Yash Hemraj Somalkar

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Education

Indian Institute of Technology (BHU) Varanasi

Dec 2021 - Jun 2025

Bachelor of Technology in Electrical Engineering

Technical Skills and Interests

Languages: C++, Python

Tools and Technologies: Git, Linux, Flutter, Jadx, Burp suite, WireShark, AutoSpy, adb, IDA Interests: Android, Bug Bounty, Web and Network Pen-testing, Reverse engineering, Incident Response

Experience

Software Developer Intern @ Kelp

May 2024 - Jul 2024

- Developed JS extension to remove cookie pop-ups, enhancing chromedp Go scraping and reducing 80% garbage Data
- Converted text-based matching logic from **Python** to **Go** for company-domain verification, achieving **90%** accuracy
- Created project converting NLP to SQL integrating OpenAI API for investor queries on millions of websites
- Converted Cleancorp Python package to Go, improving company name-to-domain verification accuracy by 25%
- Exposure: JavaScript, Go(chromedp), OpenAI API, SQL, Python, Qdrant

Security Research Analyst Intern @ Saptang Labs

Dec 2022 - Jan 2023

- Gathered and extracted data from 50+ sources using web scraping, creating APIs for enhanced police investigations. Found an ongoing HDFC scam by reverse engineering a scam app, detecting 1000+ affected endpoints and websites
- Developed an **OSINT** tool integrating **100+ APIs**, enhancing public information retrieval from Public Forums, retrieved exact location history of scamsters using these APIs, providing actionable intelligence for investigations
- Exposure: Kotlin, Python, Open-Source Investigation, Jadx, Android Reversing, Threat Intel

Projects

Cab Booking Centralized Platform

Mar 2024 - Apr 2024

- Reverse engineered 4 major cab apps in India (Ola, Uber, Rapido, Obi) using Frida, Objection, Jadx, APKTool
- Reviewed 10,000+ lines of code for patching APKs, using APKTool, and decoded Protobuf encryption in Rapido, covering 50% of requests intercepted by Burp Suite. Manually patched Uber app, ensuring request transparency
- Bypassed SSL pinning and proxied APIs, integrating data from 30+ endpoints for a unified cab booking platform
- Exposure: Reverse Engineering, Frida, Objection, Jadx, APKTool, Burp Suite

Prastuti'23 App GitHub

Dec 2022 - Jan 2023

- An app showing 10+ events, 50+ workshops and session, timeline of events and standing of 500+ participants
- Integrated features like dual theme, live animation, HTTPs, Google Maps, OneSignal, Google OAuth, text notification
- Exposure: Flutter, Dart 2, RESTful API, JSON, Node.is, Google APIs, Firebase

Certifications

Google Foundations of Cybersecurity PentesterLab Introduction Badge

TryHackMe Advent of Cyber 2022 PentesterLab Unix Badae

Bug Detection and Reports

- Reported a GDPR PII exposure vulnerability on a website with 415k active users, published on OpenBugbounty
- Reported Amazon Cloud based S3 bucket mis-configuration bug of company with \$400 million investment that exposed Millions of user's Profile Photos, exposed Product Sales segment hub and 10000+ cash receipts and bank details
- Reported Insecure Direct Object References and openredirect bug in a company with million users, bounty \$550
- Acknowledged in the NASA and SiteGround Halls of Fame for responsible vulnerability disclosure

Honors and Achievements

- Second runner up in Mercer Mettl CTF 2024, solved week-long security hackathon with 2000+ participants
- Bronze in SNEAKING INTO THE CYBERCRACKS by Saptang Labs in Inter-IIT Tech Meet 11.0, at IIT Bombay
- Runner-up in CSAW CTF 2023 by New York University, among 1400+ professional teams in one of the oldest CTFs
- Runner up in Capture the Flag as part of Elan & Vision 2022 organized by IIT Hyderabad among 3000+ participants
- 1st Position in DroneTech event about drone navigation and 3rd in CTF at Technex'22 organized by IIT (BHU) Varanasi