Zhi-Yi Chin (Joyce)

Contact Information

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Education

National Yang Ming Chiao Tung University **February, 2021 - present**
Master in Computer Science and Engineering Advised by *Prof. Wei-Chen Chiu*
Expected graduation date: September, 2023

National Chung Cheng University **September, 2017 - January, 2021**
Bachelor in Computer Science and Information Engineering
Overall GPA: 4.18 / 4.3 Major GPA: 4.21 / 4.3 Ranking: 1 / 43

Publications († indicates equal contribution)

Zhi-Yi Chin†, Chieh-Ming Jiang†, Pin-Yu Chen, Ching-Chun Huang, Wei-Chen Chiu. **Prompting4Debugging: Red-Teaming Text-to-Image Diffusion Models by Finding Problematic Prompts**, *Submitted*, 2023

Zhi-Yi Chin†, Chieh-Ming Jiang†, Pin-Yu Chen, Ching-Chun Huang, Wei-Chen Chiu. **Masking Improves Contrastive Self-Supervised Learning for ConvNets, and Saliency Tells You Where**, *Submitted*, 2023

Yun-Lun Li, Zhi-Yi Chin, Ming-Ching Chang, Chen-Kuo Chiang. **Multi-Camera Tracking by Candidate Intersection Ratio Tracklet Matching**, Accepted by *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshop 2021*

Honors and Scholarships

Presidential Honor Award 2017 - 2021
Achieve top 1% in College of Engineering for 5 times *National Chung Cheng University*

College Student Research Scholarship - AI calligraphy using 6DoF robotic arm 2020
NT$ 48,000 *Ministry of Science and Technology, Taiwan*

Google Student Travel Scholarship 2019
Scholarship to attend 2019 Grace Hopper Celebration *Google, Taiwan*

Projects

3D Point Cloud Augmentation via SRN - *MediaTek Research Project* January, 2022
- Design a 3D point cloud augmentation based on a novel view synthesis method, scene representation networks, and use PointNet to evaluate our augmented point clouds quality.
- Replace instance object id with image features from ResNet to apply our method on unseen objects and do interpolation later on.
- Proposed method is successful in ModelNet10 and generates the augmented data by intra-class interpolation with ShapeNet in the latent space of SRN encoder.
- Observe limitation of novel view synthesis method on non-textured data.

RSNA Pneumonia Detection - *Visual Recognition Using Deep Learning* January, 2022
- Design a two stage method, which first use a classification model to classify pneumonia, then use a detection model to locate the disease.
- Get the best results when using EfficientNet as classification model with 0.2 classification probability threshold when testing, and YOLOR as detection model. This method can reduce false positive results.
- Boost the final accuracy 2% by resizing the predicted bounding box to 87.5% of the original size.

Generative Models as Data Augmentation - *Deep Learning and Practice* September, 2021
- Investigate image transformation by exploring walks in the latent space of GAN.
- Use GAN steerability as an data augmentation technique.
- Conclude that GAN steerability is a better data augmentation technique compare to transformation done in the data space.

Reimplementation Challenge - *Reinforcement Learning* July, 2021

- Reimplement ICLR 2018 paper: MAXIMUM A POSTERIORI POLICY OPTIMISATION in Pytorch.
- Successfully replicate the results in Cartpole, Hopper and Acrobot in MuJoCo environment

Google CodeU Calendar Helper - *Google* August, 2019
- A multifunctional Webapp for to-do lists and calendars.
- Using Javascript and JQuery as front-end and Java as back-end and host the Webapp on Google cloud console.
- Highlights: tagging system, nice dashboard design, synchronize with Google Calendar.

Skills

Programming Languages and Frameworks
- Programming Languages: Python/C++/C/MATLAB/LaTeX/Java/Javascript
- Machine Learning: Pytorch/OpenCV/scikit-learn
- Dev Tools: Git/Jupyter/Vim/VS Code/ Google Cloud Platform/ PyCharm/IntelliJ IDEA

Languages
- Mandarin Chinese (native)
- English (proficient)