

# JACKSON ISENBURG

770-668-6875 ◇ jaxonfiles@gatech.edu ◇ github.com/JIceberg ◇ linkedin.com/in/jaxonfiles

## EDUCATION

### Georgia Institute of Technology

Expected Graduation: May 2024

Bachelor of Science in Computer Science, GPA: 3.95

Concentration in Systems & Architecture and Intelligence

Minor in Robotics and Mathematics

**Coursework:** Operating Systems, Data Structures & Algorithms, Computer Networking, AI

## SKILLS

<b>Programming</b>	Java, Python, C/C++, Rust
<b>CAD Programs</b>	Fusion 360, Inventor, Solidworks
<b>Web Design</b>	HTML, CSS, JavaScript, Web Hosting
<b>Hardware</b>	Arduino, Raspberry Pi, PCB, FPGAs

## EXPERIENCE

### Student Research Assistant

May 2021 – Present

CIPHER

*Georgia Tech Research Institute*

- Designed and implemented the first real-time operating system in Rust for the Cortex R4
- Tested improvements between a model in Rust and C for a performant and secure operating system where nearly 100% of Rust's safety features at abstraction levels above the bootloader were utilized

### Teaching Assistant

Jan. – May 2021

CS 2110

*GT College of Computing*

- Led lab sessions and office hours that supplemented lecture and worked directly with 50 students
- Produced quiz and homework assignments for students with detailed autograders

### Junior Research Assistant

June – July 2020

Aerospace, Transportation & Advanced Systems Laboratory

*Georgia Tech Research Institute*

- Worked and modeled a 5 degree-of-freedom Arduino-powered arm
- Developed a C++ library for the arm's inverse kinematics using the FABRIK algorithm
- Researched various OpenCV-extendable libraries such as AprilTags for detecting visual orientation of the end effector

### Junior Research Assistant

June – July 2019

Aerospace, Transportation & Advanced Systems Laboratory

*Georgia Tech Research Institute*

- Researched piezoelectric materials and responsiveness of neoprene to heat
- Sole researcher of liquid treatment using UV-C LEDs for the Gates Foundation reinvented toilet which had an effective wavelength range of 250-300 nm
- Worked on a waveform generator for an AD9833 paired to an Arduino Mega

## PROJECTS

### FTCLib

- Founded and led the development of a Java library for FIRST Tech Challenge, used by hundreds of teams internationally to enhance their software efficiency and experience
- Led a team of 15 developers for active contribution and maintenance of the library

### Grouch

- Created a scraping program in Python 3 that aids the registration process for Georgia Tech students by checking vacant spots and available waitlists to be used as an alternative to the currently paid service that students use

## EXTRACURRICULAR

### HyTech Racing

*Data Acquisition*

- Created a C++ library to directly interface with the registers on a BNO055 IMU with an Arduino
- Designed schematics and boards for an accelerometer and gyroscope sensor at the center of mass of the car to be added to the data acquisition CAN

### RoboJackets

*IT Coordinator*

- Managed the networks and distributed services provided to over 600 members
- Provided assistance to any members experiencing issues with their provided services or connections