William Chen

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EDUCATION

UNIVERSITY of MARYLAND at COLLEGE PARK — Maryland, USA
MS in Electrical and Computer Engineering (ECE) — Expected June 2023

NATIONAL TAIWAN UNIVERSITY — Taipei, Taiwan
BS in Engineering Science and Ocean Engineering (ESOE) — September 2018-June 2021

TEACHING EXPERIENCE

AIRABBI Inc. — Taipei, Taiwan
Part-time CodingBar Teaching Assistant and Lecturer (May 2020-July 2020)

- Taught students ranging from 5th grade to high school Python
- Drafted a course syllabus, wrote instructional plan, prepared lecture notes, and recorded full lectures for BBC Microbit course

NTU ESOE camp — Taipei, Taiwan
Student counselor and teaching assistant in C++ for Arduino (July 2019)

- Tutored students who have no prior coding background after class for 5 days and guided them to write control algorithms for a mini autonomous boat

RESEARCH EXPERIENCE

Undergraduate Research (Aug 2020~Jul 2021)

- Conducted research with the Computational Knowledge Lab (CK Lab) and Advance Fluid and Power Control Lab (AFPCL) regarding indoor Simultaneous Localization and Mapping (SLAM)

Graduate Research

- Conducted research with the Perception Robotics Group regarding DVL and underwater image processing (Dec 2021~May 2022)
- Conducting research with the Bio-Imaging and Machine Vision Lab as lab intern regarding underwater and surface vehicle control and optimization (May 2022~)

SELECTED PROJECTS (complete portfolio on https://github.com/weiyutp6)

Advance Topics in Deep Learning (Jan 2022-May 2022)

- This team project is a study on the effects of color correction in underwater images on the performance of SLAM systems
- My main contribution in the project is the SLAM derivation and comparison in performance

Robotics (Sep 2020-Jan 2021)

- This team project utilizes a TM5-900 robotic arm to accomplish various tasks. The overall goal of the project was to get the arm to prepare food.
- My main contribution in the project is analyzing the kinematics and control systems of using the robotic arm to grab on to utensils and coded the necessary algorithms on ROS Melodic

ESOE Capstone (Feb 2020-June 2020)

- This team project requires us to design, and 3D print a boat before controlling it to complete navigation tasks autonomously with a STM32 microcontroller and HC-SR04 ultrasonic distance sensor
- My main contribution in the project is designing the circuit setup for the STM32 and the sensor layout on the boat as well as writing the necessary control algorithms for the navigation tasks

COMPETITIONS

6th place, Virtual RobotX 2019, held by RobotX online (May 2019-Nov 2019)

- Controlled a virtual robot based on prototype given by RobotX, competed with team Tang
- Contribution includes creating a simple object detection algorithm from lidar point cloud on ROS Melodic before constructing the whole system with the entire team