Education____

North Carolina State University

Raleigh, NC

Aug. 2020 - May. 2024

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

- Minor in Cognitive Science, Concentration in Cybersecurity
- Dean's List (Fall 2020 Present)

Work Experience _____

InStryde Winston Salem, NC

COMPUTER VISION ENGINEER

May. 2021 - Present

- Designed and implemented a scalable solution to extract data points from a 2D image using multiple machine learning models and computer vision post-processing techniques.
- Saved the company over \$700 per cloud instance by integrating CPU support for all ML models.
- Designed and implemented a REST API for model processing and proxying client requests to 3rd-party services.
- Setup and managed continuous delivery, health checks, and scaling for backend on a major cloud provider.
- · Led development of frontend React scanning software with custom Real-Time ML to capture a clean image automatically.

Skills

Languages Python, Javascript, Java, C, HTML, CSS

Tools React, Docker, OpenCV, Numpy, PyTorch, Selenium, Pandas, Git, GCP, FastAPI, Flask, Jenkins, Linux, Nginx, LaTeX

Projects_

Sustainable Recycling Project - Samsung Solve for Tomorrow

Durham, NC

NEURAL NET COMMITTEE LEAD

Jan. 2020 - Jun. 2020

- Won National Finalist Prize of \$150,000 in technology and supplies for NC School of Science and Math.
- Created an app using Flutter that uses image processing and machine learning algorithms to help people separate recyclables and non-recyclables.
- Trained models using Yolov3 and tflite for TensorFlow which allowed for real-time, multiple object detection using a top down approach (looks at a whole photo instead of pixel by pixel).
- Part of the three person national pitch presentation team, delivered layman explanation and overview of testing and evaluation methods
- Led development of frontend React scanning software with custom Real-Time ML to capture a clean image automatically.

PERSONAL PROJECTS

Flower Identification Network, Another classification network that differentiated between 133 species of flowers with multiple objects detection in real-time.

Siri/Stri/WebAssignHW, Collection of programs that keep track of upcoming assignments on various Learning Management Systems and add them to a task manager.

Reverse Engineering iOS apps, Reverse engineered multiple iOS apps and injected custom dylibs to load on launch and modify various parameters of the application.

10T Garage Door Opener, Constructed a HomeKit compatible garage door opener from a low-cost Wi-Fi SoC, relays, and magnetic sensors to detect state.

Leadership Experience

Hack Davidson (Branch of The Hack Foundation) | FOUNDER Student Ambassador Eagle Scout Project Leader National Honors Society | LEADERSHIP TEAM

Aug. 2019 - May. 2020

Sep. 2018 - May. 2020

Jul. 2017 - Dec. 2018

Jul. 2019 - May. 2020