Hao Le

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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, aquascaping, 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. 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	*Experienced:* Python	C	C# *Familiar:* CLI	C++	PHP	HTML & CSS	Verilog
Software	Unity3D	SolidWorks	GIT	Docker	LabVIEW	MATLAB	PSpice	KiCAD
Frameworks & Libraries	Jupyter	Matplotlib	Numpy	Pandas	Scikit-learn	PyTorch	Tensorflow
Practical	FDM & SLA 3D printing	Soldering	CNC	Wire EDM
Languages	Fluent in English and Vietnamese