Dheeraj Gajula

dheeraj.gajula@colorado.edu | index.dheerajgajula.com | dheerajgajula.com | +1 303-520-8554
network production engineer intern (summer) @ **meta** | Looking for co-op & winter internship

Education

University of Colorado – Boulder Boulder, CO
Master's in computer science (Network Engineering) | 3.8/4.0 *Aug 2025 – May 2027*

- **Coursework**: Enterprise Networks, Network Systems, Machine Learning, Network Management & automation, IP routing protocols & policies

Dayanada Sagar College of Engineering Bangalore, India
Bachelor's in Computer Science and Engineering | 3.76/4.0 *Nov 2020 – May 2024*

- **Coursework**: Data structures and algorithms, Database systems, Operating systems, Computer Networks, Cloud Computing, Automata Theory, Software Engineering, Machine Learning, Deep Learning, NLP, Computer Vision

Experience

Software Engineer – 1 June 2024 – Aug 2025
Versa Networks *Bangalore, India*

- Developed REST APIs in **GoLang** and **Cassandra** that is serving more than 3000 reqs/s reported metrics through **Prometheus** and built dashboards through **Grafana**
- Performed **Quantitative and Qualitative analysis** of virus total malicious feed data by building multiple data pipelines using **Python** and **BigQuery** and built a **Mathematical Reinforcement model** to predict the result
- Containerized multiple services using **Docker** and **Kubernetes** and deployed them in **GCP**

Software Engineer – Intern Feb 2024 – June 2024
Versa Networks *Bangalore, India*

- Automated the device usage tracking at versa networks, reduced the time of billing from 7 days to under an hour
- Analyzed inconsistent logs, built systems to **detect anomalies**, and **StateMachines** to track device states
- Used **MongoDB and Python Data modelling** to process hierarchical data of the director logs and provided insights about the usage on **prometheus and Grafana**
- Used **Flask** and **FastAPI** for making it as a service, **Docker** and **Docker compose** for deploying it on servers

Projects

Network Automation Lab | *Python, Ansible, NETCONF, Jenkins, SNMP, Scapy* Jan 2026 – Present

- Automated BGP and OSPF deployment, validation, and config collection on Cisco routers with Python, Netmiko, NAPALM
- Built Flask-based tools for config generation, diff checks, and web-driven router provisioning
- Developed Ansible playbooks, Jinja2 templates, and NETCONF workflows for repeatable multi-device configuration
- Used SNMP, Nmap, Wireshark, TCPDUMP, and Scapy for monitoring, packet analysis, and troubleshooting
- Integrated GitHub and Jenkins pipelines for linting, testing, and automated code deployment

Enterprise Network Labs | *STP, VLANs, HSRP, OSPF, EIGRP, RIP, MPLS, RSVP-TE, IPsec, IPv6* Sept 2025 – Present

- Built fault-tolerant Cisco enterprise and multi-site networks with VLANs, trunking, STP/RSTP, and HSRP for redundancy
- Configured wireless LANs, DHCP/DHCPv6, inter-VLAN routing, NAT/PAT, and Stateful NAT for Internet connectivity
- Implemented RIP, EIGRP, OSPFv2/v3 multi-area routing, and redistribution with convergence and failover tuning
- Designed ISP-style topologies with MPLS and RSVP-TE tunnels to support traffic engineering and bandwidth guarantees
- Integrated IPv4/IPv6 services with IPsec-encrypted tunnels and NAT-PT for secure communication and protocol translation
- Validated routing, redundancy, and end-to-end behavior using Wireshark, ping/traceroute, and Cisco IOS verification tools

Network Applications *C++, Network Programming* Sept 2025 – Present

- Built multithreaded TCP/UDP servers, an HTTP proxy, and a UDP file transfer protocol in C/C++
- Implemented HTTP parsing, pipelining, persistent connections, cache expiration, and MD5-based page caching
- Enabled concurrent clients with threading/forking, dual-socket design, and graceful error handling
- Added blocklist filtering, link prefetching, and a secure chat system backed by PostgreSQL and SQLite
- Developed a distributed file system with chunking, redundancy, MD5-based placement, and file retrieval commands

Home Lab | *Linux system Admin, virtualisation, cloudflare, docker, docker compose, wireguard* 2023 – Present

- **https://index.dheerajgajula.com** I have a small home lab where I host multiple services, I use wireguard to access them from anywhere, and for some of them I use docker, and I always have 2 copies of backups

Technical Skills

Concepts and protocols : TCP/IP, IPv4, IPv6, ARP, STP, DNS, DHCP, NAT, RIP, OSPF, MPLS, VPN, Tunnels
Languages: Python, C/C++, shell scripting, Golang, SQL (Postgres)
Tools: GNS3, wireshark, Git, Docker, Kubernetes, Google Cloud Platform, Grafana, AWS, NGINX, Prometheus, Grafana
Network Automation: Netmiko, NAPALM, Ansible, Jinja2, Flask, Jenkins, CI/CD, Unit Testing, Network Automation