FENG-YI LIAO

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Education

University of California San Diego — **United States**
M.S., Electrical and Computer Engineering — Sep. 2021–

National Chung Hsing University — **Taichung, Taiwan**
B.S., Bio-Industrial Mechatronics Engineering — 2016–2020

- Last 60 GPA: 4.14/4.3

Experiences

Image and Signal Processing Lab, NCHU — **Taichung, Taiwan**

Research Assistant — July 2020–Feb. 2021

- Developed machine vision systems to achieve agriculture automation

Teaching Assistant — Apr. 2020–June 2021

- Assisted students in programming and wiring to design IOT systems

Projects

Optimization [GitHub]

- Implementation of The Ant Lion Optimizer
  - Solved unconstrained and constrained problems with Pshenichny's descent algorithm
- Implementation of Jaya Algorithm
  - An easy and fast but powerful algorithm for unconstrained problems

Robotics

- Intelligent agricultural robotic competition
  - Controlled by PID method to go forward
  - Capable of watering, climbing, and transportation of potted plants

Awards

- NCHU Golden Key award (top 5% of class) 2020
- Second place award, smart agricultural robotic competition 2019
- NCHU Ching-O award, NCHU (top 5% of class) 2019
- NCHU Academic Excellence award (top 10% of class) 2018

Publications/Presentation

- F. Y. Liao, K. Y. Huang, and M. T. Yan. "Auto-measurement of Geometric Features for Micro Cutting Tools," *International Society of Mechatronic Engineering, the 5th conference, (ISME),* 2020. oral presentation.
- Q. Xu, S. J. Luo, F. Y. Liao, I. C. Chen, M. C. Chien, and K. Y. Huang, "Development of Novel Auto Inspection System for Paddy Seed Germination," *Sensors and Materials*, vol. 32, pp. 3647-3657, 2020. [Online]

Skills

- Software
  - C, C++, C#, Python, MATLAB, HTML, JavaScript, Node-RED, SolidWorks, Pro/Engineer, Tina Pro
- Hardware
  - Arduino, Raspberry pi, ESP8266, AVR Microcontroller, PLC