

# Aviral Srivastava

+1 8147696414 || [aks7873@psu.edu](mailto:aks7873@psu.edu) || <https://linkedin.com/in/aviralsrivastava23/> || <https://app.hackthebox.com/profile/212766> ||

## Summary

---

- graduate student pursuing Master's program at Penn State University, with more than 20 publications and two awarded patents, co-edited a book on multidisciplinary research and co-authored a textbook on IOT
- Recipient of many prestigious awards, including Cybersecurity Innovator of the Year, Best international researcher and outstanding researcher for the fields of computer science, cybersecurity and neural cryptography, Distinguished researcher award, Asia's most promising researcher award in computer science in 2023 and InRes Academic excellence award 2023 for demonstrating exceptional research capabilities and innovation.
- Expertise in leveraging Machine Learning, Deep Learning, Reinforcement Learning, and Neural Networks to address complex cybersecurity issues. Also a keen learner of quantum computing
- Specialized in cryptography, notably Neural Cryptography, with a dedicated focus on using research to shape the future of cybersecurity.
- CEH practical and CEPT certified — HackTheBox global rank 150, Country (India) rank 2

## Technical Skills

---

**Languages:** Python, C/C++, HTML/CSS, SQL(Postgres and MySQL), Php, JavaScript, Bash

**Developer Tools:** VS Code, Jupyter Lab, Matplotlib, Eclipse, Google Cloud Platform, Digital Ocean,

**Security tools** Burpsuite, metasploit, postman, nmap, nessus, john the ripper, Hashcat, Ida64, OWASP ZAP, OWASP threat dragon, SQLmap

**Technologies/Frameworks:** Linux, GitHub, Pandas, Numpy, Django, Jekyll, Sci-kit, Docker, Postman, WordPress, network security, firewall, IPS/IDS

**Security skills:** Penetration testing (WebApp, Network, API, Thick and thin client, Active Directory), source code auditing, malware analysis, Threat modelling, Risk management, exploit development, Cloud security, Threat Intelligence

## Education

---

### Penn state University, University Park

*Master of science, Cybersecurity analytics and operations*

**Aug. 2023 – Present**

*University park, PA*

### Amity University, Rajasthan

*Bachelor of Technology, Computer Science Engineering*

**Aug. 2019 – July 2023**

*Jaipur, India*

## Experience

---

### fnCyber

*Cybersecurity Consultant Intern*

**May 2022 – August 2023**

*Hyderabad, India*

- Developed project strategies and service templates for the organisation for 250+ services, developed a project plan to migrate mission critical data to cloud as a project manager for the first month
- performed webapp pentesting, network pentesting and source code auditing for clients.
- advised clients with security architecture, critical infrastructure security, threat modelling, developing DRP and BCP for their organisations

### Virtual cyber labs

*Blue Team Intern*

**Nov 2022 – Dec 2022**

*Remote*

- conducted Windows Memory Analysis
- studied and simulated Network Security Attacks
- analysed ATT CK and basics of Cyber Threat Intelligence

### CyberFrat

*Cloud Security Research Intern*

**Jun 2022 – Aug 2022**

*Mumbai, India*

- Organising and event called infosec fusion which trains security professionals (1000+ attendees)
- writing research papers and content for CCSP syllabus
- Ranked 2nd in The global top 10 cybersecurity companies

### ComExpo Cybersecurity

*Cybersecurity research Intern*

**July 2021 – Jan 2022**

*Ahmedabad, India*

- wrote several research papers on different domains of cybersecurity
- Developed and Published Stego Dog tool and research paper in ICSCDS 2022 conference
- Other research papers on big data security, cloud based image steganography, adversarial attacks on deep neural networks, etc

## **Infosec United**

**Aug 2021 – Feb 2022**

*Cybersecurity Intern*

*Remote*

- A Community of Cybersecurity Infosec professionals UNITED with one goal: "Make Knowledge Accessible to Everyone".
- Community of more than 1500 infosec enthusiasts
- hosted CTFs and other virtual hacking workshops

## **TalaKunchi Networks Pvt Ltd**

**Sep 2021 – Nov 2021**

*Cybersecurity Analyst Intern*

*Maharashtra, India*

- Worked on 3 projects involving :- Authentication bypass
- Scanning websites with OWASP ZAP
- Scanning for open ports and attacking them to gain access to the system

## **Publications**

**Cauchy Grasshopper Optimization Algorithm with Deep Learning Model for Cloud Enabled Cyber Threat Detection**

*2023 7th International Conference on Intelligent Computing and Control Systems (ICICCS)*

