

# Hritesh Sharad Sonawane

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Seasoned software security engineer adept at protecting systems and data  
Hobbies - marathons, soccer, sci-fi movies, & anime | DEFCON Crypto village staff

## EDUCATION

**Northeastern University, Khoury College of Computer Sciences**, Boston, MA Expected May 2024

Master of Science in Cybersecurity – Computer Science GPA: 3.8/4.0

Related courses: Systems Security, Network Security, Software Vulnerabilities (by Kaan Onarlioglu!), CS Masters' Research

- Fall/22 & Spring/23: Head Graduate Teaching Assistant for Foundations of Cybersecurity
- Research: Spring/23: Recipient of the *Khoury Research Apprenticeship* under Dr. Cristina Nita-Rotaru (NDSS lab)  
Topic: Attacks against delay-based (TCP) congestion control algorithms– awarded best CS Research project 2023

**University of Mumbai**, Mumbai, India July 2022

Bachelor of Technology in Information Technology GPA: 9.1/10.0

Related courses: Computer Networks, Cryptography, Network Security, Object Oriented Programming, Operating Systems

- Research: TORSION - Web Reconnaissance using OSINT, Publisher: IEEE ICONAT
- Certifications: AWS Certified Solutions Architect - Associate; Practical Ethical Hacking - TCM Security
- Achievements: IEEE CTF Bombay Section - 1st place; Code\_Love\_Hack - Google; HackMIT 2021/2022/2023

## TECHNICAL SKILLS

**Languages** Golang, Python, C, JavaScript, Node.js, Bash, PowerShell

**Frameworks** OSINT, Wireshark, Snort, Metasploit, Nmap, Splunk, Burp Suite, Git, PostgreSQL, MongoDB

**Cloud/OS** AWS, Azure, GCP, Terraform, Kali, Ubuntu, Arch, Windows, VirtualBox, VMware

## WORK EXPERIENCE

**Zoetis, Inc (Fortune 500)**, Security Engineer Intern | Boston, MA May 2023 – August 2023

- Leveraged Python, Ansible scripts and automation frameworks, reducing manual security tasks by 30%
- Achieved 25% faster incident response by correlating 1 million daily security events with Splunk (ES and Phantom), Demisto (PAN), and CrowdStrike Falcon; VAPT using tools such as Nucleus, Nessus, Burp, Nmap, and Metasploit
- Implemented Azure and AWS cloud security measures, guarding assets through network security, IDAM & encryption

**Oyela**, Software Development Engineer Intern | Mumbai, India

February 2022 - April 2022

- Streamlined the blocking and reporting feature for users and posts; boosted user interaction and positive feedback by 30% after feature adoption; Engineered Golang REST APIs for MongoDB integration
- Built the prototype for a search algorithm with the ELK (Elasticsearch, Logstash, and Kibana) stack for 20% efficient query of username, product name and category name as opposed to legacy regex

**Codecademy**, Community Chapter Lead | New York City, NY

May 2021 - May 2022

- An ethical hacker leading and empowering a thriving community of college programmers (200+) in Mumbai, India
- Goa: Solutions to popular coding challenges; SysDesign: Software Systems Design module; GoPilot: Go with tests

## PROJECTS

**Attacks against delay-based congestion control algorithms**, Copa (<https://web.mit.edu/copa>) January 2023 – April 2023

- Formulated a finite-state machine (FSM) against Meta's implementation of the QUIC protocol (facebook/mvfst)
- Leveraged Mininet to orchestrate competitive flows with loss-based (Reno, CUBIC) & delay-based (BBR) algorithms
- Devoured numerous research papers in the congestion control sphere for comprehensive insights

**Hac'KP 2021**, Grapnel – Guided Micro-Fuzzing

March 2021 - August 2021

- Upgraded a Darknet Crawler for the Kerala Police Cyberdome, themed 'Demystifying the Dark Web'; 20% more effective crawling as compared to previous iteration of the crawler
- Represented nodes graphically; Intelligent Darknet Monitor displaying the status of onion sites (Up/Down), boosting SDLC up by 3 weeks; Used Python, GraphQL, Dgraph, AWS S3, and pytest

**IEEE Xplore – Undergrad Capstone**, Torsion

April 2021 - March 2022

- Engineered a Python-based OSINT tool (dossier) for metadata collection and username-based entity profiling and parsing; Darknet support for onion & i2p sites, optimizing querying speed by 30% through async requests