Derek Liu

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A motivated and diligent student with a passion for cybersecurity and software development. With solid experience in configuring firewalls, working with routing protocols, and designing computer networks, I bring a strong set of skills in troubleshooting, communication, and documentation. By seeking out new opportunities to learn and drive positive change through technology.

# Education

## University of Washington, BS Informatics 2027

Major: Informatics | Concentration: Software Development & Cybersecurity

## Newport High School (GPA: 3.9/4.0 2023

# Certifications

## Cisco Certified Network Associate Certification (CCNA) 2022

# Experience

**Rotary International Volunteer Work | Sponsored by Cisco**

Led a team of Newport students in Antigua to design and set up computer networks for multiple elementary schools.

Reimaged and donated over 1,000 laptops to local elementary schools.

# Skills & abilities

* Leadership – learning but also teaching and leading peers so we can progress as a team towards a goal.
* Time Management – managed time efficiently to complete schoolwork, extracurricular activities, and networking projects.
* Problem solving/Troubleshooting – debugged a variety of issues while working with computers, routers, switches, and firewalls.
* Communication – exceptional organization and documentation skills. Worked with a team to complete some labs.
* Java – proficient programming skills. Self-studied from UW CSE 142.
* Cisco CLI – worked with and configured Cisco network devices using the Cisco CLI.
* Subnetting – Designed and set up multiple network topologies using IPv4 and IPv6 addresses.

# Projects

## Cybersecurity & Programming

* Palo Alto Firewalls
* *Factory reset and configured PA-220 and PA-410 firewalls for a small office/home office with protocols such as DHCP, NAT, ARP, and CAPWAP.*
* *Updated software and operating systems on firewalls*
* *Set up a site-to-site VPN connection using a root certificate along with SHA516 hashing and aes256 encryption. Captured encrypted ESP packets with Wireshark.*
* *Configured a clientless and remote access VPN connection to simulate an offsite connection.*
* pfSense Firewalls
* *imaged a device to serve as a pfSense Firewall in a SOHO setting. Configured the pfSense Firewall to support remote desktop.*
* Cisco ASAs
* *Factory reset and configured a Cisco ASA for a small office/home office environment using the Cisco ASDM and Java.*
* *Configured a clientless VPN connection to simulate an offsite connection.*

## Routing Protocol & Network Administration labs

* VoIP/CUME
* Set up a VoIP connection between IP phones and landline connections using Cisco Unified Communications Manager Express (CUCME).
* Used or set up protocols such as TFTP, NTP, SSH, and ACLs in order to establish functionality.
* OSPF/Multi-Area OSPF
* Established multiple OSPFv2 and OSPFv3 networks on Cisco routers in conjunction with other routing protocols such as BGP, iBGP, and VRF.
* BGP/iBGP
* Built multiple BGP and iBGP networks using both IPv4 and IPv6 in conjunction with OSPF and EIGRP.
* VRF
* Configured VRF routing tables to simulate VPNs by separating IP traffic.
* GLBP
* Created a network with GLBP to show and educate peers on the importance of redundancy in computer networks.
* MPLS
* Designed a network that supports MPLS in order to explore the importance of QoS through the functions of LDP, TDP, and manually assigned labels.