Aiden Cullo

446 Circle Avenue, Kingston, NY 12401 | 845.943.8311 | *culloaiden3@gmail.com* | *http://www.aidencullo.me*

EDUCATION

Binghamton University, Thomas J. Watson School of Engineering Binghamton, NY Bachelor of Science in Computer Science, Applied Physics Expected May 2019 Cumulative GPA: 3.73/4.0; Deans list; Phi Eta Sigma Honor Society

TECHNICAL SKILLS Coursework: Data Structures — Programming with Objects — Machine Organization — Computer Systems — Architecture and Programming — Integral Calculus — Multivariable Calculus — Modern Physics — Differential Equations Computer Science: Java, C, C++, Python, Linux, Excel, Javascipt, SQL, git, bash, LaTeX, Vim, OpenMP

RELEVANT EXPERIENCE Binghamton Department of Physics, Applied Physics, and Astronomy Binghamton, NY Research Assistant August 2016Present Write software for evolutionary machine learning algorithm to find most stable atomic configuration Debug and parallelize C code using multithreading with OpenMP Collaborate with fellow undergraduate and graduate students on lab experiments Cornell Robotics Personal Assistants Laboratory Ithaca, NY Research Intern May 2016August 2016 Developed algorithm in C++ and ROS for robot to visually identify properties of an object (shape, texture, etc.) Wrote data marshaling software in Python to communicate instructions/information between distributed components Coordinated with other team members to modify software in order to smoothly integrate into larger project

LEADERSHIP Hack BU Binghamton, NY Internal Hackathon Coordinator August 2015Present Help organize and run Binghamtons annual hackathon with 300+ participants and volunteers Communicate with other hackathon organizers, sponsors, and school administrators Mentor and teach student hackers at weekly meetings and club sponsored events Binghamton Robotics Club Binghamton, NY President August 2016Present Coordinate teams to participate in inter-club design competitions and the Spaceport America Cup Organize demonstrations, group projects and collaborative events with other clubs Educate graduate/undergraduate members on concepts related to physics, computer science, and robotics

PROJECTS Artemis II Binghamton, NY Hybrid-Fuel Rocket August 2016Present Designed shape and structure of 6-foot-tall frame and nosecone of rocket Managed a group of 5-6 engineers and computer scientists in creating rocket components Built prototype for modular rocket engine powered by a potassium nitrate and sucrose hybrid fuel DNA Sequencer New York, NY Python compiler that calculates melting temperature December 2016January 2017 Developed algorithm in Python that calculates Gibbs free energy contribution of each base pair Using oligonucleotide molarity and salt content, calculated the temperature of 50% dissociation of given DNA strand Corresponded with computation biology department at NYU to perform DNA experiments on double mismatch sequences Pippin Binghamton, NY Java CPU simulator January 2016May 2016 Graphical User Interface that imitates a CPU with memory slots, an accumulator, a program counter, etc. Assembled pippin assembly (.pasm) source code into executable files and runs .exe file in GUI Simulates a CPU by changing memory slots as each machine code commands are executed Mazerunner Rosendale, NY Autonomous VEX Robot February 2015May 2015 Built robot and attached servo motors, ultrasonic sensors, bump sensors, microcontroller and rechargeable battery Calibrated motors/sensors through extensive tests and reassembling of robot Wrote software in easyC and Python that utilized sensor data to avoid obstacles and navigate through maze