Daniel Huynh

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Education

University of Alabama at Birmingham Birmingham, AL

B.S. in Computer Science, Minor in Mathematics *Aug. 2021 – May. 2026*

- Relevant Coursework: Software Engineering, Object-Oriented Programming, Systems Programming, Machine Learning, Computer Security, Database App Development, Data Structures and Algorithms

Experience

UAB Robotics Research Birmingham, AL

Machine Learning Researcher *October 2025 – December 2025*

- Partnered with other students to research and develop a vision-based robotic manipulation system using camera sensor input.
- Implemented and evaluated object detection and pattern recognition models (YOLOv8, region-based CNNs) to enable reliable target identification under variable environmental conditions.
- Applied reinforcement learning techniques to improve system adaptability and recognition accuracy through iterative training and feedback loops.

Chick-Fil-A Greystone Birmingham, AL

Team Lead *October 2021 – February 2024*

- Oversaw a kitchen that produced over $15 million in annual revenue, ensuring consistent quality and operational excellence.
- Coordinated with directors and management to identify profit-driving opportunities and implement strategies that improved overall team performance.
- Provided coaching, mentorship, and conflict resolution, while building a collaborative team culture and strengthening communication skills.

Projects

Radiowave Scrubber — Sponsored by Trideum | *React, C++, SQLite3* January 2026 – Present

- Developed a full-stack automated radio monitoring system using C++ for signal processing and React.js for real-time data visualization
- Integrated GPT-4o mini APIs to automate the transcription and summarization of captured radio transmissions, transforming raw audio into searchable text data
- Engineered a sequential scanning algorithm in C++ to monitor 100+ frequencies, utilizing squelch-based logic to trigger automated recording and processing only when a signal exceeds a specific decibel threshold.

Malware Detection via Machine Learning | *Python, Scikit-learn* October 2025 - December 2025

- Designed and implemented machine learning models to classify Android APK files as benign or malicious, given a dataset of 12,000 feature vectors.
- Compared linear and nonlinear classifiers without PCA-based dimensionality reduction.
- Performed cross-validation for hyperparameter tuning and evaluated feature importance to interpret model behavior.
- Achieved an average multiclass accuracy of 89% and 93% binary classification accuracy across logistic regression, KNN, random forest, and SVM models, evaluated using cross-validation.

Task Tracker | *React, Flask, MongoDB, JWT* September 2025 – October 2025

- Developed a full-stack task management application using React, Flask, and MongoDB, featuring JWT-secured authentication and RESTful APIs.
- Designed backend data models and endpoints to support task prioritization, persistence, and user isolation, following Agile workflows, Git-based version control, and unit testing practices

Technical Skills

Languages: C, C++, Java, Python, HTML/CSS, SQL
Frameworks: React, Flask, JUnit, JavaFX
ML / AI: Scikit-learn, NumPy, Ollama
Developer Tools: Git, GitHub, Docker, VSCode, IntelliJ, Eclipse, Cursor
Operating Systems: Linux, macOS, Windows