





ISAAC INGRAM

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OBJECTIVE

To find a Summer 2024 co-op/internship in embedded development.

EDUCATION

BS Computer Science | [Rochester Institute of Technology](#)

 Expected December 2026

 Rochester, New York

Coursework in Computer Science Theory, Artificial Intelligence, and Differential Equations.

WORK EXPERIENCE

Software Engineering Co-Op | [Collins Aerospace](#)  May 2023 - Present

- Write low-level libraries and drivers to support avionics application development
- Develop a new SITL testing framework to significantly reduce development time within the Avionics Platform Software department
- Create scripts to automate documentation tasks, boosting team productivity

Embedded Systems

Avionics

Requirements Management

Independent Contractor | [MakePlus](#)  September 2023 - January 2024

- Write embedded motor control software for custom home automation application
- Develop a secure mesh network so devices can receive commands
- Create an intuitive and customizable user interface for device control

ESP-NOW

Qt

Raspberry Pi OS

PROJECTS

SproutChaperone |  [IsaacIngram/SproutChaperone](#)

- Detect and display current moisture level of plants on a user-friendly LCD
- Constantly report data to a remote server for long-term logging and analysis
- Display data remotely through a comprehensive DataDog dashboard

C++

Arduino

DataDog

TruckFood |  [IsaacIngram/TruckFood](#)

- Webscrape information on local food trucks partaking in RIT activities each week
- Utilize the Slack API to notify users and display data in an intuitive way

Python

Selenium

Rapid React Robot

 [CommandoRobotics/FRC_Rapid_React_2022](#)

- FIRST Robotics Competition robot winning the **Innovation in Control Award**
- Use computer vision for robot localization and an automated targeting system based on computed projectile mechanics
- Develop complex control algorithms to ensure accurate path-following and safe control of all mechanical systems

Java

Arduino

Computer Vision

PID

Feedforward

LANGUAGES

C

Java

Python

TECHNOLOGIES

ESP-IDF

Qt

FreeRTOS

Git

Subversion



Jama

DOORS

ACTIVITIES



Computer Science House

 [csh.rit.edu](#)

- 3D Administrator  January 2023 - Present
 - Manage and repair 3D printers
 - Assist other members in designing, slicing, and manufacturing 3D printed parts
- Member  August 2022 - Present
 - Living-learning community focused on sharing technical skills and knowledge
 - Empower and collaborate with other members on self-driven projects

FIRSTRobotics

 [firstinspires.org](#)

- Team Captain  September 2021 - March 2022
 - Schedule and run meetings
 - Solicit team feedback and shape overall trajectory
 - Establish and maintain timelines to ensure timely completion of the project
- Lead Programmer  September 2020 - March 2022
 - Manage codebase to ensure working code is constantly available for hardware teams
 - Organize and complete programming tasks to meet overarching project timeline
 - Teach and inspire younger students to code