

Li-Wei Yang

<https://www.linkedin.com/in/dancedfsk8> • <https://liver121888.github.io>
<https://github.com/liver121888> • liver121888@gmail.com

EDUCATION

National Taiwan University

Taipei, Taiwan

Bachelor in Biomechatronics Engineering

2018-2022

- **Overall GPA: 3.97/4.30, Rank: 2/54**
- Received **Dean's list Award** (GPA ranked top 5% in a semester)
- Relevant Coursework: Automatic Control (A+), Machine Learning (A+), Robotics (A), Digital Image Processing(A), Data Structures and Algorithms (B+)

SKILLS

Programming

- Python (PyTorch, OpenCV), MATLAB (Robotics System Toolbox), C/C++, Java, C#, Latex, Kotlin

System

- Ubuntu, Kali Linux, Arduino, **Texas Instrument F28388D**

Software

- SOLIDWORKS, ROS, GAZEBO, Simulink, Qt, 3D Slicer, Android Studio, Endnote

English proficiency

- TOEFL ibt: Total: 99, Listening: 30/30; Reading: 30/30; Speaking: 20/30; Writing: 19/30
- GRE General: Total: 325, Quantitative: 169/170; Verbal: 156/170; Writing: 3.5/6.0

RESEARCH EXPERIENCE

Robots and Medical Mechatronics Lab (RMML)

Taipei, Taiwan

Undergraduate researcher, advisor: Ping-Lang Yen

Sept. 2020-Mar. 2022

- **Smart cyber-physical system of a remote specimen collection robot**
 - Developed a statistical morphing oral model that fits the oral cavity in 3D Slicer, and build a simulation environment in GAZEBO for the operator to do the specimen collection.
 - **Won sponsorship from the Ministry of Science and Technology (MOST).**
 - Contained the RMSE of landmarks below 4 mm.
- Designed the torque of a counterbalance using MATLAB, which improved the motion of lab-designed specimen collection robot.

Center for Artificial Intelligence and Advanced Robotics (AIROBO)

Taipei, Taiwan

Research Assistant, advisor: Li-Chen Fu

Feb. 2022-present

- **Companion Healthcare Aid Robot Manager**
 - Stabilized a photo chatting system based on image understanding to proactively drive the reminiscence process in social interactions with elderly users.
 - Connected an ECG smartwatch to robot via BLE protocol, which aid the diagnosis of heart diseases.
 - Maintained an SQL server to store physiological data from the smartwatch.

PUBLICATIONS

2022 International Conference on Advanced Robotics and Intelligent Systems

#1079 *Smart Cyber-physical System of a Remote Swabbing Robot*

LEADERSHIP EXPERIENCE

Mobile Lost and Found - MLF6110

Taipei, Taiwan

Team leader, related course: Robotics

Jan. 2022

- Led the team to integrate an object searching robot using RealSense D435 and RPLIDAR-A1.
- Implemented DWA and AMCL navigation methods.
- Applied BRISK and RANSAC algorithms in object searching.

Dynability5

Taipei, Taiwan

Team leader, related course: Medical Mechatronics and Control

Dec. 2021

- Built a 5 DoF manipulator that aim to deliver water bottle for people with physical disability.
- Concatenated various frequency filter and amplifier to collect clear EMG signal.
- Fine-tuned an SVM classifier to classify EMG pattern for manipulator control, achieve 90% accuracy.