

Chieh-Ying Lai

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EDUCATION

University of California, Santa Barbara , Santa Barbara, CA	09/2023 - 06/2025
• M.S. Student in Dept. of Computer Science	
National Chung Hsing University , Taichung, Taiwan	09/2020 - 06/2022
• MBA in Management Information System, GPA: 4.12/4.3	
National Taichung University of Science and Technology (Elite Program) , Taichung, Taiwan	09/2013 - 06/2020
• Associate & Bachelor of Information Management, GPA: 3.98/4.0	

EXPERIENCE

National Chung Hsing Uni. / Occupational Safety and Health Administration, MOL	Taichung, Taiwan
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.	
National Chung Hsing Uni. / Taiwan Semiconductor Manufacturing Co., Ltd	Taichung, Taiwan
Project Research Assistant	09/2021 - 01/2022
• Contributed to the project's success by designing and implementing accurate and efficient deep learning models, including object detection models, dangerous behaviour detection, and data annotation.	
• Achieved a high mean average precision (99.77%) and the average IoU (84.46%) of the object detection model.	
ShangDa Plastic Inc.	Miao-li, Taiwan
Backend Developer	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.	

SELECTED PROJECTS

Personal Website	06/2023 - 08/2023
• Developed a personal website to display my works, including introductions, publications and projects. Programmed the full stack website design with Python Django and React JS.	
Book Donation Management System and Official Website for Wanin International	03/2020 - 12/2020
• Conducted a Book Donation Management System and Official Website for Wanin International.	
• Implemented MVC pattern backend and RESTful APIs by using PHP Laravel Framework.	
• Designed the UI of the official website and developed customized responsive frontend with jQuery and Bootstrap.	

SKILLS

Programming: Python, PHP, Javascript

Operating System: Windows Server, Linux

Web Development: PHP Laravel Framework, Python Django, 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)