Vishal Yadav

B.Tech in CS (Cyber Security) | IIIT Una
Roll No.: 24427
GPA: 8.30

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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech (CS – Cyber Security)	Indian Institute of Information Technology, Una	8.30 (Current)	2024 – Present
Senior Secondary (XII)	RPS Public School, CBSE	89.0%	2022
Secondary (X)	RPS Public School, CBSE	94.6%	2020

Experience

- **Cyber Security Lead** *2026 – Present*
  ACM Student Chapter, IIIT Una IIIT Una, Himachal Pradesh
  – Leading the Cyber Security vertical of the ACM Student Chapter, organizing CTF competitions, workshops, and hands-on sessions.
  – Topics covered: penetration testing, OSINT, and ethical hacking for the student community.

Projects

- **KARAN-KAVACH | Hardware-Level Memory Exploitation Monitor** *2026*
  Python, C, Intel LBR
  – Built a security monitoring system at the hardware level to detect and prevent memory exploitation attacks in real time, going beyond signature-based detection.
  – Integrated Intel LBR to track CPU branch behavior for zero-day ROP attack detection; supports cross-platform deployment on Windows, macOS, and Linux.
- **UPI TrustZone Security Framework | ARM64 TrustZone Emulation & Fuzzer** *2026*
  Python, FastAPI, ARM64
  – Built a pure-Python ARM64 CPU emulator with 4 exception levels (EL0–EL3), MMU page tables, and hardware-level Normal/Secure world memory isolation to simulate UPI PIN protection.
  – Implemented a 200-test automated fuzzer across 10 attack categories (ROP chains, buffer overflows, PIN exfiltration, page table corruption) – achieved Grade A+ with zero breaches.
  – Exposed a mobile web UI simulating real UPI payment flow, live TrustZone monitoring, and attack simulation to demonstrate how PINs are isolated from Android userspace.
- **PhoneTrackerPro | Advanced Phone Intelligence & OSINT Framework** *2026*
  Python
  – Engineered an OSINT framework performing 8-phase phone intelligence gathering with live location consensus voting across 7 APIs and India telecom circle mapping (700+ prefixes).
  – Integrated OSINT probes for WhatsApp, Telegram, Truecaller, Facebook, Instagram, UPI ID generation, and spam/breach exposure checks.

Technical Skills

- **Offensive Security & Pentesting**: Nmap, Burp Suite, Metasploit, Netcat, TheFatRat, C2 Frameworks, Web Pentesting
- **Reverse Engineering & CTFs**: Ghidra, x64dbg, x64 Assembly, Binary Ninja (basics); active CTF competitor
- **Digital Forensics**: Memory Forensics, Android Forensics, Autopsy, ADB, SQLite, Cisco Packet Tracer
- **Malware Analysis & PrivEsc**: Static & Dynamic Analysis, Behavioral Analysis, Linux PrivEsc, Sudo Exploitation, File Hijacking
- **Network & System Security**: Wireshark, Tcpdump, Nessus, IDS/IPS, Firewalls
- **Programming & Scripting**: Python, C/C++, SQL, Solidity, x64 Assembly *(Web3 Security – interested)*
- **Cryptography**: RSA, Diffie–Hellman, AES, Hashing (SHA, MD5), Key Exchange Protocols
- **OS & Environments**: Kali Linux, Ubuntu, Windows, VMware, VirtualBox

Achievements & Certifications

- **Top 7% on TryHackMe**, tryhackme.com/p/vishalrao191004 *2025 – Present*
- **OverTheWire CTF**, Completed Bandit and other Linux, networking, and privilege-escalation challenges *2025*
- **CTF Platforms**, Active on Hack The Box, Crackmes.one, PicoCTF, and other CTF platforms *2025 – Present*
- **Ethical Hacker Certification**, Cisco Networking Academy – 70+ hrs of practical labs *2025*
- **Python Essentials 1 Certification**, Cisco Networking Academy – Python fundamentals *2025*
- **Python Essentials 2 Certification**, Cisco Networking Academy – Advanced Python *2026*