Hao A. Le

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PROFILE

Electrical engineering undergraduate with over two years of machine shop manufacturing and mechatronics design experience. Capable of tackling a wide variety of projects as well as disseminating information concisely in writing and speech.

EDUCATION

Bachelor of Science
University of California, San Diego, La Jolla, CA, expected June 2022
Concentration: Electrical Engineering
Minor: Studio Art
GPA (as of 2020): 3.91

EXPERIENCE

Summer 2017, 2019

Robotics and Mechanisms Laboratory UCLA, Westwood, CA

- Worked under a doctoral student to develop a novel compliant robotic actuator design that is compact yet can deliver up to 150 Nm and 15 degrees of deflection.
- Designed in Solidworks and manufactured prototype parts using CNC and wire EDM; experimented using system ID, frequency sweep, and LabVIEW data collection.
- Aided in writing and editing paper using LaTex to be submitted to IROS 2020.
- Prototyped a novel torque coupler design capable of selecting multiple paths of power transmission.

Spring 2019

UCSD Electrical and Computer Engineering Department, IEEE Quarterly Projects (Theme: Home Automation)

- Led a team of three to create the Modular Watering System capable of caring up to eight plants with a central watering arm.
- Soldered extensively to protoboards; manufactured with 3D printer and laser cutter; programmed using Arduino C and Blynk platform to monitor parameters of plants.
- Exhibited prototype and documentation at symposium; won first place overall.

Spring 2019

ECE 5 Line Following Robot

- Built an Arduino-powered line follower that processed photoresistor readings through a PID algorithm.
- Designed and 3D printed entire chassis.
- Competed with classmates in endurance and head-to-head courses; won first place overall.

Since Fall 2019

IEEE Project Drive

- Tasked with mechanical assembly and tuning of a tenth-scale RC car to be raced in F1Tenth 2020 in Berlin.
- 3D printed customized mounts for hardware.
- Worked with Docker-based ROS platform for real-time cartography.

SKILLS

C/C++; HTML with CSS; Docker; some Python (machine learning, computer vision, API integration, web-scraping); Solidworks; Eagle; MATLAB; Wire EDM; CNC milling; soldering

PERSONAL INTERESTS

Guitar; audio recording and production; oil painting; RC cars; fish-keeping; gardening; bowling; teaching kids; fostering animals