Education

North Carolina State University

Raleigh, NC

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Aug. 2020 - May. 2024

- 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

Frameworks/libraries/tools

REACT, DOCKER, OPENCV, NUMPY, PyTorch, Selenium, Git, GCP, FastAPI, Flask, Jenkins

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.

2018 **IoT 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

GRIFFITH BAKER · RÉSUMÉ

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