

---

---

# 王國倫 (Kuo-Lun, Wang)

- **Website** : <https://kuolunwang.github.io/>
- **Github** : <https://github.com/kuolunwang>
- **Research** : Robotics, Deep Learning, Computer Vision
- **Address** : No. 1, Ln. 94, Dafu St., Bade Dist., Taoyuan City 33462, Taiwan
- **Phone** : +886 967 075 575
- **Email** : [kuolunwang.ee08@nycu.edu.tw](mailto:kuolunwang.ee08@nycu.edu.tw)



---

## Education

National Chiao Tung University (NCTU), Hsinchu

Feb 2020 - Present

M.S in Electrical and Control Engineering

National Taiwan University of Science and Technology (NTUST), Taipei

Sep 2016 - Feb 2020

B.S in Electrical Engineering

---

## Competition

The Light Design Award of Cross-Strait New Outstanding Awards

2018

In this competition, we combined the practical abilities of the manufacturer and our imagination to develop new products. Through this competition, it broadens my horizons and makes me understand the gap between practice and theory.

**Responsibilities:**

- Writing proposal plan and Program Design

International Green Life Creative Design Competition Sliver Awards

2018

In order to respond to future environmental policies, the appearance and architecture of future charging devices are designed. In this competition, my teammates were from different departments, so it took more time to discuss.

**Responsibilities:**

- 3D printing

International Society of Mechatronic Engineering

2019

We proposed a new type of environmental trading type "green coin.". We knew some people have a habit of collecting, so we combined these two concepts to encourage the industries of environmental protection.

**Responsibilities:**

- App development

---

## Project

### Code-11 (C)

In this project we need to simulate the bar code machine and the code-11 bar code system. Not only to check whether the bar width is within 5% of the error and the lack of start and stop codes, but also to determine whether the check code matches.

#### Responsibilities:

- Program Design
- Write test data

### Calculator (C#)

Combine the infix to postfix and stack, queue structure learned from Data Structure to implement four fundamental operations of arithmetic. Besides, add brackets, power, decimal point and remainder function by using class and operation overloading to realize.

#### Responsibilities:

- Program Design
- User Interface Design

### Eatspanda (C++/C)

Design an ordering platform through which guests can choose meals and make reservations. Moreover, this platform can be shared by multiple users at the same time.

#### Responsibilities:

- Ordering platform (Socket Server)
- Timer

### AOI competition (Python/PyTorch)

This competition was supported by Aldea platform, and need to classify AOI images into six different situations. In our group, we use DenseNet model to finish this competition. Then, our team gets the best score in the final stage.

#### Responsibilities:

- Network architecture
- Training and evaluation

### SIS competition (Python/ROS/LoCoBot)

This competition we need to use LoCoBot to finish four tasks: detection, grasping, navigation and placing in the real environment. In addition, we also design a simulated environment in gazebo when we are TA.

#### Responsibilities:

- Detection and grasping

### Grasping with SSDRL (Python/PyTorch/D435/UR5)

Using Deep reinforcement learning to grasp objects in a cluttered environment to another bin with a self-supervised method, and train a real robot UR5 to execute this manipulation.

#### Responsibilities:

- Software and hardware integration
  - Program design
-

## Skill

### Program

Python

C++/C#/C

MATLAB

### Middleware, Libraries and others

Robotics Operation System (ROS)

PyTorch

OpenCV

Gazebo

### Hardware and Sensor

Depth camera (D435)

NVIDIA Jetson (TX2, Xavier)

Robot (UR5, VX300s, LoCoBot)

Barcode scanner (SR-2000)