

# Chieh-Ying Lai

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## EDUCATION

<b>University of California, Santa Barbara</b> , Santa Barbara, CA	09/2023 - 06/2025
• M.S. Student in Dept. of Computer Science	
<b>National Chung Hsing University</b> , Taichung, Taiwan	09/2020 - 06/2022
• MBA in Management Information System	
<b>National Taichung University of Science and Technology (Elite Program)</b> , Taichung, Taiwan	09/2013 - 06/2020
• Associate & Bachelor of Information Management	

## EXPERIENCE

### **National Chung Hsing Uni. / Taiwan Semiconductor Manufacturing Co., Ltd**

Project Research Assistant	04/2021 - 03/2022
• Responsible for the overall project application of AI technology to industrial safety monitoring plan	
• Applied AI techniques of computer vision and cloud platform to develop industrial security monitoring systems	
• Trained in deep learning models including object detection models, dangerous behavior detection, connection between models and platforms, and data annotation	

### **National Chung Hsing Uni. / Occupational Safety and Health Administration, MOL**

Project Research Assistant / Student Lead	03/2021 - 02/2022
• Developed edge computing-assisted artificial intelligence safety identification technology improvement plan for structural steel construction.	
• Implemented object detection and semantic segmentation models to detect unsafe behaviors and object placements in construction sites by using Python and Pytorch.	
• Achieved a high F1-score for both helmet detection (93.51%) and hook detection (97%) and IoU for safety net segmentation (0.86) and guardrail segmentation (0.65).	
• Participated in training of deep learning models, deployment of models on edge devices, and data annotation.	

## SELECTED PROJECTS

<b>Manufacturing Information Management System for ShangDa Plastic Inc.</b>	06/2020 - 02/2021
• Developed a Manufacturing Information Management System, enabling end-to-end digital management of customer information, raw material procurement, and inventory control processes.	
• Implemented MVC backend with PHP Laravel Framework and MySQL, and developed frontend with Vue.js.	
<b>Book Donation Management System for Wanin Foundation</b>	03/2020 - 12/2020
• Participated in the Book Donation Management System Platform and Official Website Development project.	
• Implemented MVC pattern using the PHP Laravel Framework.	
• Design the UI of the official website and developed customized responsive frontend with jQuery and Bootstrap.	

## sSKILLS

**Programming:** Python, PHP, Javascript

**Operating System:** Windows Server, Linux

**Web Development:** PHP Laravel Framework, React.js, MySQL, HTML5, JQuery, CSS

**Deep Learning:** Pytorch, Object Detection, Semantic Segmentation, Image Classification, Edge Computing

**Languages:** Mandarin (native), English (fluent), Japanese (fluent, JLPT N1)