Jing-Shiang Wu

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EDUCATION

National Taiwan University — Taipei, Taiwan

Bachelor in Biomechatronics Engineering — Feb. 2022

- **Overall GPA: 3.39/4.30, Rank: 18/54**
- Relevant Coursework: Dynamics and Control of Robots(**A**) Automatic Control (**A**), Digital Control Systems(**A**), Adaptive Control Systems(**A**), Neuro-control Systems(**A**) Machine Learning (**C+**), Digital Image Processing(**A-**)

SKILLS

Programming
- Python (Tensorflow2, OpenCV, NumPy, Matplotlib), **ROS1 melodic noetic**, C/C++, Qt, MATLAB, etc.

System & Controller
- Ubuntu18/20, Raspberry pi 4, Arduino, Nvidia TX2, Nvidia Xavier, Pixhawk series.

Software
- SolidWorks, Simulink, **GAZEBO,** Qt designer, QGroundcontrol.

RESEARCH EXPERIENCE

Robots and Medical Mechatronics Lab (RMML) — Taipei, Taiwan

Undergraduate researcher — Sept. 2019-Sept. 2021

- ***Development of a common platform for remote control robots for oral and nasal cavity specimen collection***
  - Objective: Building a automatic specimen collection robot with remote center motion(RCM) technique for the sake of higher security during the swabbing process.
  - Designed the RCM linkage mechanism
  - **Won sponsorship from the Ministry of Science and Technology (MOST)**
- Participated in 2019 Bio-mechatronics Field Robot Competition
  - Using open source tiny-yolov3 repository to train our model. Aiming at getting apple's 3-D coordinates so that we can control a 4-axis manipulator to grab the apples automatically.

Aiseed tech Inc. — Taipei, Taiwan

Robotics AI engineer intern — Oct. 2021-Aug. 2022

- ***Building UAV systems***
  - Objective: Building a fully automatic VTOL system with ROS
  - Connecting a variety of sensors such like intel realsense d435i, T265, webcam with raspberry pi4
  - Validating the automatic tracking algorithm with Gazebo.
  - Studying the obstacle avoidance and slam techniques to be applied to UAV system.
  - Precision landing function enabled with distance sensor and irlock beacon
- ***Object detection and video streaming***
  - Streaming inferred video from UAV system to website or ground station through Gstreamer.

LEADERSHIP EXPERIENCE

2020 Azalea Festival Project — Taipei, Taiwan

Team leader — Feb. 2020-Mar. 2020

- Led the team to build a **Automatic sensing and catching apple truck system**
- In charge of image recognition and the transportation between the Arduino and the laptop
- Filmed a recruit video to promote Biomechatronics Engineering Department

2020 Country Youth Life Study Club — Taipei, Taiwan

Leader of activities department — Sept. 2020-Feb. 2021

We will conduct a summer/winter camp in the rural junior high school for a week. The responsibility of activities department is to hold an evening party and bring the laughter and tears to the children.

- Effectively assigning work to every member of activity department.
- Good time management to ensure each work will be in place in time.