# NISARG PATEL

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## PROFILE

Aspiring Network Engineer with hands-on experience in designing, configuring, and troubleshooting network infrastructure, from routing and switching, VLANs, and TCP/IP protocols to network automation using Python, Netmiko, and SSH. Comfortable working across network operations with practical experience in Cisco networking, network monitoring, fault diagnosis, and infrastructure maintenance, supported by strong technical problem-solving and teamwork skills.

## SKILLS

- **Networking Fundamentals & Protocols:** TCP/IP, OSI Model, IPv4/IPv6, Subnetting, CIDR, DNS, DHCP, ARP, ICMP, NAT/PAT, TCP/UDP, LAN/WAN
- **Routing & Switching:** Cisco IOS, VLANs, 802.1Q Trunking, Inter-VLAN Routing, Static Routing, OSPF, BGP Fundamentals, STP/RSTP, EtherChannel, ACLs
- **Network Monitoring & Troubleshooting:** SNMP, Syslog, Wireshark, TCPdump, Ping, Traceroute, Network Performance Monitoring, Fault Isolation, Root Cause Analysis
- **Network Infrastructure & Administration:** Cisco Routers & Switches, Network Configuration, Network Documentation, Network Topologies, Configuration Backup, Network Maintenance, Firewall & VPN Fundamentals
- **Operating Systems, Tools & Automation:** Linux (Ubuntu), Windows Server Fundamentals, Cisco Packet Tracer, GNS3, PuTTY, SSH, VirtualBox, Python Fundamentals, Bash Scripting
- **NOC Operations & Incident Management:** Network Availability Monitoring, Alert Triage, Incident & Ticket Management, Troubleshooting, Escalation Procedures, SLA Awareness, ITIL Fundamentals, Change Management

## EDUCATION

MSc Cybersecurity and Emerging Threats – Middlesex University, London — Sep 2025 – Sep 2026

Bachelor of Technology, Information Technology – New L.J. Institute of Engineering and Technology — Sep 2021 – May 2024

## INTERNSHIP

**Network Technician Intern, Karmsoft** — Jun 2024 – Jun 2025

- Configured and maintained Cisco routers, switches, and LAN/WAN infrastructure, implementing IP addressing schemes, subnetting, and network connectivity solutions to support reliable enterprise network operations.
- Implemented and managed VLAN configurations, trunking, DHCP, DNS, and basic routing protocols, improving network segmentation, inter-device communication, and infrastructure efficiency.
- Diagnosed and resolved Layer 2 and Layer 3 connectivity issues using Cisco IOS CLI, Wireshark, Ping, and Traceroute, analyzing network traffic and troubleshooting routing, switching, and TCP/IP communication problems.
- Conducted network performance monitoring, configuration validation, and infrastructure documentation, collaborating with network engineers to maintain network availability, troubleshoot incidents, and support operational improvements.

## PROJECTS

**Enterprise Network Design & VLAN Segmentation**

- Designed and simulated a multi-department enterprise network using Cisco Packet Tracer, implementing a hierarchical network topology with Cisco switches, routers, and centralized infrastructure to connect Marketing, Sales, General Support, and Server departments.
- Developed a VLAN-based network architecture (VLANs 10, 20, 30, and 100), incorporating departmental IP addressing, subnet segmentation, and dedicated server connectivity to establish a structured, scalable enterprise networking environment.

**Network Automation Using Python & Netmiko**

- Developed a Python-based network automation solution using Netmiko and SSH to establish authenticated connections with multiple Cisco IOS routers, automating device access and execution of network diagnostic commands.
- Designed and configured a simulated Cisco network infrastructure, implementing SSH authentication, IP connectivity validation, and automated interface status retrieval (show ip interface brief), streamlining repetitive network administration tasks and establishing a reusable framework for multi-device network management.

## CERTIFICATES

- CompTIA Security+ — CompTIA