

Chetan Pavan Sai Nannapaneni

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PROFESSIONAL SUMMARY

CCNA-certified Telecommunications Networks graduate with hands-on experience deploying and automating cloud infrastructure and enterprise networking solutions. Skilled in IP networking fundamentals, Linux/Unix environments, routing protocols (BGP, OSPF, EIGRP), Cisco IOS, Terraform, Ansible, Python, and Bash scripting. Experienced deploying scalable AWS infrastructure, troubleshooting routing and connectivity issues, validating network convergence, and automating repeatable deployment workflows.

EDUCATION

Northeastern University Master of Science, <i>Telecommunication Networks</i>	Sep 2024 - May 2026 GPA: 3.8
Indian Institute of Space Science and Technology Bachelor of Technology, <i>Electronics and Communication Engineering</i>	Nov 2020 - Jun 2024 GPA: 2.7

SKILLS

Networking: TCP/IP, DNS, DHCP, VLANs, STP, ARP, OSPF, BGP, MP-BGP, EIGRP, HSRP, GLBP, FRRouting (FRR), Cisco IOS, ACLs, VPN, EtherChannel, LACP, Network Troubleshooting, Infrastructure management, LAN, WAN networks

Cloud / Tools: AWS, Terraform, Ansible, Wireshark, Cisco Packet Tracer, Git, Paramiko, StrongSwan, Vagrant, Cloud server environments

Systems / Automation: Python, Bash, Linux/Unix Administration, Shell Scripting, Infrastructure as Code

WORK EXPERIENCE

Northeastern University | Teaching Assistant – TELE 6420 Infrastructure Automation Jan 2026 - May 2026

- Supported students in Linux administration and Infrastructure as Code labs using Terraform, Ansible, and AWS, troubleshooting lab connectivity and access issues.
- Debugged Terraform/Ansible runs, environment misconfigurations, and deployment failures; documented common fixes and lab runbooks for faster resolution.
- Co-developed cloud deployment labs and technical documentation to standardize repeatable setup and validation steps across student projects.

Indian Institute of Space Science and Technology | IT Support Aug 2023 - Apr 2024

- Provided **Level 1/2 support** for faculty and students by troubleshooting workstation hardware/software and network connectivity issues on campus endpoints.
- Resolved **desktops** and **laptops** issues across Windows and Linux systems, including OS/application installation, upgrades, and configuration fixes.
- Configured and supported VPN access on Windows and Linux, diagnosing authentication and routing issues to restore secure remote connectivity.
- Documented troubleshooting steps and recurring fixes to improve turnaround time for repeat support requests; coordinated with peers for escalations when needed.

PROJECTS

Automated BGP/OSPF Network Deployment with Terraform and Ansible

- Designed and deployed a multi-router AWS network lab using EC2 instances running FRRouting 8.5.2, implementing OSPF Area 0 and eBGP peering between AS100 and AS200 to simulate **WAN networks** connectivity and dynamic route exchange.
- Provisioned AWS infrastructure including VPCs, subnets, route tables, Internet Gateway, security groups, and Linux-based routers using modular Terraform code, enabling repeatable Infrastructure-as-Code deployments.
- Automated router configuration and network validation using Ansible, Jinja2, Python, and Paramiko to verify OSPF adjacencies, BGP neighbor states, routing tables, and convergence behavior during simulated link failures, achieving recovery within 35–40 seconds.

Multi-Tier AWS Application with Infrastructure as Code

- Architected and deployed a highly available three-tier AWS application using Terraform, Ansible, Nginx, Flask, Gunicorn, systemd, and Amazon RDS MySQL, incorporating load balancing, private networking, and secure communication between application components.
- Developed modular Infrastructure-as-Code templates managing over 30 AWS resources including VPCs, public/private subnets, NAT Gateway, Application Load Balancer, Auto Scaling Groups, route tables, security groups, and managed database services.
- Implemented CloudWatch-based monitoring and Auto Scaling policies that dynamically expanded capacity from 2 to 4 instances during 50,000+ request load tests, maintaining greater than 95% successful request completion while improving application availability and resilience.

Enterprise Network Architecture

- Designed a scalable enterprise network connecting five branch offices using hierarchical network design principles, OSPF routing, VLAN segmentation, summarized IP addressing, and **LAN** design practices to improve routing efficiency and network scalability.
- Configured Cisco IOS routing and switching technologies including Router-on-a-Stick, VLANs, PVST+, EtherChannel, DHCP, DNS, ACLs, VPN tunnels, and SSH-based management to provide secure connectivity and reliable inter-site communication.
- Implemented high-availability solutions using HSRP failover, Rapid STP, LACP link aggregation, and EIGRP route redistribution with filtering policies, improving fault tolerance, reducing single points of failure, and ensuring continuous network operations.

CERTIFICATIONS & ACHIEVEMENTS

- Cisco Certified Network Associate (CCNA 200-301) - Cisco Jan 2026