

# Yu-Ting Lai

Graduate Student Researcher

yutingkevinlai@ucla.edu

+1 (310) 498-9015

yutinglai.com

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## EDUCATION

- 2018 **M.S. in Electrical and Control Engineering**, National Chiao Tung University (NCTU), Hsinchu, Taiwan  
2016 **B.S. in Mechanical Engineering**, National Tsing Hua University (NTHU), Hsinchu, Taiwan

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## EXPERIENCE

Feb. 2020 – Present **Graduate Student Researcher**, Mechatronics and Controls Laboratory (UCLA)

- Demonstrated an autonomous posterior capsule polishing with 5  $\mu\text{m}$  accuracy on *in situ ex-vivo* pig eyes using Optical Coherence Tomography (OCT) feedback.
- Developed a collaborative control strategy based on Iterative Learning Control (ILC) for two 6-axis robot manipulators to enable 6 DOF position and force control.

Jun. 2018 – Feb. 2019 **Assistant Researcher**, Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan

- Developed a traffic light detection and recognition framework on autonomous vehicle by integrating LiDAR localization and camera image processing.
- Demonstrated a fully autonomous driving of 15 km in an urban area without human engagement.

Sep. 2016 – May. 2018 **Graduate Student Researcher**, Embedded Systems Laboratory, NCTU, Hsinchu, Taiwan

- Developed an automated anomaly inspection on data collected from industrial partners using deep learning and generated adversarial network.

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## HONORS & AWARDS

- 2019 Innovation Award, ITRI, Taiwan  
2018 – 2019 Institute Distinguished Research Award, ITRI, Taiwan

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## SKILLS

- Programming:** C/C++, Python, MATLAB, LabVIEW  
**Robotics:** PID/Feedforward control, trajectory planning, dynamics, image-based robot guidance  
**Prototyping:** Solidworks, Milling, Drilling, 3D printing  
**Language:** Mandarin/Taiwanese (Native), English (Proficient)  
**Other:** LaTeX, Adobe Illustrator