



## **Wei-Ting 'Lily' Hsu**

Phone: +886-9-75669361

Email: thpss92093@gmail.com

### **Education**

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<b>M.S.</b> in Graduate Degree Program of Robotics, National Chiao Tung University (NCTU), Taiwan.	2019 ~ present
<b>B.S.</b> in Electrical and Computer Engineering (ECE), National Chiao Tung University (NCTU), Taiwan.	2015 ~ 2019

### **Research Interests**

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Self-Driving Vehicle, Simulation 、 Automatic Control System

### **Related Courses**

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Automatic Control Systems, Robotics, Self-Driving Cars, Image Processing

### **Skills**

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**Languages:** Chinese(native), English(fluent)

**Programming:** C/C++, C#, Java, Python, Matlab

**Middleware and Libraries:** Robotic Operating System (ROS), OpenCV, PCL (Point Cloud Library)

**Simulation:** Gazebo, Unity

**Software:** SketchUp, SolidWorks

### **Research Projects and Professional Experience**

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#### **Duckietown – Robotics Education & Demo Experience**

I have learnt a lot from Duckietown since I was in third grade, doing the project with professor Nick Wang. Duckiebot is my first robot and it is a self-driving car platform for education, research and promotion. For the skills' part, I have learnt the basic knowledge of self-driving car, ROS(Robot Operating System) and openCV. In addition, I also gain a lots of experience about the demo events for the high school students and others who don't have the background knowledge about robotics and self-driving car.

### **Simulation (Duckietown) & Virtual Data(Pick-and-Place System)**

During the project in grade third, I use Gazebo to build a virtual environment, trying to let the duckiebot finish the driving test by itself. From this project, I learn how to use Gazebo to run my system and making both robot model and the map by SolidWorks and SketchUp.

In grade forth, I join a team about pick-and-place system in our lab. Our goal is to let the robot arm pick the object and place it to the right shelf with its front side by detecting its brand name. In the team, I am responsible for building the objects' model and generating the virtual datasets. It is important to use virtual data to improve the efficiency of collecting data to train the FCN model.

### **Teaching Experience**

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**Teaching Assistant**, Creative Software Project (Fall 2017)

**Teaching Assistant**, Human Centric Computing (Spring 2019)