Collin Bolles

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Intro

Research Software Engineer for SAIL at Boston University. Full Stack developer creating applications to enable research at the university.

Skills and Proficiency

Languages

ARM Assembly	●●○○○
C	●●●●○
C#	●●●○○
C++	●●●○○
HTML/CSS	●●●●○
Java	●●●●●
JavaScript	●●●○○
Python	●●●●●
Rust	●●●○○
Typescript	●●●○○

Frameworks and Libraries

Angular	●●●○○
Django	●●●○○
Flask	●●●○○
NestJS	●●●○○
React	●●●○○
Spring Boot	●●○○○

Tools and Environments

AWS	●○○○○
Azure	●●○○○
Git	●●●●●
Google Cloud	●●●○○
LaTeX	●●●○○
Linux	●●●●○
Mac OS	●●●●○
Maven	●●●○○
ROS	●●○○○
Vim	●●●○○
Windows	●●●○○

Awards

Best IoT Hack · *Publicis Sapient*
UB Hacks 3rd Place Award · *UB Hackathon Group*
Congressional App Challenge Winner · *NY Congressional District 21*

Education

Boston University
M.S. Robotics and Autonomous System
GPA 3.88/4
Rochester Institute of Technology
B.S. Computer Science
GPA 3.84/4

Employment

Software and Application Innovation Lab · Software Engineer — May 2022 to Present
- Created tagging platform for annotating videos containing ASL signs
- Managed deployment of data collection tool target pay inequality

D3 Engineering · Engineering Technician — Jan. 2021 to Dec. 2021
- Developed Linux Kernel drivers for cameras designed for embedded vision on the NVIDIA Jetson platform
- Populated Linux device trees for newly designed hardware
- Add features to NVIDIA Linux Kernel to expand camera platform capabilities
- Solved hardware and software bugs using Linux and hardware analysis tools on custom hardware
- Tools and Technology: C, Python, Linux Kernel, Git, Gerrit

Herrick Technology Labs · Software Intern — Sep. 2020 to Dec. 2020
- Worked on an inter-disciplinary team tasked with producing a multi-faceted sensing solution for US military avionics
- Wrote libraries to communicate with HTL radio solutions over a range of protocols including TCP over Ethernet and UART
- Optimized radio based object tracking algorithm leveraging GPU based hardware acceleration
- Tools and Technology: C++, Python, Git, Cuda

Blue Spiral · Software Developer — June 2020 to Aug. 2020
- Wrote iOS application for on-the-spot employee performance reviews using SwiftUI
- Updated existing image processing pipeline to use the newest Azure OCR API
- Developed software to detect vegetation levels from done footage
- Tools and Technology: C#, Swift, Python

Ball Bowler · Software Developer — Jan. 2019 to Nov. 2019
- Designed and developed a UI for a miniature bowling lane
- Implementing scoring logic and user interface on a LattePanda single board computer
- Captured state of bowling pins using computer vision
- Tools and Technology: Java, JavaFX

Blue Spiral · Software Intern — Aug. 2017 to Aug. 2018
- Developed object detection training pipeline built on top of Tensorflow
- Applied object detection pipeline for the detection of unwanted ducks
- Tools and Technology: C#, Python, C++, Tensorflow

Valogix · Software Intern — July 2016 to Nov. 2018
- Developed a web application for keeping track of the over 100 deployed applications
- Resolved bugs and incorporated features in the existing Valogix code base
- Tools and Technology: Java, Spring, Spring Boot, PostgreSQL, Groovy

Activities

Electric Vehicle Team
Firmware Lead — May 2020 to May 2022
Firmware Member — Dec. 2018 to May 2020
- Develop a custom software library for developing firmware on EVT produced hardware (EVT-core)
  - Produce object oriented based software layed on top of the STM32 Hardware Abstraction Layer (HAL)
  - Wrote drivers to support various communication protocols in EVT-core including CAN, UART, I2C, and PWM
- Designed and developed firmware for the EVT produced battery management system
- Added support for CANopen to EVT-core for communication across the motorcycle systems