

# RANA N. VANIKAR

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## EDUCATION

### Pune Institute of Computer Technology (SPPU)

BE Electronics and Telecommunications *GPA: 8.75*

Pune, Maharashtra, India

Dec 2021 - July 2025

### SP College Pune

High School (HSC) PCM *GPA: 82.83%*

Pune, Maharashtra, India

June 2019 - May 2021

## WORK EXPERIENCE

### Ribbon Communications

*Verification Engineer*

Navi Mumbai (Hybrid)

June 2025 - Present

- Executed automated test suites on Neptune routers and analyzed resulting logs to verify protocol stability and operational correctness.
- Performed operational verification post-test to confirm service continuity and validate protocol behavior under real workloads.
- Conducted penetration tests on router firmware and network interfaces to identify exploitable vulnerabilities and attack vectors.
- Investigated and triaged security-related log anomalies, correlating events to reproduce issues and assess impact.
- Verified remediation effectiveness by re-running automation and validating fixes across the Neptune product line.
- Documented findings, attack scenarios, and mitigation steps in clear reports to support product enhancement
- Collaborated with firmware and OS development teams to remediate vulnerabilities and resolve protocol instabilities.

### Ernst & Young (EY)

*Summer Intern - Cybersecurity*

Pune, Maharashtra, India

Mar 2025 - Jun 2025

- Performed penetration testing on 5G (Telecom) infrastructure and developed tools for protocol testing
- Performed Secure Code Review (Manual SAST) and manual DAST for Web and Mobile apps
- Performed Red Teaming Operation (PenTesting) on IT (Networks and Domain)
- Reviewed Network architectures and Cloud Deployments from a security standpoint
- Setup and maintained a test 5G core deployment on Kubernetes for testing purpose

### Uniken INC

*Intern - Mobile Application Security Tester*

Pune, Maharashtra, India

Aug 2024 - Nov 2024

- Conducted static & dynamic analysis of Android applications using industry-standard tools.
- Evaluated application vulnerabilities and reported security flaws with remediation steps.
- Applied OWASP Mobile Top 10 techniques to assess security vulnerabilities in Android applications.

### Cybage Software

*Cybersecurity Intern*

Pune, Maharashtra, India

Dec 2023 - Feb 2024

- Automated SAST & SCA integration into CI/CD pipelines, optimizing security workflows and enhancing DevSecOps practices
- Performed manual DAST and API penetration testing following OWASP standards.
- Compiled security testing reports and recommended fixes to improve web application security.

## SKILLS

Programming and Scripting:	Python, JavaScript, C/C++, Bash
Essentials:	Linux, Advanced Networking, DevOps, CI/CD
Tools and Services:	Ansible, Docker, Git, Grafana, Kubernetes
Cloud:	AWS, Azure, DigitalOcean, Proxmox
Cybersecurity:	OWASP, MITRE ATT&CK, Bug Hunting, Incident Response, Wazuh, SPLUNK

## PROJECTS

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### **Home Lab** *Routers, Layer 3 switches, wireless access points, Proxmox, Ansible, RaspberryPI*

For over six years, I have been building and managing a home lab with Mikrotik Routers, Layer 3 switches, Access Points, virtual machines and containers for hands-on Networking, Security Testing, DevOps and DevSecOps experimentation. I automate infrastructure management using Ansible and continuously monitor system performance with monitoring tools.

### **AI Powered Deep Packet Analyzer** *Python, AI/ML, Scapy, Wireshark, L3 Managed Switch*

Developing an AI-driven network security model for real-time packet inspection and anomaly detection using Python, Scapy, and Wireshark. The system classifies packets by signatures, protocols, and traffic patterns to detect threats proactively. A related research paper, highlighting AI's role in cybersecurity, is set for publication in Springer LNNS.

### **IoT Based Power Over Ethernet Device** *ESP32, ACS712, Azure, Grafana, InfluxDB, RaspberryPI*

Developed an IoT-enabled Power over Ethernet (PoE) system with real-time power monitoring and a cloud-based dashboard for data visualization. Integrated seamlessly with existing network infrastructure, enabling real-time monitoring.

### **Freelance Bug Hunting** *Nmap, BurpSuite, Postman, SQLi, XSS, Cloud Security, Network Security, OWASP*

For over two years, I have been identifying and reporting security vulnerabilities in web, mobile, network configuration and cloud deployments through responsible disclosure programs. I provide remediation steps, detailed PoCs, and clear reproduction steps to help organizations strengthen their security.