Nguyen-Hanh Nong

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Technical Skills

Programming Languages: Python, C#, C, C++, Rust, Go, Java, JavaScript, TypeScript, HTML/CSS, TCL
Frameworks and Libraries: Angular, Playwright, React, Next.js, Express.js, Django, Node.js, Electron, ASP.NET
Developer Tools: Git, GitHub, GitLab, Perforce, Postman, Docker, Apache Maven, Swagger, Hotjar, ElasticSearch
Databases: SQL, MSSQL, MongoDB, SQLite, Prisma

Experience

Software Engineer Intern January 2025 - April 2024
Cisco *Ottawa, Ontario*
- Incoming Software Engineer Intern at Cisco for Winter 2025 term on Embedded Automation team.

Software Engineer Intern May 2024 - August 2024
Qualcomm *Toronto, Ontario*
- Led the development of a full-stack desktop color calibration tool using **Electron, TypeScript, and React**, enabling users to fine-tune display properties like hue and saturation, and deployed it to over **500 clients**.
- Designed and implemented backend services with **C# and ASP.NET**, integrating native **C++ code** directly for color calibration drivers, achieving a 50% reduction in latency.
- Collaborated with a team to implement a **CI/CD pipeline** for ASP.NET API testing and code coverage using **Swagger, NUnit, and Jenkins**, ensuring reliable daily builds and comprehensive test reports.
- Engineered a **cross-platform Python SDK** enabling extraction of display color and hardware data from Android phones by replacing the previous DLL-based solution, improving **OS compatibility** and scalability.

Software Developer Intern September 2023 - December 2023
Government of Canada *Ottawa, Ontario*
- Led creation of **CI/CD** pipeline for automated build deployment and regression testing of web applications using **GitLab**, **ElasticSearch, Logstash, and Kibana.**
- Designed **SQL scripts** to automate database seeding and migrations for **CI/CD pipeline integration**, resulting in automated database resetting.
- Redesigned and enhanced the front-end of internal company applications using **Angular** and **TypeScript**, improving UI aesthetics and implementing accessibility best practices to ensure compliance with **WCAG** standards, resulting in a more inclusive user experience.

Software Developer Intern May 2023 - August 2023
Nokia *Ottawa, Ontario*
- Spearheaded design and implementation of a **Python**-powered packet analysis tool for live inspection and encryption verification across 3+ routers.
- Streamlined **AES** and **RSA** encryption tests by developing **PyTest and Hypothesis** test suite, reducing execution time by **20%** and enhancing test readability.

Projects

cs2-golang-hacker-analyzer | **Go, Python, SQLite, NumPy, Pandas, Scikit-learn, Tensorflow, Matplotlib**
- Built a **Counter-Strike 2** anti-cheat using **Python and Go**, integrating TensorFlow and Scikit-learn to analyze player gameplay data and **classify cheating behavior** from player actions and statistics.
- Designed and trained a multilayered **Convolutional Neural Network (CNN)** using **TensorFlow and Keras**, achieving a **10% improvement in classification accuracy** over standard binary classification models through optimized architecture and fine-tuned hyperparameters.

advanced-mnist-visualizer | **Python, NumPy, Pandas, Scikit-learn, Tensorflow**
- Engineered an advanced **MNIST** image analyzer using **Python, TensorFlow, and Scikit-learn**, capable of deciphering stacked digits from noisy images with high classification accuracy.
- Optimized a custom neural network model using **TensorFlow**, achieving a **15% improvement in test accuracy** through fine-tuning hyperparameters and increasing gradient descent step size.
- Processed and **analyzed datasets with NumPy and Pandas**, enabling efficient feature extraction and visualization of classification results using Matplotlib.

RL-Geospatial Satellite Simulator | **Python, NumPy, Pandas, Scikit-learn, Tensorflow, PyQT**
- Engineered a satellite pathfinding simulator using **Python, TensorFlow, and PyQt**, integrating machine learning and deep learning algorithms to predict optimal satellite routes while avoiding space debris.
- Designed statistical performance metrics and visualizations using **Pandas, NumPy, and Matplotlib**, providing insights into machine learning algorithm efficiency across 1,000+ simulations.
- Developed a **custom Q-Learning reinforcement learning algorithm** for satellite path optimization, **reducing average path length by 30%** compared to traditional routing algorithms.

Education

Carleton University September 2021 - April 2026
Bachelor of Computer Science, Artificial Intelligence and Machine Learning Stream *Ottawa, Ontario*
- **GPA: 4.0/4.0**
- **Estimated Graduation Date: April 2026**