

# KAILASH PARSHAD

Cybersecurity Professional | Ethical Hacker | Security Researcher

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## PROFESSIONAL SUMMARY

Cybersecurity professional and researcher with hands-on experience spanning penetration testing, SIEM deployment, vulnerability research, and critical infrastructure protection. Currently pursuing M.S. in Security Informatics at Johns Hopkins University. Co-founded a Zero-Trust browser isolation startup reducing cyberattack incidents by 60%. Built 20+ open-source cybersecurity tools on GitHub. Experienced in security automation with Python, Go, Bash, and PowerShell. Active educator sharing security knowledge through YouTube.

## EDUCATION

**Johns Hopkins University** — Baltimore, MD Expected May 2027  
Master of Science in Security Informatics  
*Relevant Coursework: Security & Privacy in Computing, Network Security, Digital Forensics, Ethical Hacking*

**Vellore Institute of Technology (VIT-AP)** — Andhra Pradesh, India June 2025  
Bachelor of Technology in Computer Science, Specialization in Cyber Security & Ethical Hacking

## TECHNICAL SKILLS

**Programming:** Python, Go, Bash, PowerShell, Java, C/C++, Rust, Ruby, SQL, Assembly  
**Security Tools:** Nmap, Metasploit, Burp Suite, Wireshark, Splunk, ELK/SIEM, Wazuh, Nessus, Shodan, Volatility, Aircrack-ng, Hashcat, Kali Linux, Docker  
**Domains:** Penetration Testing, Vulnerability Assessment, OSINT & Threat Intelligence, SIEM & Log Analysis, Incident Response, Digital Forensics, Malware Analysis, Network Security, Cloud Security, IoT Security, Web Application Security, Red Teaming, DevSecOps

## PROFESSIONAL EXPERIENCE

**Cyber Security Research Intern** — Indian Institute of Technology, Madras Jan 2025 – Jun 2025

- Conducting research on India's first indigenous biometric-based Hardware Security Module (HSM) utilizing FIDO2 authentication
- Collaborating on the Shakti chip project, developing integrated circuits fabricated at IIT Madras for national hardware security infrastructure
- Investigating passwordless authentication models using FIDO2-compliant biometric keys for cryptographic operations

**Co-Founder & Penetration Tester** — Digital Fortress Pvt Ltd (mIsolate) Jan 2023 – Jan 2025

- Co-founded mIsolate, a Zero-Trust Browser Isolation platform with Secure DaaS, reducing cyberattack incidents by 60% via containerization
- Led penetration testing for web applications, network infrastructure, and cloud environments, achieving 30% reduction in recurring vulnerabilities
- Deployed and managed ELK and Wazuh SIEM platforms with real-time detection rules for threat monitoring and incident triage
- Enhanced DevSecOps collaboration by 35% through integration of open-source security solutions
- Aligned security testing with ISO 27001, GDPR, and NIST compliance standards
- Mentored junior penetration testers and coordinated with incident response teams for vulnerability resolution

**Security Analyst** — Mukham India Nov 2021 – Jan 2023

- Deployed and configured ELK SIEM solutions, improving threat detection and incident response times by 30%
- Developed custom alert correlation rules and KQL queries, reducing false positives by 20%
- Investigated security incidents end-to-end: triage, containment, root cause analysis, and remediation documentation
- Monitored network traffic and system logs for indicators of compromise using Wireshark and Splunk
- Performed penetration testing on containerized applications, collaborating with DevOps on secure deployment

**Critical Infrastructure Cybersecurity Intern** — NHPC Limited Sep 2023 – Nov 2023

- Secured critical power station infrastructure using air-gapped ICS/SCADA systems in India's power generation sector

- Managed Industrial Control Systems governing turbine operations and water flow rates
- Developed and implemented security protocols for mission-critical systems

#### **YouTube Cybersecurity Educator** — HackProKP

Oct 2023 – Present

- Creating comprehensive free educational content on ethical hacking, penetration testing, and security research
- Producing OSCP certification roadmap series with video tutorials, notes, and hands-on labs for a growing global community
- Demonstrating strong communication and technical documentation skills

## **FEATURED PROJECTS**

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### **Slot Machine Vulnerability Analysis** — JHU Security & Privacy Course | *Go, Python, Shell*

- Performed comprehensive security analysis discovering 5 critical vulnerabilities with OWASP/CWE classification
- Built automated exploitation suite: SQL injection, credential cracking, MD5 hash cracking, CVE scanning

### **Smart Thermostat Security System** — JHU Security & Privacy Course | *Go, SQLite*

- Designed secure-by-design IoT system implementing RBAC with 3 user roles, OWASP Top 10 controls, audit logging, and defense-in-depth

### **NmapAutomator** — Open Source | *Python*

- Built menu-driven Nmap automation tool with 11 specialized scan profiles for OSCP/HTB-style penetration testing workflows

### **Windows Security Enhancer** — Open Source | *PowerShell*

- Developed interactive system hardening toolkit with 66 security controls across 16 categories (UAC, Firewall, ASR, BitLocker, Credential Guard)

### **SIEM Threat Detection Platform** — Open Source | *ELK Stack, Sysmon, KQL*

- Architected end-to-end SIEM solution integrating Sysmon with Elasticsearch, Logstash, and Kibana for real-time threat detection

### **Alexa ARP MITM Tool** — Open Source | *Python, Scapy*

- Built IoT security research tool for Amazon Echo with interactive wizard, subnet scanner, auto-detect gateway, BPF filtering, and pcap capture

### **Wifi-Killer Network Analysis Toolkit** — Open Source | *Python, Scapy*

- Developed network analysis toolkit: ARP-based host discovery, MITM attacks, bandwidth control, MAC anonymization with CLI + GUI

### **Archive Cracker** — Open Source | *Python, Hashcat*

- Created multi-format archive password cracker (ZIP/RAR/7Z/TAR) with dictionary, brute-force, mask attacks, multi-threading, GPU acceleration

## **AWARDS & HONORS**

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### **HackPiDefender Award** — Vellore Institute of Technology, May 2024

Award-winning cybersecurity education tool powered by Raspberry Pi 5; affordable alternative to Flipper Zero with WiFi hacking, RFID scanning, and universal remote capabilities

### **Most Emerging Project Award (H4ck3r's Pie)** — Vellore Institute of Technology, May 2023

Multi-instrument cybersecurity device using Raspberry Pi 400 + Kali Linux with Rubber Ducky, WiFi deauth, RFID scanner, and IR blaster

### **COVID-19 Analysis Tool Award** — Vellore Institute of Technology, May 2023

### **Codeclectic Coding Competition Winner** — DPS Ghaziabad, 2020

## **LEADERSHIP & COMMUNITY**

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- **Head of Technical Department** — Null (InfoSec) Chapter, VIT-AP | Led cybersecurity workshops, CTF competitions, and mentored students
- **Head of Cyber Security** — Vitopia, VIT-AP | Formulated cybersecurity strategy and incident response for university event
- **Community Lead** — IIC, VIT-AP (3+ years) | Fostered innovation culture, organized workshops with state education council
- **Delegate** — Startup Mahakumbh 2024 | Represented mIsolate, discussed innovation with Prime Minister Modi

## **CERTIFICATIONS**

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Practical Ethical Hacking | Offensive Security Engineering | Reverse Engineering, Debugging & Malware Analysis | Kali Linux & Penetration Testing