Sambhrant Maurya

1st Year Postgraduate
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Education

Indian Institute of Technology, Kanpur
M.Tech. in Computer Science
Expected: June 2022
CGPA: 10 / 10

Institute of Engineering & Technology, Lucknow
B.Tech in Mechanical Engg.
Graduated: June 2019
Percentage: 76.62%, Honors

St. Mary's School, Mirzapur
Senior Secondary: 90.6%
Secondary: 92.4%

Courses and Grades

2020-2021-II (Current)

Statistical Natural Language Processing

Modern Cryptology

Computer Systems Security

2020-2021-I

Introduction to Machine Learning
Grade: A

Data Mining
Grade: A

Advanced Compiler Optimizations
Grade: A

Key Skills

Languages
- *Experienced*: C, Java, Python
- *Familiar*: C++, Javascript

Tools and platforms
HTML, SSH, Linux, Windows

Interests

- Cyber Security
- Adversarial Machine Learning

Projects

Adversarial Attacks in Natural Language Processing
Under Prof. Ashutosh Modi **|** *Jan'21 - current*
This project focuses on exploiting blind spots in NLP models and involves doing a literature review of adversarial attacks done on text in Natural Language Processing. It also involves hands-on experience with "*Textattack*", an open-source python library for adversarial training in NLP.

Data Mining for Analysis of Air Pollution in India
Under Prof. Arnab Bhattacharya **|** *Sep'20 – Dec'20*
Used various data mining tools to collect data and analyze the Air Pollution trends in various states of India for the period 2008-2014. Also analyzed the impact of number of vehicles, factories and population density of a region on concentrations of SO_2, NO_2 and RSPM in that region.

Ethical Hacking on a Local Area Network
Self **|** *Dec'20 - Jan'21*
Designed various hacking tools in python using the scapy library, like *remote-keylogger*, *arp-spoofer*, *dns-spoofer*, *network-scanner*, *packet-sniffer*, *reverse-backdoor*, *website-crawler*, *netcut* and *file-downloads-spoofer*. Also managed to bypass https for many of these modules using sslstrip. Learned how to package these tools into .exe files and how to social engineer them while bypass antivirus programs on the target machine.

Inter-Procedural Data Flow Analysis in LLVM using Value Contexts
Under Prof. Amey Karkare **|** *Sep'20 – Dec'20*
Implemented the VASCO framework in LLVM, originally developed for SOOT and is described in this paper. This involved designing a fully context sensitive general forward inter-procedural data flow analysis framework and extended it to perform Sign Analysis.

Achievements

1. **GATE 2020**: Secured All India Rank 239 among 97481 candidates
2. **First prize:** Best autonomous robot and best manual robot in Robotics event held at Institute of Engineering & Technology, Lucknow

Position of Responsibility

1. **Teaching Assistant** | Fundamentals of Computing (ESC101), CSE Department, IIT Kanpur.
2. **Editor at gateoverflow.in** – A platform for mentoring students for GATE CSE examination (Feb'2019 – present)

Volunteer work

1. **Participant, Fridays for Future** – A global movement focusing on climate change awareness (Mar'19 – June'19)