Ho-Jung Yang

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Education

Cornell University Ithaca, NY *Expected Graduation: May 2020*

Major: Electrical and Computer Engineering, GPA: 3.84/4.0 (Dean's List)

Relevant Experience

Astranis San Francisco, CA Sep. 2019-Present

Electrical Engineering Intern, Software Defined Radio (SDR) Hardware Team

Anduril Industries Irvine, CA June 2019-Aug. 2019

Hardware Intern

- Designed hardware (mechanical structure and PCBs) and wrote firmware of active camouflage prototype for Ghost drones
- Researched and chose backup generator vendor for Sentry Towers
- Made PCBs for internal tools (e.g. CAN to USB adapters and testing rigs)

MITRE Bedford, MA

Communications Intern, Interim Secret Clearance June 2018-Aug. 2018

- Wrote Python scripts to create radio network topologies in testbed to assess performance of tactical radios and waveforms
- Designed hydrophone preamplifiers with programmable, adjustable gain for general underwater acoustics testbed
- Used PyVISA to control oscilloscope and function generator with a computer for future hydrophone calibration tests

Organic Robotics Lab Ithaca, NY

Undergraduate Research Assistant for Principal Investigator Robert Shepherd Jan. 2017-Present

- Designed test rig for automatically bending and twisting a block with optical sensors to model deformation
- CADded fingers and palm for a high-force prosthetic hand with Solidworks and Autodesk Fusion 360 using Carbon3D printers

Teaching Assistant Ithaca, NY

ECE 2200: Signals and Information Jan. 2019-May 2019

ECE 2400: Computer Systems Programming Aug. 2018-Dec. 2018

ENGRI 1210: The Computing Technology Inside Your Smartphone Jan. 2018-May 2018

- Held office hours and graded exams for classes introducing C and C++ programming, digital logic, and signals

Campus Involvements

Cornell Amateur Radio Club (W2CXM)

President, Callsign KC3JKQ (Extra Class) Aug. 2017-Present

- Led meetings, got "on air" on amateur radio frequencies, and organized events like foxhunts and high-altitude balloon launches

Cornell Mars Rover Project Team

Electrical Subteam Member Sep. 2017-Present

- Working on a team that builds a rover teleoperated from a base station for the University Rover Challenge each year
- Designed Power over Ethernet (PoE) adapter board and drives board connecting to motor controllers in Eagle
- Wrote firmware in C for handling errors for the rover's on-board IMU, ramping for motors, and above boards

Projects

SCULPT – Basic CNC machine used to carve an image into soap using a PIC32 microcontroller, made from scratch

Balloon TX – High-altitude balloon using Arduino Due to beacon location with APRS radio protocol on 144.330 MHz carrier signal

Skills

Programming – Python, C, MATLAB, Linux

Production – Soldering, 3D Printing, Laser Cutting, Altium, Eagle, Autodesk Fusion 360, Solidworks