Shengkai Xu

Sam

14008 Labeau Ave
Charlotte, North Carolina, 28277
shengkai.x.sam@gmail.com
+1-734-731-6398
Github: www.github.com/ric3b0wl

As a Chinese international student with 10+ years of US residency, I possess a strong background in engineering and a passion for exploring and implementing innovative technologies. With excellent analytic skills and attention to detail, I strive to remain up-to-date with the latest advancements in the field and leverage these to make a positive impact through my work.

Key Skills

- PCB Board Design
- SOLIDWORKS
- 3D Printing
- Python
- PyTorch
- Embedded C
- Data Analysis
- Linux/Debian Proficiency

Projects

- Tech Demo: Office Cat detector using transfer learning deployed on Nvidia Jetson Nano
- Academic Project: Implemented YOLOv4/5 models to detect mask usage in videos footage.
- Senior Design Project: Published a IEEE conference article on Robotic Path Planing algorithm.
- Personal: Developing a custom mechanical keyboard from zero, completing with personalized firmware.
- Personal: Automated 3D printing server stations via Telegram messaging app.
- Personal: Constructing a competitive race car with upgraded performance modifications

Professional Experience

2022 - Present

Research Lab Assistant
Transformative Computer Systems and Architecture Research Lab, Charlotte, North Carolina Area

Developed and researched an AI pipeline for civilian security and public safety systems, specifically focused on video processing and anomaly action detection.

TeCSAR is a UNC Charlotte research lab led by Dr. Hamed Tabkhi. Lab uses machine learning, deep learning, and data analytic to improve community safety, health, and well-being.

2021 - Present

Embedded Firmware Engineer
Oxit, Charlotte, North Carolina, United States

Responsible for researching and developing tools to assist in various projects. One of my major contributions was designing module libraries that streamlined embedded applications for different chip-sets

Oxit is an engineering company specializing in low-power, long-range RF communication technology for IoT applications, including LoRa.

2020 - 2021

OneIT Tech Analyst
University of North Carolina at Charlotte, Charlotte, North Carolina, United States

Provided university IT support and resolved technical issues for faculty and staff via phone, email, and in-person support.

Education

2022 - Present

Master's degree in Computer Engineering
University of North Carolina at Charlotte at Charlotte, NC

Courses Highlights:
- Real-Time Machine learning
- Machine learning for Internet of Things

2018 - 2022

Bachelor's degree in Computer Engineering concentration of Machine Learning
University of North Carolina at Charlotte at Charlotte, NC