# Kartikey Kumar
UG (IV Year I Semester)
IMSc Applied Mathematics
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Registration No: 19112040/2023

Indian Institute of
Technology
Roorkee

## Area of Interest

Information Security, Data Structures and Algorithms, Software Development

## Education

| Year | Degree/Examination | Institution/Board | CGPA/Percentage |
|------|--------------------|-------------------|-----------------|
| 2022 | Int. M.Sc. 3rd Year | Indian Institute of Technology, Roorkee | 8.726 |
| 2018 | Intermediate (Class XII) | Modern Academy, Lucknow(ISC) | 88.20 % |
| 2016 | Matriculate (Class X) | Lucknow Public College, Lucknow | 91.00 % |

## Internships

**Junior Security Analyst** | Resec Systems Private Limited                September 2021 - July 2022
- Performed regular security auditing of the various web applications (including APIs ) and android applications belonging to the company.
- Performed DevOps in day-to-day tasks while addressing security concerns.
- Made several security related challenges aka CTFs during the internship period.
- Major technologies involved were Linux, Python, Java, Docker and AWS Cloud Computing.

## Projects

**Breaking insecure Diffie Hellman Key Exchange by using Pohlig-Hellman Algorithm** | IIT Roorkee
                                                                                February 2022 - May 2022
- Involved research in Cryptography, where research topics involved learning about the Diffie Hellman Key Exchange and Pohlig-Hellman Algorithm.
- The security aspects of the Diffie Hellman Key Exchange were analyzed in the project.
- Performed an attack targeting the Key Exchange from scratch which involved application of several cryptographic concepts along with aforementioned Pohlig-Hellman Algorithm.

## Awards / Scholarships / Academic Achievements

- Rank 2, in THE GREAT APPSEC HACKATHON'21 organized by Data Security Council of India (DSCI).
- Winner of CSAW'21 Capture The Flag in India Region organized by NYU, Abu Dhabi.
- Winner of FooBar'21 Capture The Flag organized by NIT Durgapur.
- Winner of CodeFest'21 Capture The Flag organized by IIT BHU.
- Finalist of CSAW'21 Embedded Security Challenge among 15 finalists in India Region organized by NYU, Abu Dhabi.
- Secured an Honorable Diploma in Eighth International Olympiad in Cryptography, NSUCRYPTO'21.
- Secured an AIR of 3655 in JEE Advance'19.
- Secured an AIR of 2280 in JEE Mains'19.

## Skills

| | |
|---|---|
| Computer languages | C++, Python, C, PHP, SQL, HTML, CSS, JavaScript |
| Software Packages | Python Modules: PwnTools, Scapy, Numpy, Sage. Other software packages: Wireshark, GDB, IDA, Burp Suite, Ghidra, Linux Scripting |
| Additional Courses | Design And Analysis Of Algorithms, Data Structures,. |
| Languages Known | Hindi(SRW), English(SRW) |

## Positions of Responsibility & Extra Curriculars

**Member** | InfoSecIITR                                                January 2020 - June 2022
- Increasing the knowledge about Information Security among IITR junta.
- Taken active part in hosting various Capture the Flag competitions which involve global participation of the candidates.
- Major Capture the Flag competitions hosted the group were BackdoorCTF and ScytheCTF, which had 10,000+ participations worldwide.
- Involved in finding out bugs in various open source platforms and reporting the disclosures responsibly.

**Member** | National Sports Organization(NSO) Basketball                September 2019 - Present
- Participated in various intra-campus tournaments of basketball.

## References

**Maheshanand**
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