

# Collin Bolles

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## Intro

Senior Computer Science student graduating May 2022, looking for a full-time opportunity starting in Fall 2022. Main interests in embedded and systems level programming.

## Skills and Proficiency

### Languages

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

### Frameworks and Libraries

Django	●●●●●
Flask	●●●●●
Mbed	●●●●●
Node.js	●●●●●
React.js	●●●●●
Requests	●●●●●
Spring Boot	●●●●●

### Tools and Environments

AWS	●●●●●
Azure	●●●●●
Git	●●●●●
Google Cloud	●●●●●
LaTeX	●●●●●
Linux	●●●●●
Mac OS	●●●●●
Maven	●●●●●
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

### Rochester Institute of Technology

**B.S. Computer Science**

GPA 3.85/4

Expected Graduation: May 2022

## Employment

### 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 drone 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
- Incorporated object detection pipeline with the Microsoft Hololens
- Tools and Technology: C#, Python, C++, Tensorflow

### Valogix · Software Intern

July 2016 to Nov. 2018

- Implement a system level automated testing suite for Valogix web application
- Produced custom web API incorporated into Valogix's servers for system health information
- 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 Present

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 layered 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
- Develop drivers for communicating with Sendyne GFD, TI battery management chip, and STM32 peripherals