

CHAITANYA RAHALKAR

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EDUCATION

Georgia Institute of Technology

MS Cybersecurity *GPA: 4.0*

Atlanta, GA
January 2021 - December 2022

- Relevant Courses: CS 8803 - Blockchain and Cryptocurrencies, CS 6262 - Network Security, CS 6238 - Secure Computer Systems, CS 6265 - Binary Exploitation Lab, CS 6210 - Advanced Operating Systems, CS 6260 Applied Cryptography
- Graduate Teaching Assistant for CS 6238 Secure Computer Systems and CS 6260 Applied Cryptography

Savitribai Phule Pune University

BE Computer Engineering *GPA: 9.6/10*

Pune, India
August 2016 - May 2020

- Research Assistant
 1. Worked on the study of side-channel attacks that target the virtualization level of an Operating System.
 2. Assisted in creating a meta classifier-based ensemble learning model for attack detection.
 3. Researched various techniques used by attackers to exploit private information from the set of target virtual machines running on cloud platforms.

SKILLS

Programming Languages:	C++, C, Golang, Javascript, Rust, Python, Assembly, Bash
System Administration:	AWS Cloud Services, Linux/UNIX System Administration, Cloud Deployment
Security Engineering Tools:	IDA Pro, Pwntools, LLVM LibFuzzer, AFL, Burp Suite, Ghidra, Metasploit
Web Frameworks:	Django, ExpressJS, Flask, FastAPI

EXPERIENCE

Meta (formerly Facebook)

Security Engineering Intern

Seattle, WA
May 2022 - August 2022

- Designed and developed coverage-guided fuzzing harnesses with LLVM Libfuzzer that run on Meta's Continuous Fuzzing platform - Lionhead.
- Found 10+ security bugs in Meta's production code and tooling systems through fuzzing and code reviews / auditing.
- Audited and statically analyzed code in the WhatsApp Payment Engine system for security and privacy issues. Found 5+ CVE-worthy security bugs.
- Worked on developing an automated fuzzing harness generation system to get coverage guided fuzzing for 100,000+ API endpoints.
- Designed a fuzzing metrics system and visualization dashboard for coverage and fuzzing performance insights.

BosLeo LLC

Security Engineer

Pune, India
July 2020 - July 2021

- Worked on the development of Anti-Virus, Anti-Phishing, Software Sandboxing, Application Firewall etc. components as a part of the company's Endpoint Protection Platform (EPP).
- Worked on the design, development and deployment of a network-based intrusion detection system (NIDS) supplemented with an intrusion analytics and insights system. Simulated, detected and analyzed 100+ network intrusion attacks with the NIDS.
- Developed a Software-Defined Perimeter prototype based on the Zero Trust Network architecture.

Rhythmflows Solutions

Software Engineering Intern

Pune, India
January 2020 - June 2020

- Worked on scalable architectural design and development of a video on-demand solution streaming and web API, used by more than 500,000 users.

- Audited the backend & the Cordova codebase (iOS + Android native app development framework) for security issues and vulnerabilities. Found 20+ CVE-worthy security and privacy issues.

Quick Heal Technologies

Security Engineering Intern

Pune, India

June 2019 - November 2019

- Developed a secure central authentication service (CAS) to support single sign on (SSO) for the company's internal applications with added support for LDAP / Active Directory integration.
- Designed client integration libraries for Python and Golang-based web application frameworks to support and integrate 100+ internal applications.

Centre for Police Research (Government of Maharashtra, India)

Research Intern

Pune, India

January 2020 - April 2020

- Worked with the Pune Police Department to design and develop a PoC (proof-of-concept) for an automated WiFi Security Analyzer for ethical war drives conducted by the police department.

PROJECTS

Frost Linux (Maintainer & Developer) *Bash, Python*

Frost Linux is a security-oriented Linux distribution based on Arch Linux. It is a set of Shell scripts to make Arch Linux more security and privacy-centric. The distribution is designed for casual, security-minded Linux enthusiasts.

SPV - Stateless Password Vault *NodeJS, Electron*

It is a stateless, secure and highly reliable master-password-based password manager that ensures that the data doesn't leave your device.

WebTTY *Python*

A utility to share services running on localhost, mirror terminals, eliminating the hassle of setting up network port forwarding, DNS and static IP addresses.

Cyberfort CTF Platform *Python (Django), Angular JS*

An online platform to test and advance skills in Penetration Testing and Cybersecurity.

PUBLICATIONS

Summarizing and Analyzing the Privacy-Preserving Techniques in Bitcoin and other Cryptocurrencies *arXiv preprint arXiv:2109.07634, 2021*

End-to-End Lung Cancer Diagnosis on Computed Tomography Scans using 3D CNN and Explainable AI *International Journal of Computer Applications, 2020*

Content Addressed Peer-to-Peer File System for the Web with Blockchain-based Metadata Integrity *IEEE International Conference on Advances in Computing, Communication and Control, 2019*

Using Generative Adversarial Networks for Secure Pseudorandom Number Generation *ACM Conference on Computer and Communications Security (CCS), 2019*

A Secure Password Manager *International Journal of Computer Applications, 2019*

LEADERSHIP

IEEE Student Branch at Pune Institute of Computer Technology - Programming Head

IEEE Student Branch at Pune Institute of Computer Technology - Co-founder, Creator & Head of Lakshya CTF

AWARDS AND RECOGNITION

Finalist, ACM (Association for Computing Machinery) *Pune Chapter Hackathon (2019)*

Winner, ACM (Association for Computing Machinery) *Pune Chapter Hackathon (2018)*

Runner Up, Vishwa CTF Cybersecurity Competition *(2018)*

Winner, MIT Tesla's Googler (Technology Quizzing Event) *(2017)*

Finalist, MindSpark's Googler (Technology Quizzing Event) *(2017)*

Finalist, National Coding Competition *(2017)*