

# MANOJ KUMAR

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## SUMMARY

Hands-on experience in designing, configuring, and securing networks in virtual lab environments with a strong focus on network security. Experienced in L2/L3 networking, routing protocols, VLAN segmentation, DHCP, traffic analysis, and server virtualization through extensive lab deployments using Packet Tracer, GNS3, and PNETLab on on-premise systems.

## EXPERIENCES

### Student Intern

**iQube - Innovation Center**

May 2024 - Present, Coimbatore

- Deployed a multi-vendor virtual lab using PNETLab on Lenovo X3550 for OSPF and BGP lab scenarios.
- Automated VM provisioning using Ansible, reducing manual setup time, validated deployments using Docker, Apache2, Pi-hole DNS.
- Captured and analyzed traffic between Cisco SG300 and FortiGate Layer3 switch using sFlow for performance monitoring as well logging.
- Conducted workshops for juniors on networking configurations and troubleshooting.
- Managed Cisco SG300 switches and delivered temporary Wi-Fi networks for campus events.
- Managed NAS infrastructure from testing to production, ensuring secure and reliable file services.
- Conducted workshops for juniors on networking configurations and troubleshooting.

**Team Nova**

July 2023 - April 2024, Coimbatore

- Active CTF participant focused on forensics and cryptography domains
- Familiar with basic web security fundamentals and network traffic analysis (PCAP)
- Conducted intra College CTF by designing and hosting on isolated VLAN environment with two new Aruba AP products for wifi connectivity as well ddos protected machine.

**Research and Development center**

January 2023 - July 2023, Coimbatore

- Participated in the Smart India Hackathon internal round (2024), contributing to the development of a decentralized ledger-based e-vault system for the ministry of Law and Justice.
- Organized a paper presentation event at an inter-college technical fest with over 250 participants.

## ACHIEVEMENTS

- Secured 7th place in the Territorial Army CTF Hackathon (Top 15 in India).
- Won 1st place in blogging competition at KCT.
- Achieved 3rd place in Switch and Win competition by Pynet (OSPF troubleshooting + real-time Q&A)

## EDUCATIONS

### Bachelor of Electronics and Communication Engineering

Kumaraguru College of Technology | Batch 2026 | CGPA: 8.5

## PROJECTS

### Cryptocurrency Transaction Analysis Tool

- Built a script to identify cryptocurrency wallet addresses using OSINT techniques across social media and dark web platforms.
- Guided team members to achieve the SIH internal hackathon (2025) objective.
- Led OSINT scripting efforts focused on extracting wallet addresses from platforms such as Reddit and Telegram, while the team handled application development.

### Portscanning Vulnerability Tool

- Built a scalable web-based UI using the React library to address assigned application requirements.
- Developed a custom Python script to perform TCP handshakes for node health checks and integrated authentication using Keycloak OAuth realms; tested the solution in a local subnet environment with test users.

### Network Attached Storage for Kumaraguru Institution

- Configured and racked a Synology NAS server, managing both hardware and DSM 7.2 software components (180 TB), including permissions, quotas, and team folders.
- Coordinated with the Microsoft support team to troubleshoot SSO issues and integrate SAML-based authentication.
- Implemented the Synology Drive application to enable secure collaboration and file versioning across Kumaraguru Institution.

## CERTIFICATIONS

- JNCIA-Junos (Juniper)
- Palo Alto Network Security Basics – Palo Alto Networks
- Certified Network Security Practitioner – SecOps
- Enterprise Networking, Security & Automation – Cisco NetAcad
- Switching, Routing & Wireless Essentials – Cisco NetAcad
- DevNet Associate – Cisco NetAcad
- ITN – Cisco NetAcad

## TECHNICAL SKILLS

**Networking:** VLAN, OSPF, BGP, Switching, Routing, DHCP, DNS, NAT, TCP/IP, SSL/TLS.

**Automation:** Ansible, Bash, PowerShell, Git.

**Tools:** Packet Tracer, GNS3, PNET Lab, AWS services.

**Platforms:** Windows, Linux, Docker.

**Other:** sFlow Traffic Analysis, Keycloak, OIDC.

**Languages:** HTML, CSS, Markdown, Javascript.

## SOFT SKILLS

- Communication
- Problem Solving