

JACKSON ISENBURG

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EDUCATION

Georgia Institute of Technology

Expected Graduation: May 2024

Bachelor of Science in Computer Science

Concentration in Systems & Architecture and Intelligence

Minor in Robotics and Mathematics

Coursework: Operating Systems, Data Structures & Algorithms, Processor Design, Machine Learning

SKILLS

Programming Java, Python, C/C++, Rust, Verilog

CAD Programs Fusion 360, Inventor, Solidworks

Web Design HTML, CSS, JavaScript, Web Hosting

Hardware Arduino, Raspberry Pi, PCB Design, FPGAs

Mathematics Differential Equations, Linear Algebra, Graph Theory

Software Operating Systems, Compilers, Computer Organization, Networking

Robotics Control Theory, Motion Planning

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 as an alternative to the currently paid service that students use

EXTRACURRICULAR

HyTech Racing

Data Acquisition

- Designed schematics and fabricated PCBs to retrieve sensor data to be analyzed
- Programmed and tested Arduino/Teensy microcontrollers over a CAN line for messages containing sensor data to be parsed into a useful, readable format for debugging and testing

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