Han Ling Tung

(206) 793-9527 • hanlngtw@uw.edu
linkedin.com/in/harrytung • github.com/honeytung • profile.coolgaa.com

EDUCATION

The University of Washington   **Expected March 2024**
Master of Science, Computer Science (Robotics Track), GPA: 3.92

The University of British Columbia   **November 2021**
Bachelor of Applied Science, Electrical Engineering

Stanford University Online on Coursera
Machine Learning   **December 2018**

EXPERIENCES

Robotics Engineer, Applied Physics Laboratory-UW & MSTI Launch (Contract)   **September 2023 – Present**
- Developed computer vision support for BlueROV2 performing underwater maintenance and inspection
- Upgraded hardware components (Camera and RPi) to support high-rate data capture and processing
- Wrote simulation and control package to support ROS2 integration with BlueROV2 and blue package
- Created UDP stream pipeline with Oak-D Pro W to stream low-latency live video from ROV to laptop

Software Developer Intern, PTEK Technology   **May 2021 – August 2022**
- Deployed and maintained the company website using WordPress on a third-party hosting service provider
- Tested and debugged battery management IC chips using state machines in C using ESP32 microcontrollers

Agile Developer Intern, Rogers Communications (Contract)   **May 2020 – August 2020**
- Built a smart-cities application MVP (minimum viable product) for all first responders in the City of Kelowna and helped reduce the response time to meet the 90 seconds targeted time using Lidar and 5G
- Built a backend web processor using JavaScript to parse Lidar data and send it to the frontend website
- Implemented collision detection algorithm for detecting incidents and displaying results to the web server
- Provided metrics to ICBC (vehicle insurance) to help determine accident liabilities in the City of Kelowna

PROJECTS

Cisco Robotics Datacenter, github.com/honeytung/Fetch-Robotics-VR   **March 2023 – June 2023**
- Built a system to help Cisco Engineers perform remote server maintenance using Fetch Robot in VR
- Built an object identification and segmentation ML using YOLOv8 to identify tools for pick-and-place tasks

AnimaliaVR, github.com/honeytung/AnimaliaVR   **March 2023 – June 2023**
- Developed a VR game with Unity in C# with pick-and-place tasks using Oculus Integration SDK
- Programmed object detection by calculating the absolute distance between objects to trigger events

ACTIVITIES

UBC Rocket, Club/Engineering Design Team   **September 2019 – September 2021**
Avionics Developer
- Led a team and designed a new sensor interface that is modular and provides better maintainability
- Modified existing code to support additional sensor components (GPS, IMU, and Radio) with custom PCB
- Increased team productivity and better code maintainability by migrating all code bases from C to C++

PUBLICATIONS

- **Tung, et al. *Virtual Reality-based Human-Robot Interaction for Remote Pick-and-Place Tasks.***
  HRI '24 - IEEE Human-Robot Interaction, 2024 (doi:10.1145/3610978.3640748).

SKILLS & AWARDS

Awards: Microsoft Imagine(Active), Amazon HackSEA(3rd), Microsoft/Rogers Hackathon(3rd), UBC BMIAI(3rd)
Languages: C, C++, C#, Python, Java, JavaScript, Verilog, SystemVerilog
Hardwares: Arduinos, Esp32, Raspberry Pi, 8051, DE1-SoC, Jetson TX2, Meta Quest 2
Tools: Azure Cloud, Git, Linux, Docker, ROS, RTOS, PyTorch, MATLAB, SYMULINK, Oscilloscope, Soldering