ZACHARY OLKIN

EDUCATION

Georgia Institute of Technology *August 2018 - May 2022*
Candidate for Bachelor of Science in Computer Engineering
GPA: 4.00
Member, Eta Kappa Nu

EXPERIENCE

iREAL Lab January 2020 - Present
Underdraguate Researcher *Atlanta, GA*

· Lead the development of an autonomous quadrotor architecture for path planning and control leading to the submission of one paper. Developed and analyzed non-linear controllers and filters. Innovated novel methods for time-optimal, onboard trajectory generation.
· Created and tested a tool to receive data from external cameras on a flying quadrotor in real time.

Grand Challenges May 2020 - Present
Team Facilitator *Atlanta, GA*

· Guide the work of a team of undergraduate freshmen in the Grand Challenges program at Georgia Tech. Help the team develop ideas, work on leadership skills, and think critically about real world problems.

EPIC Lab January 2019 - May 2019
Undergraduate Researcher *Atlanta, GA*

· Worked on the development of a hip exoskeleton for assisting people with walking disabilities. This included walking in the exoskeleton and monitoring others while they used the exoskeleton.
· Developed a user interface for researchers to easily adjust, tune, and graph parameters in real time.

Left Hand Robotics May 2019 - August 2019
Robotics Engineering Intern *Longmont, CO*

· Designed filters for accelerometer data that reduced noise by six orders of magnitude. Wrote critical IMU device driver for an new IMU.
· Worked in a small team of four other robotics engineers.

Grand Challenges January 2019 - May 2019
Ambassador *Atlanta, GA*

· Contacted potential Georgia Tech freshman and discussed my experiences at Georgia Tech and in the Grand Challenges program.
· Provided advice to new students and gave tours to students who came to visit.

ACTIVITIES

The Hive Interdisciplinary Makerspace August 2019 - Present
Master Peer Instructor *Atlanta, GA*

· Teach students soldering, breadboard use, 3D printing best practices, and PCB Fabrication. Also help students find the correct parts for their projects.
· Teach other peer instructors how to use the benchtop electronics tools. Assist with the new peer instructor interview process.

RoboJackets May 2019 - December 2019
Software Training Lead *Atlanta, GA*

· Lead a group of 10 students to outline, script, film and edit an educational video series on C++.

· Taught in-person classes about writing C++ for robotics

PATENTS AND AWARDS

US Patent: # 9,303,448: *FLOOD SHIELD SYSTEMS AND METHODS*

US Patent Pending: *AUTONOMOUS PATH TREATMENT SYSTEMS AND METHODS*

1st Place at HackGT: First place out of about 200 submissions. *Georgia Institute of Technology (2019)*

Genius Award: Award for assisting others and achieving high academic standards. *Georgia Institute of Technology (2019)*

Prudential Spirit of the Community Award: Recognition of outstanding volunteer work. *State Wide, Colorado (2016)*

SKILLS

Programming	C++, C, Matlab, x86 Assembly, MIPS Assembly
Hardware	Oscilloscopes, Logic Analyzers, Waveform Generators, Power Supplies
Software	Eagle CAD, Solidworks, GitHub, LaTeX, Vim
Tools & Operating Systems	Linux, Windows, Slack, Microsoft Office, Google Drive