EWE ZU LIN

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EDUCATION

NATIONAL TAIWAN UNIVERSITY — *Taipei, TW*
MSc in Electrical Engineering — *Expected Jun 2023*

NATIONAL YANG MING CHIAO TUNG UNIVERSITY* — *Hsinchu, TW*
BSc in Electrical and Computer Engineering — *Jun 2021*
Cumulative GPA: 3.61/4.00; Last 60: 3.84/4.00
Relevant Coursework: Automatic Control System; Signal and Systems; Object-oriented Programming; Data Structures; Algorithms; Intelligent Robots Lab; Self-Driving Cars
**National Yang Ming University and National Chiao Tung University merged into National Yang Ming Chiao Tung University on February 1, 2021.*

METHODIST COLLEGE KUALA LUMPUR — *Kuala Lumpur, MY*
Cambridge International A Levels: 1A, 1A, 1B, 1C* — *Nov 2016*

RESEARCH INTERESTS

Robotics; Autonomous Vehicles; Reinforcement Learning; Simultaneous Localization and Mapping;

RESEARCH EXPERIENCE

ADVANCED CONTROL LABORATORY — *July 2021 - Present*
National Taiwan University
- Intelligent Robotics. Advisor: Prof. Li-Chen Fu

ASSISTIVE ROBOTICS GROUP — *Jun 2019 - Mar 2021*
National Chiao Tung University
- Autonomous Exploration. Advisor: Prof. Hsueh-Cheng 'Nick' Wang

PUBLICATIONS

1. Huang, J. T., Lu, C. L., Chang, P. K., Huang, C. I., Hsu, C. C., Ewe, Z. L., Huang, P. J., & Wang, H. C. (2021). Cross-Modal Contrastive Learning of Representations for Navigation Using Lightweight, Low-Cost Millimeter Wave Radar for Adverse Environmental Conditions. *IEEE Robotics and Automation Letters*, *6*(2), 3333-3340.

TEACHING EXPERIENCE

Teaching Assistant, *Robotics Dev Workshop ft. Duckietown (One-day Workshop)* — *May 2020*
Teaching Assistant, *AI Robotics Dev Workshop: Locobot A to H (Summer Workshop)* — *Summer 2020*
Teaching Assistant, *Introduction to Artificial Intelligence (Robotics)* — *Fall 2020*

PROJECTS

DARPA SUBTERRANEAN CHALLENGE, TEAM NCTU — *Feb 2020 - Mar 2020*
Urban Circuit in Elma, Washington, USA
- The DARPA Subterranean or “SubT” Challenge seeks novel approaches to rapidly map, navigate, and search underground environments during time-sensitive combat operations or disaster response scenarios.
- The urban circuit was held at a would-be nuclear power plant, which its internal structure simulates or mirrors an urban underground environment.
- My responsibilities in the team included: Communications (Wi-Fi, p2p LoRa, mesh XBee), teleoperation, and data analysis.

SEARCH AND EXPLORATION ROBOT *Jun 2020*

Final Competition, *Human-centric Computing Lab (Spring 2020)*

- Implemented a system on a teleoperated robot (Locobot), whose mission is to detect and localize specific items in an environment where the map is given via Apriltags.
- Modules: Learning-based Object Detection, Localization (Apriltags and wheel odometry).
- Placed first in the competition.

UNDERGRADUATE RESEARCH PROJECTS

Uwb-based Positioning System Analysis and Applications in Mobile Robot Exploration *Fall 2019*

Xbee Wireless Mesh Network and Communication-aware Planning in Mobile Robot Exploration *Spring 2020*

SKILLS

Programming Languages: C/C++, Python, MATLAB
Software and Libraries: Git, Docker, Robot Operating System(ROS), OpenCV, Pytorch, Octave, Hugo
Hardware: Raspberry Pi, Jetson TX2, Arduino, LoRa, Digi XBee, Pozyx UWB Kit
Languages: Chinese (Native), English, Malay

OTHER ACTIVITIES

Office of International Affairs, NCTU *Hsinchu, TW*

Student Assistant / Volunteer *Jun 2018 – Sep 2019*