

EDUCATION

University of North Carolina at Chapel Hill – Chapel Hill, NC

Expected Jun 2026

Computer Science, B.S.

- **Coursework:** Discrete Mathematics, Data Structures and Analysis, Linear Algebra, Systems Programming, Foundations of Programming
- **GPA:** 4.00

Honors and Awards

- Carolina Scholar (full scholarship)
- Honors Carolina

EXPERIENCE

Nolyn – Greenville, NC

May 2023 - present

nolyn.co

Founder

- Founded a startup w/ team of 5 to build a smarter stop-arm camera for 100X less than competitors (\$30 vs. \$3,000)
- Built an IoT camera on the ESP32 platform with C++ and a web interface with JS/React
- Architected AWS cloud infrastructure with NoSQL DB, RESTful APIs, and an MQTT to communicate with cameras.
- Coordinating closely with stakeholders and working on deploying on Pitt County Schools' 200+ buses
- Received a \$1,000 grant from Amazon

ACADEMIC RESEARCH

Machine Learning-Enhanced Electrocardiograms

Sep 2024 - present

Researcher

- Working with Dr. Faisal Syed at UNC School of Medicine on using deep neural networks to analyze ECGs.

Implementing a Federated Learning System to Protect Patient Privacy

Feb 2020 - April 2023

Lead Author

- Conducted research into applying federated machine learning in the field of healthcare data analysis.
- Used TensorFlow-Federated to train federated models and Pandas/NumPy to perform data processing.
- Demonstrated that federated modeling results in a <5% loss in accuracy while eliminating the need to share data
- Presented my findings at East Carolina University's ISS Symposium.

LEADERSHIP AND COMMUNITY INVOLVEMENT

Pitt Pirates Robotics – Greenville, NC

Aug 2020 – Jun 2020

Software/R&D

- Trained a custom deep neural network with PyTorch to achieve real-time object detection.
- Deployed model on the NVIDIA Jetson platform, a Linux-based CUDA-enabled edge processor
- Designed website with Figma and built it out with Tailwind/Vercel

The Daily Reflector – Greenville, NC

Dec 2022 - present

Columnist

- Regularly featured voice on issues ranging from technology to economic policy.

Mozilla – San Francisco, CA

Dec. 2023 - present

Open-Source Contributor

- Contributor to bugbug, a Mozilla project aimed at using ML to classify bugs

ADDITIONAL INFORMATION

- Highly proficient in Python, JavaScript, and Java.
- Proficient in Rust and C/C++.
- Experienced in building cloud applications, full stack development, and machine learning, particularly computer vision