

Hao LE

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A haole.art

SUMMARY

Electrical engineering undergraduate with over three years of machine shop manufacturing and mechatronics design experience. Also capable of tackling programming-heavy projects. Competent in disseminating information concisely in writing and speech. Practices fine art, guitar, aguascaping, gardening, and hiking as pastimes.

EDUCATION

University of California, San Diego

2018 - 2023 (Expected)

B.S. IN ELECTRICAL ENGINEERING, GPA: 3.9 AS OF 2021

• Concentrating on machine learning and controls. Minoring in studio arts.

EXPERIENCE

VIDEO PROCESSING LAB UCSD

Since early 2020

STUDENT RESEARCHER

- Specializing in a Unity3D synthetic platform for autonomous driving data generation and algorithm benchmarking.
- Produced large, diverse datasets tailored for robust object detection.
- · Collaborated with feature matching researchers by generating synthetic point-cloud data and pose ground truth.
- Presented work at seminars and symposiums.

ROBOTICS AND MECHANISMS LABORATORY UCLA

Summer 2017, 2019

INTERNING RESEARCHER

- 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.

IEEE PROJECT DRIVE UCSD

Fall 2019 - Spring 2020

PROJECT MECHATRONICS HEAD

- Part of tenth-scale RC car racing competition team responsible for mechanical and embedded systems.
- 3D printed customized mounts for hardware and fabricated chassis out of metal.
- Programmed NVIDIA Jetson running ROS to perform SLAM using RGB-D and LiDAR data.

IEEE QUARTERLY PROJECTS UCSD (THEME: HOME AUTOMATION)

Spring 2019

PROJECT HEAD

- 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 lasercutter; programmed using Arduino C and Blynk platform to monitor parameters of plants.
- Exhibited prototype and documentation at symposium; won **first place** overall.

SKILLS

PROGRAMMING LANGUAGES

SOFTWARE

Unity3D | SolidWorks | GIT | Docker | LabVIEW | MATLAB | PSpice | KiCAD

FRAMEWORKS & LIBRARIES

PRACTICAL

LANGUAGES

Experienced: Python | C | C# Familiar: CLI | C++ | PHP | HTML & CSS | Verilog

Unity3D | SolidWorks | GIT | Docker | LabVIEW | MATLAB | PSpice | KiCAD

Jupyter | Matplotplib | Numpy | Pandas | Scikit-learn | PyTorch | Tensorflow

FDM & SLA 3D printing | Soldering | CNC | Wire EDM

Fluent in English and Vietnamese