**Stego Dog: Image Steganography Tool for Confidentiality and Integrity**

*2022 International Conference on Sustainable Computing and Data Communication Systems (ICSCDS)*

**Efficient Data Hiding Method in Image Based on Modified LSB**

*2022 IEEE 2nd International Symposium on Sustainable Energy, Signal Processing and Cyber Security (iSSSC)*

**An Overview on Emerging Security Threats in Big Data Clusters and their Defenses**

*2022 International Conference on Edge Computing and Applications (ICECAA)*

**Enhancing Cloud Security with a Fuzzy Rule-Based Classifier for Intrusion Detection and Classification**

*5th International Conference on Inventive Research in Computing Applications*

**EEG Classification using Reinforcement Learning and Swarm based Deep Sparse Autoencoder**

*5th International Conference on Inventive Research in Computing Applications*

**Revolutionizing IoT Network Security with Deep Learning- Anomaly Detection Model**

*4th International Conference on Electronics and Sustainable Communication Systems (ICESC - 2023)*

**Secure Horizons: Advanced Protection Mechanisms for Holographic Data Storage Systems**

*Springer International Conference on Recent Developments in Cyber Security*

**Adaptive Cyber Defense: Leveraging Neuromorphic Computing for Advanced Threat Detection and Response**

*International Conference on Sustainable Computing and Smart Systems (ICSCSS-2023)*

**IMPERCEPTIBLE MALWARE: Bypassing modern AV-engine with AI assisted code**

*IJEAST*

**Identification and Monitoring of Malware with Several Detection System—A Systematic Review**

*JECA*

**Lattice-based Cryptography For Iot And Cloud Security**

*Gis Science*

**swarm intelligence for network security: a new approach to user behavior analysis**

*IRJET*

**Outsmarting the smart: unraveling the rise of ai-powered malware and the battle for cybersecurity**

*13TH INTERNATIONAL ISTANBUL SCIENTIFIC RESEARCH CONGRESS*

\* Other 10 publications are accepted and soon will be published and 4 are ongoing

## Certifications

---

<b>EC-Council</b> <i>Certified Ethical Hacker Practical (CEH)</i>	<b>Oct 2022</b> <i>Remote</i>
<b>Pristine Infosolutions Pvt. Ltd.</b> <i>Certified Penetration Testing Expert (CPTe)</i>	<b>Nov 2021</b> <i>Ahmedabad</i>
<b>SkillFront</b> <i>ISO/IEC 27001 information security associate</i>	<b>May 2021</b> <i>Remote</i>
<b>Gremlin</b> <i>Gremlin certified chaos engineering practitioner (GCCEP)</i>	<b>Jun 2021</b> <i>Remote</i>
<b>Coursera</b> <i>Specialisation in Cybersecurity</i>	<b>May 2021</b> <i>University of Maryland</i>
<b>Coursera</b> <i>Information Systems Auditing, Controls and Assurance</i>	<b>Sept 2021</b> <i>The Hong Kong university of science and technology</i>
<b>Coursera</b> <i>Data Structures</i>	<b>May 2021</b> <i>UC San Diego</i>
<b>Other like udemy, cybrary, TCM security, etc</b> <i>VAPT, cryptography, forensics, red team and blue team, malware analysis, reverse engineering, etc (50+)</i>	<b>2019 - 2022</b> <i>Other platforms</i>

## Achievements

---

Achieved rank of **237** in top 64000 hackers in Ring0 CTF

Reached **"PRO HACKER"** rank in HackTheBox and global ranking 150 and india ranking 2

Received young researcher award by INSTITUTE OF MANAGEMENT BHUBANESWAR

Received young researcher award by Institute of scholars for my paper **"StegoDOG"**

Received ISSN Best international researcher award in the field of computer science and cybersecurity

Received Cybersecurity innovator of the year at Bsides Bangalore 2023

Received International Outstanding Researcher Award for the field of Neural Cryptography

Represented my company at Bangalore tech summit 2022

## Hackathons/Conferences

---

<b>Bsides Ahmedabad 0x03 Security conference</b> <i>Attendee</i>	<b>Oct 2022</b> <i>Ahmedabad</i>
<b>DEF CON Delhi event</b> <i>Invited</i>	<b>Aug 2022</b> <i>Delhi</i>
<b>Bsides Ahmedabad 0x02 Security conference</b> <i>Attendee</i>	<b>Nov 2021</b> <i>Ahmedabad</i>
<b>Other hackathons like MLH, Cambridge atlas, RU hacking etc</b> <i>Participant</i>	<b>2021 - 2022</b> <i>Virtual</i>
<b>Bsides Bangalore Security conference</b> <i>Awardee</i>	<b>june 2023</b> <i>Bangalore</i>