

# Jing-Shiang Wu

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## EDUCATION

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### National Taiwan University

*Bachelor in Biomechatronics Engineering*

Taipei, Taiwan

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

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### 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

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### Robots and Medical Mechatronics Lab (RMML)

*Undergraduate researcher*

Taipei, Taiwan

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.

*Robotics AI engineer intern*

Taipei, Taiwan

Oct. 2021-present

- ***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 quadcopter system with Gazebo and mavros SDK.
  - Studying the obstacle avoidance and slam techniques to be applied to UAV system.
  - Video streaming from UAV system to website through Gstreamer
  - Precision landing function enabled with distance sensor and irlock beacon

## LEADERSHIP EXPERIENCE

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### 2020 Azalea Festival Project

*Team leader*

Taipei, Taiwan

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

*Leader of activities department*

Taipei, Taiwan

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 every work will be in place in time.