JACOB RICKEY Athens, OH | +1 740-403-4401 | jr521816@ohio.edu | www.linkedin.com/in/jacob-rickey

Master of Information and Telecommunication Systems student with expertise in cybersecurity, 5G/LTE architecture, and telecommunications strategy and policy.

EDUCATION

Master of Information and Telecommunication Systems | Ohio University | *Exp. Dec 2026*

Bachelor of Science in Information and Telecommunication Systems | Ohio University | *May 2025*

TECHNICAL SKILLS

- **Network & Wireless:** Internet Engineering, IP/TCP, IPsec/VPN, OSPF, BGP, Linux
- **Programming & Data:** Python (Pandas, SciPy, Matplotlib), Java, C++, R

ACADEMIC PROJECTS

Natural Language Network Automation via MCP | *Fall 2025*

- Developed a conversational CLI interface using Anthropic's Claude API and the Model Context Protocol (MCP) to translate natural language intent into executable network commands.
- Deployed a Python-based MCP server to bridge Claude with the GNS3 API, enabling automated project and node management.
- Implemented a real-time orchestration pipeline where user prompts are reasoned by Claude, converted into tool-use blocks, and executed as HTTP requests against emulated network infrastructure in GNS3.

Post-Quantum Metadata Leakage Analysis | *Fall 2025*

- Simulated encrypted VPN tunnels using StrongSwan and emulated a GNS3 testbed to model links secured by post-quantum cryptography.
- Developed Python scripts to capture side-channel metadata and scripts to analyze and visualize trends.
- Determined that traffic types (e.g. industrial control traffic vs. file transfer traffic) can likely be inferred via packet size, inter-arrival time, etc. despite post-quantum encryption.

RELEVANT PROFESSIONAL EXPERIENCE

Support Engineering Intern | JBT Corporation – Automated Systems Division | *Summer 2025*

- Configured radio modules and initialized hardware for next-generation Self-Guided Vehicles (SGVs), facilitating the deployment of new fleet units.
- Executed preventative maintenance (PM) regimens and troubleshot hardware/software faults to ensure operational continuity for autonomous systems.
- Validated communication hardware upgrades throughout installation and testing period for new radio modules, ensuring compliance with the site's operational standards.