

EDMOND TONG

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EDUCATION

University of Michigan

Master of Science in Robotics

GPA: 3.98/4.00

Coursework: Robot Learning for Planning and Control, Deep Learning for Robot Perception, Robot Systems Laboratory, Programming for Robotics, Autonomous Vehicles, Applied Optimal Control

Ann Arbor, MI

May 2024

Brigham Young University

Bachelor of Science in Mechanical Engineering

GPA: 3.80/4.00

Coursework: Design of Mechatronic Systems, System Design Fundamentals

Provo, UT

Apr 2018

RESEARCH

Workshop Paper:

- OVAL-Prompt: Open-Vocabulary Affordance Localization for Robot Manipulation through LLM Affordance-Grounding. - Vision-Language Models for Navigation and Manipulation (IEEE ICRA). 2024.

EXPERIENCE

University of Michigan

Graduate Student Instructor

Ann Arbor, MI

Sep 2023 – May 2024

- Assisted teaching in the courses Programming for Robotics, and Deep Learning for Robotic Perception
- Led weekly lab sessions for a class of 30+ students, resulting in a noticeable improvement in students' programming skills in C++ and Python
- Developed project-based learning modules in PyTorch, for students to apply deep learning techniques to real-world robotic perception task

PacMar Technologies

Intern – Data Science and Autonomy

Ann Arbor, MI

May 2023 – Sep 2023

- Analyzed data generated by reinforcement learning models to identify and address uncertain state spaces
- Wrote Python scripts to process and visualize extensive datasets, enabling real-time trend identification
- Employed physics-based simulations to evaluate and stress test reinforcement learning controllers
- Developed a user-friendly GUI to showcase bottlenecks within ROS2 communications, streamlining troubleshooting and optimization processes

In-Position Technologies

Application Engineer

Kaysville, UT

Aug 2018 – Apr 2021

- Created custom robotics solutions for over 120 clients in manufacturing
- Developed middleware in bash and python to communicate between different automation software
- Installed and programmed machine vision systems and improved defect detection by 30%
- Engineered electrical and mechanical schematics for multirobot work cells using Computer-Aided Design
- Utilized rapid prototyping and robotic computer simulations to close \$500,000 in sales
- Provided technical support and troubleshooting for clients via email, phone, and on-site visits

Brigham Young University

Linux System Engineer

Provo, UT

May 2016 – Feb 2018

- Supported Red Hat Linux infrastructures for over 250 web servers
- Assisted in managing user accounts and permissions, storage, and logical volume management
- Automated server maintenance and upgrades reducing server downtime by 100 hours
- Refactored scripts for server deployment and decreased build time by 15%
- Monitored performance of servers, applications, and network traffic to predict early failures

- Collaborated with developers to implement changes on development, test, and production servers

SKILLS

Software: SolidWorks, NX, Fusion360, Microsoft Office
Operating Systems: Linux, Windows
Programming: C++, Python, Pytorch, TensorFlow, MATLAB, ROS, Git
Coursera Certification: Deep Learning Specialization
Languages: Conversational in Cantonese