Yu-Ting Lai

Website: https://goo.gl/QdhR3r
Email: yutingkevinlai@ucla,edu
Phone: +1-310-498-9015

EDUCATION

University of California, Los Angeles — Los Angeles, USA
Graduate Student Researcher, Mechanical Engineering — 09.2019 – Present

National Chiao-Tung University — Hsinchu, Taiwan
M.S., Electrical and Control Engineering — 08.2016 – 09.2018

- **Advisor:** Prof. Jwu-Sheng Hu
- **Master Thesis - Industrial Anomaly Inspection based on Neural Networks and Generative Adversarial Networks:** Evaluated all possible solutions for industrial surface inspection.

National Tsing-Hua University — Hsinchu, Taiwan
B.S., Power Mechanical Engineering — 09.2012 - 06.2016

PUBLICATIONS

- Y. T. K. Lai and J. S. Hu, "Annotation-free Industrial Anomaly Detection Using Generative Neural Network Models," in *Journal of Intelligent Manufacturing*, 2020. (*under review*)

- Y. T. K. Lai and J. S. Hu, "A Texture Generation Approach for Detection of Novel Surface Defects," in *IEEE International Conference on System, Man, and Cybernetics*, 2018.

- Y. T. K. Lai, J. S. Hu, W. Y. Chiu, Y. H. Tsai, "Industrial Anomaly Detection and One-Class Classification using Generative Adversarial Networks," in *IEEE/ASME International Conference on Advanced Intelligent Mechatronics*, 2018. (*oral presentation*)

PATENT

- Y. T. Lai, J. S. Hu, Y. H. Tsai, and K, H, Chang, "Industrial Image Inspection Method and System and Computer Readable Recording Medium." (pending)

AWARDS

- 2019 Institute Distinguished Research Award, Industrial Technology Research Institute, Taiwan
- 2019 Innovation Award, Industrial Technology Research Institute, Taiwan
- 2018 Institute Distinguished Research Award, Industrial Technology Research Institute, Taiwan

EXPERIENCES

National Taiwan University — Taipei, Taiwan
Research Assistant, Electrical Engineering Dept. — 07.2019 – Present
- Assist the development of surgical robots

Industrial Technology Research Institute (ITRI) — Hsinchu, Taiwan
Intern/Young Researcher, Mechanical and Mechatronics Labs — 02.2016 – 01.2019
- Sensor fusion of multiple cameras and LiDAR for object recognition and tracking
- Traffic light detection and recognition
- Developed a novel industrial inspection algorithm using generative adversarial networks for industrial automation
- Developed a random bin picking project for robot manipulator
- Product development of a high-precision calibration module for robot manipulators

LANGUAGE AND TECHNOLOGIES

- **Programming Language:** C, C++, Python, MATLAB, LabView
- **Frameworks:** OpenCV, Point Cloud Library (PCL), Caffe, Tensorflow, Pytorch, Visual Studio, ROS, Gazebo
- **Embedded Board:** Arduino, Raspberry Pi, ARM
- **Prototyping:** Solidworks, Milling, Drilling, 3D printing
- **Language:** Mandarin (proficient), English (proficient)