Yi-Chun Chen

yichunc3@andrew.cmu.edu | LinkedIn: www.linkedin.com/in/yichunchenycc | (+886) 915-819-588

EDUCATION

Carnegie Mellon University, School of Computer Science — Pittsburgh, PA
Master of Science in Computer Vision (MSCV) - *Beginning in Jan. 2021* — May 2022

National Tsing Hua University — Hsinchu, Taiwan
Bachelor of Science in Power Mechanical Engineering — June 2017

WORK EXPERIENCE

Inventec Corporation — Taipei, Taiwan
AI Research Engineer — Jan. 2019 – Present

- Originate a self-supervised autoencoder-enhanced RCNN framework to reduce need of data annotation in surface defect detection by up to 50%, and adapt to 16 different manufacturing products and brain MRI data
- Design and develop an algorithm pipeline and modules for automated laptop inspection machine using LibTorch to reduce inspection time by 50% and increase quality consistency by 6%
- Create a defect segmentation network using perceptual similarity to enhance network's shift-invariance capability and align model prediction with production expectation, increasing 7% mean average precision
- Coordinate with 4 internal and external teams to define project specifications and incorporate domain knowledge to algorithm design
- Gave a talk at NVIDIA GPU Technology Conference; topic: Toward Taming the Training Data Complexity in Smart Manufacturing

Viscovery — Taipei, Taiwan
Computer Vision Engineer — Apr. 2018 – Dec. 2018

- Devised a hierarchical metric learning approach for image retrieval to support visual search system on the largest e-commerce website in Taiwan; project was company's top priority and brought in highest revenue
- Structured the largest, million-scale real-world fashion dataset in company by creating crawlers in Python and designing knowledge system with a tree-structure to validate the proposed, generalized image retrieval model

RESEARCH EXPERIENCE

Dept. of Electrical Engineering, National Tsing Hua University — Hsinchu, Taiwan
Research Assistant — Feb. 2017 – Mar. 2018

- Established a 2.5-D object detection model based on YOLO9000 and prototyped a wearable vibrotactile-feedback device for a real-time guidance system, making 83% visually impaired users confident in reaching objects; 2nd-author paper published in iROS 2018
- Introduced normal-field-of-view grounding task and novel Visual Grounding Model to navigate 360° videos from video subtitles in both indoor and outdoor scenes; 2nd-author paper published in AAAI 2018
- Innovated to automatically select and caption salient views of 360° videos by extending concept of Cycle-GAN to translate between vision and language domains; 2nd-author workshop paper published in ECCV 2018

SKILLS

Programming Language: Python, C/C++
Tools: PyTorch, LibTorch, Tensorflow, Docker, Git, OpenCV, Scikit-Learn
Computing Environments: Linux, Windows, Raspberry Pi