Brandon Hung

bhung@andrew.cmu.edu | (626) 224-5222 | https://github.com/BrandonHung343 | https://brandonh.dev/

Education

Carnegie Mellon University, Class of 2021

- Major: Electrical and Computer Engineering. Minors: Robotics, Computer Science
- GPA: 3.56
- Relevant Coursework:
  - Control Systems, Analog Circuits, Signal Processing, Digital Design
  - Robot Kinematics, Mobile Robot Algorithms, Artificial Intelligence
  - Computer Systems, Computer Vision, Functional Programming

Work Experience

CMU Biorobotics Lab - Summer Research Assistant

- Worked with PhD student to analyze and implement multi-agent path planning algorithm for swarm robots
- Created ROS controllers and designed Gazebo URDFs to simulate subterranean robots

Activities

CMU Robotics Club Officer - Developer **Fall 2018-Present**

- Maintains server and website infrastructure to publicize club activities
- Mentors 2 student personal projects using club resources

TartanHacks - Competitor **Spring 2019**

- Worked in team of 3 to create VR Fruit Ninja on Oculus Go using Unity

Red Robot Hackathon - Organizer **Fall 2019-2020**

- Organized parts and built website for CMU Red Robot Hackathon: link

Projects

Introduction to Programming Final Project **Fall 2018**

- Developed platform to control robotic arm; link
- Incorporated computer vision tracking and voice control for human robot interface

Automated Forklift Software Stack **Fall 2020**

- Worked in group of three to build full software stack for mini automated forklift
- Implemented localization, object detection, path planning to detect /pick up pallets

Autonomous Terrarium for Indoor Farming **Fall 2020**

- Worked in group of three on robotic greenhouse to grow radishes indoors
- Used AI to solve constraint-based scheduling problem for watering/lighting plants
- Implemented machine learning monitor to evaluate plant health

Relevant Skills

- ***Computer***: Python, ROS, Linux, C, TensorFlow, OpenCV, MATLAB, SML
- ***Electrical***: Digital and analog circuit design, SystemVerilog
- ***Mechanical***: SolidWorks, laser cutting, 3D printing, machining
- ***Mechatronics***: Arduino, Raspberry Pi, rapid prototyping