Akshit **Singh**

Reverse Engineer/Android Security Researcher

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https://github.com/it4ch1-007

https://it4ch1-007.github.io/

ABOUT

Pre-Final year at IIT Roorkee. Aspiring low-level developer and cybersecurity enthusiast with experience in the field of Android security, reverse engineering and malware internals.

SKILLS

Python Rust Development Malware Internals
Web Pentesting Kernel Exploitation Reverse Engineering
C/C++ Development Windows Internals Operating Systems
Android Security CyberSecurity IoT/Hardware Security

Windows Kernel Development Game Security

EXPERIENCE

Android Security Research Intern

Forensics Cybertech Machines

Mar 2024- May 2024

- Security research on Android system exploits and proof of concepts of various vulnerabilities in the Android kernel as well as Android applications.
- Working on the emulation of the exploits in Android devices and gaining privileged information of the administrator using privilege escalation techniques.

EDUCATION

Bachelors of Technology, IIT Roorkee

Majors: Electrical Engineering

Bachelors of Technology, NSUT Delhi

Majors: Computer Science Engineering

DAV Public School, New Delhi

Completed High School Education

EXTRACURRICULAR

Reverse Engineer, InfoSecIITR

https://infoseciitr.in/

- InfoSecIITR is a team of cyberSecurity enthusiasts at IIT Roorkee, and is one of the top 10 CTF teams globally,working towards promotion of cybersecurity throughout the country.
- Participation in global CTFs.
- Conducting CTFs and lectures to promote Information Security.

PROJECTS

Modder.exe (C++, Windows API, Assembly programming)

https://github.com/it4ch1-007/Modder_exe

- A C++ based Windows game reversing tool that includes features like DLL hooking, Memory scanning, Pattern instruction scanning, Disassembling, Debugging, Call logging and Chat proxying using packet capturing.
- Also uses modern techniques to evade the Anti-Cheat system in various games.

Cobra (Rust, Windows Internals, Malware Analysis, Powershell, Batch, AV evasion)

https://github.com/it4ch1-007/Cobra

- A Rust based C2 software that evades various Windows security mechanisms to take control of the system.
- Developed not to trigger any AV checks and exploit the basic mechanisms of the Windows susbsystem with modern Persistence, Credentials, Lateral Movement techniques.
- Uses Powershell and Batch scripting to bypass UAC checks and implement new AV evasion techniques like Custom crypto algorithms, PEB Traversal debug checks, WiFi Parsing, APC Queue injection, Code injection, DLL injection, API hashing and more.

ACHIEVEMENTS

- Won Times of India online National English Debate Contest.
- Got a book published by Children's Book Trust Of India.
- Qualified for final round of TrustLabs CTF held at IIT Bombay
- 2nd position at Scythe CTF , held at Cognizance IIT Roorkee
- 1st globally in VishwaCTF 2024
- 1st globally in JerseyCTF 2024.
- 3rd globally in PragyanCTF 2024, organised by NIT Trichy
- 5th globally in UMASSCTF 2024
- Qualified for HackDay CTF Finals 2024, held at ESIEE, Paris, France
- 6th globally in b0il3rsCTF 2024
- 9th globally in HackDay Qualifications 2023