Pang-Chi Lo

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Education

Carnegie Mellon University Pittsburgh, PA
Master of Science in Computer Vision *Expected December 2026*
- Relevant Coursework: Introduction to Robot Learning, Learning for 3D Vision

National Taiwan University Taipei, Taiwan
Bachelor of Science in Computer Science and Information Engineering *January 2025*
- GPA: 4.02/4.30

Work Experience

Genenet Technology Ltd. Stevenage, UK
Data Engineer Intern *July 2024 - November 2024*
- Contributed to building a platform for genetic circuits with genetic sequence analytical tools for lab researchers.
- Implemented three different computer vision algorithms, including boundary detection and segmentation models for measuring cardiac organoid beating rate from lab videos and reached over 70% accuracy.

Stats-Insight Inc. Taipei, Taiwan
Baseball Data Analyst & Full-Stack Developer *May 2022 - June 2024*
- Developed the first online platform for scouting and statistical visualization for Taiwanese baseball and supported specialized analytical services for teams in the Chinese Professional Baseball League (CPBL).
- Devised customized scouting data system and play-by-play data collection software for the scouting team of the Chinese Taipei National Men's Baseball Team in the World Baseball Classic and winning the World Champion in Premier 12.
- Led the project on retrieving player positioning and movement tracks from bird-eye view cameras with YOLOv8.

Research Experience

Katef Group, Carnegie Mellon University Pittsburgh, PA
Master Research advised by Prof. Katerina Fragkiadaki *Octorber 2025 - Current*
- Collaborated on the development of a benchmarking environment for Vision-Language Models in table-top robot manipulation.

Embodied Artificial Intelligence Lab, National Taiwan University Taipei, Taiwan
Undergraduate Research advised by Prof. Tsung-Wei Ke *September 2024 - September 2025*
- Researched 4D scene reconstruction challenges and proposed a novel model unifying 3D reconstruction and dynamic scene understanding via integrating 3D RoPE and Chamfer loss on flow supervision, achieving over 40% improvement in flow estimation.

Communication and Multimedia Lab, National Taiwan University Taipei, Taiwan
Undergraduate Research advised by Prof. Winston H. Hsu and Prof. Yi-Ting Chen *September 2022 - January 2025*
- Explored error detection for few-shot imitation learning and cooperated in developing a cross-domain benchmark and proposing a pattern extractor that surpassed strong baselines by an 5% performance shift across 21 scenarios.
- Investigated reward generation for reinforcement learning in long-horizon robotic manipulation tasks from action-free videos with language instructions and achieved a 43% improvement in success rates.

Publications

[1] **Pang-Chi Lo***, Jhao-Syun Lai*, Tsung-Wei Ke, "SM4RT: Cascaded Feed-forward Model for 4D Reconstruction," *Under review*

[2] Kuo-Han Hung*, **Pang-Chi Lo***, Jia-Fong Yeh*, Han-Yuan Hsu, Yi-Ting Chen, Winston H. Hsu, "VICtoR: Learning Hierarchical Vision-Instruction Correlation Rewards for Long-horizon Manipulation," *ICLR 2025*

[3] Jia-Fong Yeh, Kuo-Han Hung*, **Pang-Chi Lo***, Chi-Ming Chung, Tsung-Han Wu, Hung-Ting Su, Yi-Ting Chen, Winston H. Hsu, "AED: Adaptable Error Detection for Few-shot Imitation Policy," *NeurIPS 2024*

Selected Course Projects

Adversarial Attacks on Language and Vision Model-Powered Robots Taipei, Taiwan
Security and Privacy in Machine Learning at National Taiwan University *Spring 2024*
- Investigated vulnerability of vision-language model(VLM)-powered robots under targeted multimodal adversarial attacks across malicious prompts, perturbed goal images, and perturbed demonstration videos.
- Achieved a 40% targeted attack success rate shift with projected gradient descent on image perturbation.

Skills

Languages: Native - Mandarin and Taiwanese, Proficient - English, Conversational - German
Programming: Advanced - Python, C/C++, and JavaScript **Machine Learning Toolkits**: PyTorch, Numpy, Scikit-learn
Cloud & DevOps: Docker, AWS, GCP, Nginx **Backend Development**: Node.js, Express, Flask, FastAPI, REST API
Frontend Development: React, HTML5, CSS **Databases & Data Management**: SQL, MongoDB