

Donald Le

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Education

University of California, Berkeley
Mechanical Engineering, B.S.

May 2024
GPA: 3.34

San Diego Miramar College

May 2021
GPA: 3.96

Technical Skills

CAD: Solidworks, Engineering drawings with GD&T, Inventor, Creo, Fusion 360, Finite Element Analysis (Ansys and Solidworks)

Manufacturing: DFM, CNC Mill, FDM/SLA 3-D Printers, Mill, Lathe, Waterjet, Laser cutting, Sheet Metal, Carbon Fiber Layups

CS/EE: Python, Matlab, Arduino, Microcontrollers, Sensors, Encoders, Servos/Motors

Experience

Amazon Robotics

August 2023-Present

Hardware Safety Engineering Co-op (HDE I)

- Performed a hazard and risk analysis (HARA) for a pick-and-place robotic arm
- Researched and documented safety functions for collaborative and industrial robots from ABB, KUKA, Fanuc, and Universal

Solar Turbines - Caterpillar

May 2023-August 2023

Mechanical Engineering Co-op

- Created a calculator to optimize lifting lug geometry based on relevant failure modes and desired factor of safety
- Designed standardized lifting lugs for all turbine air intake ducts and verified design using finite element analysis in Ansys
- Carried out structural analysis of all turbine air intake and ventilation duct stiffeners for worse case wind loads
- Designed support mounts for turbine ducting and developed boundary conditions for simulation in Ansys

Johnson & Johnson - Robotics and Digital Solutions

Jan 2023-May 2023

Mechanical Engineering Co-op

- Designed and implemented a robot joint torque testing machine using a torque sensor, planetary gearbox, and motor
- Performed an engineering study on the effect of absolute encoder rotor/stator axial spacing on robot joint friction
- Formulated and implemented a metric for robotic joint friction into a Python web tool
- Designed a 1mm pin pressing fixture for physician grasper manufacturing with undersized spring-loaded pins for alignment
- Created engineering drawings with GD&T to ensure proper alignment and clearances for all designed parts/components

Berkeley Formula Racing (FSAE)

Sep 2021-May 2023

Brakes and Driver Interface Design Engineer

- Designed and manufactured throttle pedal and return mechanism reducing weight by 50% from the previous year
- Performed finite element analysis and material subtraction on the brake pedal, throttle pedal, and pedal tray
- Created engineering drawings with the necessary GD&T for all designed components
- Designed and manufactured carbon fiber pedal cups and their corresponding layup molds
- Carried out thermal analysis on brake rotors (Ansys)
- Conducted cost analysis for brakes and driver interface related assemblies

Relevant Coursework

Intro to Robotics

Robotic Locomotion

Matlab Programming

Properties of Materials

Fluid Mechanics

Thermodynamics