Cheng-Wei Lin

lindavid1688@gmail.com ⋄ +886 970-911-688 ⋄ https://cwlin1.github.io ⋄ linkedin.com/in/chengwei-lin

EDUCATION

National Taiwan University Sep. 2021 – Jun. 2023
Master of Science in Computer Science and Information Engineering; GPA: 4.01/4.30 *Taipei, Taiwan*
- **Research**: Computer Vision, Deep Learning

Yuan-Ze University Sep. 2017 – Jun. 2021
Bachelor of Science in Electrical Engineering *Taoyuan, Taiwan*

EXPERIENCE

MediCapture Inc. Oct. 2024 - Present
AI Architect *New Taipei City, Taiwan*
- Developed and optimized real-time deep learning classifiers for polyp detection in endoscopic images.
- Integrated and deployed deep learning models into embedded medical imaging devices, ensuring high performance and low-latency inference.

MediCapture Inc. Jan. 2023 - Dec. 2023
Software Engineer Internship *New Taipei City, Taiwan*
- Development and research of medical imaging solutions for clinical requirement.
- Front-end development and deployment of desktop application and web application

Chernger Tec. Oct. 2021 - Sep. 2022
Software Engineer Internship *Taipei, Taiwan*
- Development and research of computer vision solutions for automatic optical inspection.

PROJECTS

aiScope Oct. 2024 – Present
MediCapture Inc.
- Develop a real-time on-device object detector to find the polyp from the colonoscopy inspection video.
- Optimize the utilization of computation resource based on inspection status.

Toric IOL Implant Digital Alignment Sep. 2023 – Dec. 2023
MediCapture Inc., Bausch + Lomb
- Augment graphic overlay over the live video of an eye from the surgical microscope to assist the surgeon with the alignment of the toric intraocular lens implant.
- Perform iris registration to identify the center of the eye and iris diameter on pre-operational image, then identify the location and rotation of iris on the video frame during surgery.

X-Ray Image Alignment before and after Total Hip Arthroplasty Jan. 2023 – Sep. 2023
MediCapture Inc.
- Developed the automatic image alignment algorithm for radio-graphs taken before and after total hip arthroplasty.
- Proposed a method to apply stricter alignment on interested part, and achieves better alignment result.
- Developed the desktop application and web application to make it clinical useful, and reduce the risks after surgery.

Object Detection and Recognition with Its Application to Smart Homecare Sep. 2020 – Dec. 2020
Yuan-Ze University, Industrial Technology Research Institute, Taipei Veterans General Hospital.
- Developed a Real-time Recognition System (OD-RASH) to obtain blood pressure values and trigger emergency notifications.
- Developed an Android application that deploys the DL models through PyTorch Mobile to assist users in capturing high-quality images, and communicate with the server system to receive emergency notifications.

PROGRAMMING SKILLS

- **Programming Languages**: Python, C/C++, Java, HTML/CSS, JavaScript, Matlab
- **Frameworks/Tools**: Tensorflow, Pytorch, Kornia, MediaPipe, Scikit-learn, Flask, OpenCV, Streamlit, Git, Bash