

# HARSH SAGLANI

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## EDUCATION

### University of Maryland, A James Clark School of Engineering

Masters in Engineering in Cybersecurity (GPA: 4.0)

College Park, USA

Expected May 2023

### Savitribai Phule Pune University, Pune Institute of Computer Technology (PICT)

Bachelor of Engineering in Computer Engineering (GPA: 9.46/10)

Pune, India

Jun 2021

## ACADEMIC EXPERIENCE

### Secure Restaurant Ordering System, Academic project, ENPM809W

Aug 2021 – Dec 2021

- Built a secure restaurant ordering system from scratch using secure coding practices in PHP
- Created Software Requirement and Software Design Documents for the project
- Performed code reviews of several web applications, reported vulnerabilities, weaknesses and suggested mitigations

### Segmented Federated Learning for Adaptive Intrusion Detection System ([Research Paper](#))

Jul 2021

- Built a Segmented-Federated Learning based system for network intrusion detection
- Solved the problem of data privacy when training machine learning models dealing with sensitive data

### Network Intrusion Detection System (NIDS) using Federated Learning

Jan 2021 – Jun 2021

Detected Cyber-attacks by implementing a NIDS using Federated Learning

- Solved the lack of availability of data for Machine Learning (ML) algorithms that detect cyber attacks
- Implemented a NIDS system more efficient as compared to traditional ML based NIDS using Python
- Created a continuously evolving ML model as an improvement over traditional ML system

## RELEVANT EXTRACURRICULAR ACTIVITIES:

### Event Head, Capture the Flag, "Lakshya" CTF 2020 – a cybersecurity technical festival at PICT

2019-2020

- Organized the event and managed a team of 20+ members
- Contributed 10+ problem statements in steganography, digital forensics, cryptography, penetration testing and encryption
- Designed and developed a robust and intuitive website which received 3000+ concurrent visitors

### Founder, Cyber Security Student Cell, PICT

2021

- Planned, strategized, and managed various CTF events, seminars, workshops and meetings in PICT

## WORK EXPERIENCE

### University of Maryland Dining Services

College Park, USA

Graduate Assistant - Webmaster

Jan 2022 - Present

- Creating and maintaining a new centralized web platform for various catering service providers in UMD
- Updating the website regularly with new content such as events, monthly nutrition articles, student resources
- Transforming the existing nutrition website into a better optimized, intuitive and user friendly website

### R2i2 Technologies

Delhi, India

Intern – Web Developer

May 2021 – Jul 2021

- Enhanced usability of an internal website which helped create, edit and manage projects thereby increasing productivity
- Strategized and designed an algorithm which solved the MTSP Problem using Google OR tools
- Developed a website using Google OR tools for the "Optiplan" project to solve MTSP problem

## SKILL SETS:

- **Operating Systems** - Linux, Windows, Mac
- **Programming** - Python, Java, C / C++, Android, Perl, Bash, Powershell, Assembly
- **Web & Database** - HTML, CSS, JS, PHP, Wordpress, Drupal, Node JS, MySQL, MongoDB, Firebase
- **Tools** - Splunk, Nmap, Wireshark, Metasploit, Nessus, Snort, Tcpdump, Burp Suite, Nikto, Weeveily, Hydra, Hashcat, John, Wpscan, Sqlmap, Responder, GNU Debugger (GDB), Android Studio, Google Suite, VMWare
- **Frameworks** - NIST, MITRE ATT&CK, PCI-DSS, GDPR, HIPAA, ISO 2700x, SOX, SOC 2, CCPA, FERPA

## ACADEMIC COURSES

- **Hacking in C & Unix Binaries** - Reverse Engineering, Shell Scripting, Buffer overflows, Assembly Language
- **Penetration Testing** - Social Engineering, Enumeration, Web Exploits, Network Security, Privilege Escalation, EDR tools, Incident Response, Firewall Management
- **Secure Coding Practices in S/w Engg** - SDLC, input based attacks, cryptography, session hijacking, logging, code review, vulnerability assessment, vulnerability management and mitigation, OWASP Top 10