

Bharat

Department of Computer Science & Engineering
Indian Institute of Technology(IIT), Kanpur

LinkedIn: Bharat **GitHub:** Bharat
Email: bharat22@iitk.ac.in **Phone:** +91-7503519440

Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2022 - Present	M.Tech Cyber Security	Indian Institute of Technology, Kanpur	7.83
2018 - 2022	B.Tech	Guru Govind Singh Indraprastha University, Delhi	9.39/10
2018	CBSE(XII)	Yuvashakti Model School, Rohini	81.6%
2016	CBSE(X)	Yuvashakti Model School, Rohini	9.8/10

Scholastic Achievements

- Secured **All India Rank 1092** in **GATE 2022** .
- Received the **Merit Scholarship** for 4 consecutive year for excellent academic performance from 2018-22 academic sessions.

Key Projects

- **Rootsh3ll Labs** (August'22 - November'22)
Mentor: Prof. Sandeep kr. Shukla, Department of Computer Science, IIT KANPUR.
 - In the labs, we have done various **Linux programming** based labs. We have also done a sufficient amount of practice on **Web security** in which we used various tools like **Burpsuite**, **Meterpreter** etc.
 - We have done various labs on **Network Security** in which we used tools like **airmon-ng**, **airodump-ng**, **aircrack-ng** , etc to exploit various wireless networks and enterprises.
 - We have also done various labs on **Network security** and **linux privilege escalation** using various tools.
- **Making Defensive Recommendations (MITRE ATT&CK)** (September'22 - October'22)
Mentor: Prof. Sandeep kr. Shukla, Department of Computer Science, IIT KANPUR.
 - In this project, we have done MITRE ATT&CK framework mapping based on various tactics and techniques used by APT28(Russian based threat actors) on European Union and Ukranian Govt. during a cyber attack and make defensive recommendations by analyzing the attack using MITRE framework.
- **Unified Kill Chain Navigator Tool** (October'22 - November'22)
Mentor: Prof. Sandeep kr. Shukla, Department of Computer Science, IIT KANPUR.
 - Based on The Unified Kill Chain Thesis, we implemented its Navigator tool for this project.
 - Using this attack mapping tool, we may upload and retrieve the mapped reports as well as map cyber attack reports and display attack/APT specific kill chains.
 - In order to compare numerous mapped reports simultaneously and analyse their convergence and divergence, we have also introduced this feature.
- **PUF Problem using Linear ML model** (August'22 - September'22)
Mentor: Prof. Purushottam Kar, Department of Computer Science, IIT KANPUR.
 - Implemented a Linear Model **SVM (Support Vector Machine)** algorithm from scratch without using sklearn library.
 - Successfully created create a new feature vector from the 8-bit challenge so that a linear model on that feature vector is able to predict the response.
- **The Code Corrector** (September'22 - October'22)
Mentor: Prof. Purushottam Kar, Department of Computer Science, IIT KANPUR.
 - Implemented Logistic Regression ML model to predict the error class of code of line which is given in the form of Bag of Words.
 - Analyzed the given data and perform some data analysis so that the data should be feasible to fed to the ML model.
- **Sales Analysis using Python and its libraries** (june'22- July'22)
 - In this project , we are using various python libraries such as Pandas , Numpy ,etc and various data visualization tools to get some useful insights from the raw data.
 - In Exploratory Data Analysis phase , we also do Data visualization with the help of various libraries supported by Python like Matplotlib , Seaborn , Plotly , etc., to plot various plots so that we get to know the insights about the data
 - During the data visualization phase , we also get the solutions of company's questions.

Technical Skills

- **Programming Languages:** C, C++, Python
- **Software and Libraries:** Nmap, Wireshark, Airmon-ng, Airodump-ng, Pandas, Numpy, Matplotlib, Seaborn, sklearn

Relevant Courses

- Computer System Security
- Practical Cyber Security for Practitioners
- Intro to Machine Learning