Wan-Cyuan (Chris) Fan

🌐 Personal website   GitHub   Twitter
✉ christine5200312@gmail.com   ✉ r09942092@ntu.edu.tw

Education

Jan. 2022   🔖 **Masters of Science**, National Taiwan University, Taiwan
Graduate Institute of Communication Engineering, Vision and Learning Lab
Thesis: Target-free Text-guided Image Manipulation 🔗 link
IPPR 2022 Honorable Master Thesis Award
Advisor: Prof. Yu-Chiang Frank Wang 🔗 link
GPA: 4.11 / 4.3

Sep. 2020   🔖 **Bachelor of Science**, National Taiwan University, Taiwan
Department of Electronics Engineering
Undergraduate thesis: LayoutTransformer: Scene Layout Generation with Conceptual and Spatial Diversity 🔗 link
In proceedings of CVPR 2021
Advisor: Prof. Yu-Chiang Frank Wang 🔗 link
GPA: 3.98 / 4.3

Work Experience

Sep. 2022 – Present   🔖 **Research Assistant** in Vision and Learning Lab (VLL) at NTU
advised by Prof. Yu-Chiang Frank Wang
- Build a text guided image manipulation network under weakly supervised setting
- Learning scene layout generation with spatial and conceptual diversity

Mar. 2022 – Sep. 2022   🔖 **Research Intern** in Azure Computer Vision Research at Microsoft
- Working with Yen-Chun Chen, DongDong Chen, Yu Cheng, and Lu Yuan
- Exploring a multi-scale diffusion and denoising strategies of the diffusion model for conditional complex scene image generation

July 2019 – Aug. 2020   🔖 **Research Assistant** in Institute of Information Science, Academia Sinica, Taiwan, advised by Prof. Tyng-Luh Liu
- Design models for the long-tailed object detection and instance segmentation tasks
- Explore the adaptive batch-wise regularization for image classification under long-tailed and fine-grained distribution

July 2017 - Jan. 2018   🔖 **Student Intern** in Digital Learning Center, National Taiwan University
- Problem-solving for digital learning using design thinking and activity planning

Publications

Pre-prints (🔍 Google Scholar profile)

1. **Wan-Cyuan Fan**, Yen-Chun Chen, Dong Dong Chen, Yu Cheng, Lu Yuan, Yu-Chiang Frank Wang. "Frido: Feature Pyramid Diffusion for Complex Scene Image Synthesis." In submission, 2022. (📄 paper)

2. **Wan-Cyuan Fan**, Cheng-Fu Yang, Chiao-An Yang, Yu-Chiang Frank Wang. "Target-free Text-guided Image Manipulation." In submission, 2022.

3. **Wan-Cyuan Fan**, Cheng-Yao Hong, Yen-Chi Hsu, Tyng-Luh Liu. "IOU-Aware Multi-Expert Cascade Network via Dynamic Ensemble for Long-tailed Object Detection." In submission, 2022.

4. Yen-Chi Hsu, Cheng-Yao Hong, **Wan-Cyuan Fan**, Ming-Sui Lee, Davi Geiger, Tyng-Luh Liu. "ACE: Adaptive Confusion Energy for Natural World Data Distribution." In submission (journal), 2022. (📄 paper)

5. **Wan-Cyuan Fan**. "Auto-drawer: Generating and Modifying Images Continually byVisual-Relational Knowledge Graph." Arxiv pre-print, 2019. (📄 paper)

Conference Papers (🔍 Google Scholar profile)

1. Cheng-Fu Yang, Yao-Hung Hubert Tsai, **Wan-Cyuan Fan**, Yu-Chiang Frank Wang, Louis-Philippe Morency, Ruslan Salakhutdinov. "Paraphrasing Is All You Need for Novel Object Captioning." In Proceedings of the Conference on Neural Information Processing Systems (NeurIPS), 2022. (📄 paper)

2. Chiao-An Yang, Cheng-Yo Tan, **Wan-Cyuan Fan**, Cheng-Fu Yang, Meng-Lin Wu, Yu-Chiang Frank Wang. "Scene Graph Expansion for Semantics-Guided Image Outpainting." In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022. (📄 paper)

3. Chih-Chun Yang, **Wan-Cyuan Fan**, Cheng-Fu Yang, Yu-Chiang Frank Wang. "Cross-Modal Mutual Learning for Audio-Visual Speech Recognition and Manipulation." In Proceedings of Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI), 2022. (📄 paper)

4. Cheng-Fu Yang*, **Wan-Cyuan Fan***, Fu-En Yang, Yu-Chiang Frank Wang. "LayoutTransformer: Scene Layout Generation With Conceptual and Spatial Diversity." In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2021. (📄 paper)

5. **Wan-Cyuan Fan**, Cheng-Yao Hong, Yen-Chi Hsu, Tynh-Luh Liu. "Multi-expert heads of Long-tailed Instance Segmentation." Tech. Report of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (ECCV) workshop, 2020. (📄 paper)

Miscellaneous Experience

Awards and Achievements

2022	🔖	**Honorable Master Thesis Award**, The Chinese Image Processing and Pattern Recognition Society, Taiwan. 🔗 link
2021	🔖	**Master Student Research Scholarship**, Novatek Foundation, Taiwan. 🔗 link
2020	🔖	**Top 10 Winner** (World Ranking 7), Large Vocabulary Instance Segmentation Challenge, ECCV workshop. 🔗 link
2018	🔖	**Third prize**, the Contest of Innovation and Entrepreneurship of Biotechnology of Ministry of Education, Taiwan. 🔗 link 🔗 link

Position of Responsibility

2016-2017 🔖 **Vice leader of Public Relations Department** in the Aboriginal Service Club at National Taiwan University.
- Manage the Public Relations Department and host the training courses and 2 days camp for almost 80 members.

Professional Activity

2021-2022 🔖 **Teaching Assistant of the Course for the graduate students**.
Deep Learning for Computer Vision, National Taiwan University (NTU), 2020
Deep Learning for Computer Vision, National Taiwan University (NTU), 2021