

Andrew Q. Nguyen

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EDUCATION

Northeastern University <i>M.S. in Computer Science – (DSA, Distributed Systems, Statistics, OOP, ML, Operating Systems)</i>	Seattle, Washington <i>Expected Graduation, June 2026</i>
University of California San Diego <i>B.S. in Biochemistry and Cell Biology Minor: Business (Rady School of Management)</i>	San Diego, California <i>Graduated, March 2020</i>

SKILLS

Programming Languages / Web Tech: Python (proficient), Java (proficient), C++ (familiar), SQL, HTML, JavaScript, R, React, RESTful APIs
Tools: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, XGBoost, Power BI, Splunk, Wireshark, Routing Protocols, MySQL, VMs, TDD
DevOps / Databases: Git, Docker, Kubernetes, Jenkins, CI/CD, Bash, Apache Spark/Kafka, MongoDB, AWS DynamoDB, AWS Lambda

WORK EXPERIENCES

Vigitron Inc. Innovative Networking Solutions <i>Network Engineer</i>	San Diego, California <i>June 2021 – June 2024</i>
<ul style="list-style-type: none">▪ Reduced manual testing by 20% by automating security testing frameworks, integrating Splunk and Wireshark for log analysis.▪ Achieved a 15% improvement in pre-emptive issue detection by implementing machine learning models using Scikit-learn on Virtual Machines to predict potential network vulnerabilities.▪ Enhanced QA testing and network maintenance effectiveness by applying knowledge of computer systems hardware, PoE, switches, midspan/coax/UTP devices, TCP/IP protocols, and routing protocols (BGP, OSPF).	
Dr. Alex Yao, San Diego State University <i>Data Intern</i>	San Diego, California <i>Dec 2023 – June 2024</i>
<ul style="list-style-type: none">▪ Improved model accuracy by 12% by focusing on feature selection and hyperparameter tuning in a product recommendation system using PyTorch and e-commerce data.▪ Enhanced system scalability by contributing to cloud deployment of machine learning models using AWS Lambda and Kubernetes.▪ Ensured releases with minimal errors by setting up CI/CD pipelines with Jenkins and Docker for scalable deployment of models.	
Gleeson Lab, University of California San Diego <i>Machine Learning Researcher</i>	San Diego, California <i>Jan 2019 – Jan 2021</i>
<ul style="list-style-type: none">▪ Streamlined bioinformatics data processing by 50% by developing scripts in Bash, C++ and SQL on the UCSD Computing Cluster.▪ Supported data analysis and decision-making by creating interactive dashboards using React, HTML, CSS, JavaScript, and Power BI.▪ Maintained code quality and reduced bugs by 15% through version control with Git and active participation in code reviews using Test-Driven Development methodologies.	

SELECTED PROJECTS

Semantic Sounds – A Personalized Recommender (Python) <i>Team Lead</i>	Seattle, Washington <i>Dec 2024</i>
<ul style="list-style-type: none">▪ 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.▪ Enhanced users' satisfaction by 50% integrating audio and lyrics to recommend songs based on "mood" and "semantic meaning".▪ Preprocessed 10000 Spotify entries achieving regression models' accuracies of >.5 to identify features influencing song popularity.	
Gesture-Based Music Notation System (Java) <i>Team Lead</i>	Seattle, Washington <i>Nov 2024</i>
<ul style="list-style-type: none">▪ Improved system scalability and efficiency by optimizing a music system using OOP principles and advanced GUI development.▪ Achieved 90% gesture recognition accuracy by leveraging bounding boxes, subsampling, and coordinate transforms.▪ Enhanced modularity by 40% through refactoring, serialization, and creating reusable components.	
Structural Variation (SV) Detection Model (Python/Bash) <i>Team Member</i>	San Diego, California <i>May 2020 – Sept 2020</i>
<ul style="list-style-type: none">▪ Reduced false positive rates by 10% when detecting somatic structural variants by developing a machine learning data pipeline.▪ Deployed an Apache Spark-based pipeline to analyze large GIAB consortium datasets, improving preprocessing speed by 33%.▪ Generated high-coverage BAM files (up to 300x) by utilizing BWA for sequence alignment and SAMtools and BEDTools for coverage and variant analysis.	
<h2>CERTIFICATIONS AND ACTIVITIES</h2>	
Certifications <i>Google Cyber Security Certificate (Linux, MySQL, and Python hands-on labs)</i> <i>AWS certified Cloud Practitioner</i>	Online <i>Completed Nov 2024</i> <i>In progress - Expected Feb 2025</i>
WeSafe: Community-Driven Emergency App Hackathon Oct 2024	Seattle, Washington
<ul style="list-style-type: none">▪ Ensured a responsive, user-friendly design by developing the front-end interface using HTML, CSS, and JavaScript.▪ Integrated real-time analytics by utilizing AWS Lambda for backend development with cloud-based geolocation services.	