Meghana Gorripati

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Education

Purdue University, West Lafayatte, IN | MS in Computer and Information Technology **(4.0/4.0)** *Jan 2024 - Dec 2025*
SASTRA Univeristy | Bachelor's in Technology (BTech) in Computer Science and Engineering *July 2018 - May 2022*

Professional Experience

Software Consulting Engineer II, Cisco, India Aug 2023 - Jan 2024

- Designed and implemented a quality management tool used by managers and network engineers to evaluate the quality of 500+ reports/month, track delivery statistics, and analyze performance metrics, ensuring standardization and operational efficiency.
- Developed an SDN-driven network quality monitoring system, analyzing TCP/IP traffic patterns, BGP route optimizations, MPLS-based data forwarding, and VXLAN overlays to proactively monitor device health in Cisco products, including vManage and ACI, improving network reliability and scalability.
- Built Webex bots and API-driven automation tools to enhance network engineers' access to internal documentation, leveraging REST APIs and OAuth, resulting in a 30% improvement in operational efficiency.

Software Consulting Engineer I, Cisco, India Aug 2022 - July 2023

- Developed 40+ Python-based automation scripts for real-time SDWAN health monitoring, integrating network telemetry collection and distributed logging systems.
- Integrated ML-based anomaly detection models for proactive SDN monitoring, predicting network congestion, optimizing application-aware routing, and improving QoS in large-scale SDWAN deployments.

Technical Undergraduate Intern, Cisco, India Jan 2022 - July 2022

- Developed an SDN-driven application as part of the Business Critical Services (BCS) team to monitor the health and performance of Cisco products, ensuring optimal functionality and uptime.
- Engineered network automation scripts to streamline Proactive Software Recommendations reports, reducing manual report generation efforts by 60%, significantly enhancing network analytics and operational efficiency.
- Earned CCNA and DevNet certifications during my internship, enhancing expertise in networking and automation.

Research Projects

Explainable AI (XAI) for Enhancing Cloud Autoscaling | **Purdue University** Aug 2024 - Present

- Designed and implemented an LSTM-based time series model and working on fine-tuning BERT for enhanced prediction of CPU and memory utilization, optimizing cloud resource management using cameleon cloud.
- Integrating SHAP to improve the interpretability of AI-driven autoscaling decisions in Kubernetes environments.

Trust Enforced Computational Offloading for Health Care Applications in Fog Computing *Link* Apr 2021

- Designed and optimized computational offloading algorithms to improve efficiency in resource-constrained fog computing environments, reducing processing latency and enhancing security for real-time healthcare data processing.
- Developed synthetic data models and validated the offloading framework against existing models, demonstrating improvements in load balancing, reliability, and computational efficiency in distributed fog systems.

SKILLS

Languages: Python, C/C++, Java, JavaScript, GoLang, MATLAB, HTML/CSS
Networking & SDN: Cisco vManage, Routing & Switching (R&S), OpenFlow, VXLAN, MPLS, Mininet, SDWAN, Routing protocols like BGP, OSPF.
Software Engineering: Data Structures & Algorithms (DSA), Multithreading, Performance Optimization, Distributed Systems
AI/ML Tools & Frameworks: TensorFlow, PyTorch, Scikit-learn, SHAP (SHapley Additive ExPlanations), Django, Angular
Databases & APIs: MySQL, PostgreSQL, MongoDB, Mimir API, REST API, OAuth
Development Tools: Git/GitHub, VS Code, Jupyter Notebook, Postman, Linux, Docker

Certificates & Achievements

CCNA | **Cisco Certified Network Associate** *Link* Jul 2022
DevNet | **Cisco Development and Networking Certification** *Link* May 2022
InfyTQ | **Infosys Certified Software Programmer** Apr 2021
Dean's Merit Scholarship | Awarded for being among the Top 2% of undergraduate students. 2019, 2020
NPTEL| Introduction to Programming Through C++ | **Top 2%** Nov 2019