Aaron Tran

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malkstik.github.io

EDUCATION

California Polytechnic State University, San Luis Obispo March 2022
- Bachelor of Science in **Mechanical Engineering,** concentration in **Mechatronics**
- GPA: 3.94

University of Michigan, Ann Arbor April 2024
- Candidate for Master of Science in **Robotics**
- GPA: 4.00

WORK EXPERIENCE

EverestLabs.ai, Fremont, CA May 2023 – August 2023
Robotics Intern
- Develop and validate model for robot grasp detection
- Generate pressure dataset and design/build associated software, hardware to support data collection and labeling
- Develop ROS pipeline for online brand detection and data storage

Winslow Automation, Milpitas, CA May 2022 – August 2022
Automation Engineering Intern
- Validate machine vision algorithm
- Design visual inspection module for part defect detection

Lawrence Livermore National Laboratories, Livermore, CA June 2021 – October 2021
Defense Technologies and Engineering Division Intern
- Design test diagnostic assembly fixture
- Evaluate tolerance stack up of high precision tooling
- Perform stress analysis to validate safety of lift fixture

SKILLS

Programming Languages
C++, Python, MATLAB
Frameworks
ROS2, MoveIt, Klamp't , PyTorch, OpenCV, NumPy, Jax, Carla, RTOS

Hardware
Arduino, STM32, Raspberry Pi, UART
Other
Linux, Git, Docker

PROJECT EXPERIENCE

Real-time Motion for Eye Imaging Robot – UMich Image Guided Medical Robotics Lab September 2023 to Present
- Design motion planner for constrained alignment of eye imaging system to face
- Mapping/obstacle detection and avoidance during alignment
- Improve trajectory generator for pupil camera-based eye alignment
- Participate/conduct human subject imaging experiments

Soft Robotic Crawler – Student Project Team January 2023 to Present
Goal: Design a soft robotic crawler capable of autonomously navigating a pipe maze
- Design position retention module
- Design actuation scheme to allow for robust motion in unstructured pipe environment

Hydraulically Powered Exo – UCSF BioRobotics May 2023 to Present
Goal: Design an exo that can be used under strong magnetic fields to allow for brain signal analysis during use
- Evaluate system for performance needs and determine system characteristics
- Build data collection and analysis pipeline
- Implement and test admittance control