Hyuntae Yoo

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Cybersecurity Specialist | Network Engineer | IT Support

Detail-oriented **Cybersecurity and Network Engineering student** at **Purdue University** with hands-on experience in **network deployment, system administration, and secure infrastructure design**. Proven ability to troubleshoot, secure, and optimize IT systems through academic research and military service. Passionate about building resilient, scalable, and secure network environments.

Key Skills & Core Competencies

- **Network Engineering:** Cisco, Juniper, HP Aruba, VLANs, OSPF, VRRP, MSTP, DHCP, NAT, NTP, EIGRP, SNMP, IPv6
- **Cybersecurity:** ACL, Firewalls, IDS/IPS, Web Application Firewall (WAF), Splunk SIEM, IAM, Threat Detection, Network Segmentation
- **Cloud & Virtualization:** AWS (EC2, VPC, RDS, EFS, Auto Scaling, IAM), VMware ESXi, Virtual Machines, Oracle Cloud
- **Operating Systems:** Linux (RHEL, Ubuntu), Windows Server, macOS, Kali Linux
- **Programming & Scripting:** Bash, PowerShell, C Lang
- **Tools & Platforms:** TFTP, Wireshark, Git, Ticketing Systems, AWS Pricing Calculator, LibreNMS
- **Operations Management**: Cost Reduction, Risk Management, Process Optimization, Process Improvement
- **Cyber Forensics**: Disk Imaging, MBR, FAT, GPT, NTFS, Email Forensics
- **Languages:** English (Fluent), Korean (Native)
- **Communication**: Written & Verbal Communication, Conflict Resolution, Customer Service, Team Collaboration

Professional Experience

Cybersecurity Intern

Sinapsis AI — West Lafayette, IN | Nov 2025 – Present

- Developing an Information Security Management System (ISMS) aligned with ISO/IEC 27001, covering control mapping, policy definition, and operational security processes.
- Implementing and integrating the ISMS framework within a Proxmox-based virtualized environment, ensuring alignment between security controls and system architecture.

Network Engineering Aide

Purdue University — West Lafayette, IN | Jan 2025 – Present

- Troubleshoot and maintain network infrastructure supporting 30,000+ users across campus.
- Deploy and install networking equipment (Cisco, HP) for academic and administrative environments.
- Collaborate with Network Engineers to resolve outages and optimize uptime through root-cause analysis.
- Document network configurations and assist with preventive maintenance plans.

Undergraduate Research Assistant

Purdue University — West Lafayette, IN | Aug 2024 – Aug 2025

- Conducted independent research on **WebAssembly (WASM)** focusing on its **security implications and performance**.

- Analyzed **NIST publications** to assess WebAssembly's potential applications in secure software development.

Undergraduate Teaching Assistant

Purdue University — West Lafayette, IN | Aug 2024 – May 2025
- Guided 18+ students each semester through **Windows System Administration** projects and lab exercises.
- Evaluated and graded assignments, providing structured feedback for skill improvement.
- Maintained and troubleshooted lab systems to ensure uninterrupted student access and performance.

IT Specialist (Sergeant)

Republic of Korea Air Force — Gangneung, South Korea | Nov 2021 – Aug 2023
- Managed secure IT operations supporting **real-time air operations** and mission-critical systems.
- Repaired and configured computers under **internet, intranet, and private network** environments.
- Provided Tier-1 and Tier-2 technical support for personnel, following structured troubleshooting procedures.
- Led crisis management response for aviation communication systems, ensuring operational continuity.

Projects

Basic Host-based Penetration Testing (BHPT) | *Dec 2025 – Present*
- Conducted a **host-based penetration test** using an **on-demand lab environment**, simulating **real-world attacker workflows** against a **single target host**.
- Identified, validated, and documented **system-level vulnerabilities** through **reconnaissance**, **enumeration**, and **exploitation techniques**.
- Practiced defensive response strategies by validating **patches**, performing **system hardening**, and **retesting mitigations**.

Network Engineering Lab (Cisco, Juniper, HP Aruba) | *Aug 2025 – Dec 2025*
- Built a **multi-vendor network environment** using Cisco, Juniper, and HP Aruba hardware.
- Implemented **MSTP, IPv6, DHCP (EIGRP and OSPF), and VRRP/HSRP** to enable redundancy and reliable connectivity.
- Automated configuration backups via TFTP server and monitored network health using **LibreNMS**.

Cybersecurity Home Lab (ESXi, Splunk, Firewalls) | *Jun 2025 – Present*
- Designed and operated a **multi-zone network** (DMZ, IntraNet, DevNet, SOCNet) with segmented security controls.
- Integrated **Splunk-based SIEM** for real-time monitoring and alerting using IDS and threat analysis tools.
- Configured **firewalls, IPS, and WAF** to simulate an enterprise-level security posture.

AWS Cloud Infrastructure Project (Amazon Cloud Quest) | *Jun 2025 – Nov 2025*
- Developed secure AWS infrastructure with **VPC peering, ALB + Auto Scaling Groups, and Multi-AZ RDS**.
- Implemented **IAM least privilege**, Security Groups, and NACLs for access control and compliance.
- Utilized **AWS Pricing Calculator** to ensure cost-efficient and scalable architecture.

Education And Certifications

Purdue University — West Lafayette, IN

Bachelor of Science in Cybersecurity and Network Engineering Technology

Expected Graduation: December 2026

- **Certified Linux Administrator** – Valid through April 2028
- **AWS Certified Cloud Practitioner** – Valid through December 2028