Andrew Q. Nguyen

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SUMMARY/OBJECTIVE

Graduate CS student with 2+ years of network engineering experience with expertise in applied machine learning and cloud infrastructure. Skilled in network analysis (Splunk, Wireshark), L2/L3 protocol diagnostics (TCP/IP, DHCP, VLANs), and automation (Python, Bash, YAML). I am passionate about using these skills to secure and optimize infrastructure and backend systems.

EDUCATION

Northeastern University (GPA: 4.0) — Seattle, Washington
M.S. *in Computer Science – (DSA, Distributed Systems, Statistics, OOP, ML, Operating Systems).* — *Expected Graduation, Dec 2026*

University of California San Diego — San Diego, California
B.S. *in Biochemistry and Cell Biology* — *Graduated, March 2020*

SKILLS

Programming Languages / Scripting: Python (proficient), Java (proficient), C++ (familiar), YAML, Bash, KQL, RESTful APIs, TDD, Unit Test
Networking, Data Science & ML: OSI Model (L1-L3), TCP/IP, VLANs, DHCP, OSPF/BGP (familiar), ACLs, Splunk, Wireshark, NetFlow, configuration management, PyTorch, Clustering, Large Language Models (LLM), Power BI, Z3 Solver
DevOps / Databases: Git, Docker, Kubernetes, Jenkins, CI/CD, VMs, Microsoft KQL database, Postgres, Redis, Agile

WORK EXPERIENCES

Microsoft — Redmond, Washington
Cloud Network Engineer Intern — *Jun 2025 – Aug 2025*

- **Engineered** a system to automate **configuration management**, ensuring precise networking devices compliance and achieving a **25%** reduction in incident response time for configuration drift issues within an **agile** environment.
- **Developed** an automated **YAML workflow** that gathers metadata using **KQL** from a **KQL database,** generates CR/ICM reports via **API** access, then initiates internal tool to push configuration changes to devices effectively eliminating **90%** of manual work.
- **Wrote** scalable code and docs with **unit tests** in a **Test-Driven Development (TDD)** framework improving onboard efficiency by **33%**.

Vigitron Inc. Innovative Networking Solutions — San Diego, California
Network Engineer — *June 2021 – June 2024*

- **Reduced** manual testing by **20%** by automating **L2/L3** network security validation pipelines, integrating **Splunk**, **Wireshark,** and **NetFlow** for real time log analysis and anomaly detection.
- **Achieved** a **15%** improvement in pre-emptive issue detection by **developing** Python and Bash scripts using **Scikit-learn** to analyze system metrics on **virtual machine (VM)** infrastructure and predict network vulnerabilities.
- **Maintained** company networking systems and **enhanced** QA testing by configuring and troubleshooting PoE, switches, VLANs, midspan/coax/UTP infrastructure, while **conducting** Tier-2 diagnostics across L2/L3 protocols including **TCP/IP**, **DHCP**, and **ACLs**.

Gleeson Lab, University of California San Diego — San Diego, California
Data Engineering Researcher Intern — *Jan 2019 – Jan 2021*

- **Engineered** scripts in **Bash**, **C++**, and **SQL** on the UCSD Computing Cluster to streamline bioinformatics data processing by **50%**, enabling the training of a machine learning model to detect somatic structural variations within the genome.
- **Created** data dashboard using **React**, **JavaScript**, and **Power BI**, facilitating data analysis of results and supporting research decisions.
- **Maintained** code quality and reduced bugs by **20%** by integrating **unit tests** into a **Test-Driven Development (TDD)** framework, leveraging Git for version control, and actively participating in thorough code reviews.

SELECTED PROJECTS

ConquestFour - Qualcomm & Microsoft On-Device AI Hackathon [Demo] — Seattle, Washington
Team of 5 Co-Lead Developer — *March 2025*

- **Won Second Place out of 28 Teams** creating a **local LLM**-powered Connect Four game using **Mistral-7B (4-bit quantized**).
- **Implemented** Minimax algorithm with Alpha-Beta pruning and **Z3 state validation**, integrated with speech-to-text capabilities using **OpenAI Whisper** Increasing overall player-AI interaction by **75%**.
- **Optimized** performance with **NPU-accelerated** animation reducing game overall processing delay by **60%**.

Semantic Sounds – A Personalized Recommender [Demo] — Seattle, Washington
Team of 3 Lead Developer — *Dec 2024*

- **Designed** a semantic meaning music recommender system with improved relevancy and **HDBSCAN clustering** effectiveness (Silhouette score: **0.7464**) from base recommender using SHAP-selected features and **sBERT** embeddings.
- **Preprocessed** 60000 Spotify entries achieving regression models' accuracies of **>.5** to identify features influencing song popularity.

CERTIFICATIONS AND ACTIVITIES

Certifications — Online
Google Cyber Security Certificate (Linux, MySQL, and Python hands-on labs) — *Completed Nov 2024*
Azure Fundamentals (AZ-900) — *Completed June 2025*

Selected for Graduate Leadership Institute at Northeastern (GLI) | *Leadership Development* | *Dec 2024* — Seattle, Washington

- **Developed** leadership skills through workshops and feedback sessions, resulting in 40% improvement in team performance.