Mumbai   May 2021 - July 2021
- **Expander Graph Analysis:** Explored expander graphs within spectral graph theory, unraveling the relationship between spectral gap and isoperimetric constant. Enhanced comprehension of structural and spectral attributes.
- **Practical Applications Study:** Investigated expanders' suitability for computational and communication tasks. Analyzed construction algorithms, deepening insight into their real-world utility.

Projects

Data Analysis and Financial Modeling | J.P. Morgan Chase & Co.   March 2022 - July 2022
- Used Monte Carlo Simulations in financial modeling to simulate stock Brownian motion and derive option prices.
- Conducted a comparative analysis between the simulated option prices and the established Black Scholes Model
- Analyzed Indian govt. data on Women Empowerment policies, performed K-means clustering & correlation analysis.

Awards / Scholarships / Academic Achievements

- Achieved Overall **AIR 5** (All India Rank) and **AIR 1** among girls in **KVPY** Fellowship 2019
- Selected as Quantitative Research Mentee 2022 at **JP Morgan Chase & Co.** with an acceptance rate of 5%
- Encore Awardee (Overall Excellence, IIT Roorkee) 2021 (in **top 10** among 1000+ candidates)
- Secured **AIR 3892** in JEE Mains 2019 and **AIR 4508** in JEE Advance 2019
- Represented IIT Roorkee in Vijyoshi National Science camp at IISER Kolkata 2020

Skills

Computer languages	C++, Java, Python, Typescript, SQL
Software Packages	Springboot, React, AWS, Docker, Kubernetes, Google Colab, LaTex, Mathematica
Additional Courses	Probability & Statistics, Data Structures & Algorithms, DBMS, Linear Programming, Non-Linear Programming, Fuzzy Mathematics
Languages Known	English (SRW) , Hindi (SRW)

Positions of Responsibility & Extra Curriculars

Placement Manager | Placement and Internship Cell, IIT Roorkee   October 2020 - Present
- Heading a 3-tier team of 100+ students for campus relations with 600+ firms for 1500+ students.
- Acting as an interface between students, institutes, and companies to maximize the benefits of all stakeholders.

Secretary | Lawn Tennis NSO, IIT Roorkee   August 2019 - Present
- Prepared & led a team for the Inter-IIT Sports Meet. Organized Multiple sports events including Institutes Colours Trophy.
- Represented IIT Roorkee at Inter-IIT Sports Meet 2019, organized by IIT Kharagpur.