Wan-Cyuan (Chris) Fan

🌐 https://davidhalladay.github.io/

✉ christine5200312@gmail.com

Research Interests

My research interests span the fields of Deep Learning (DL) and Computer Vision (CV), particularly multi-modal learning, cross-modal representation learning, text-to-image synthesis, text-guided image manipulation, object detection / segmetation.

Education and Work Experience

2022 – now	🔖	**Research Assistant** in Vision and Learning Lab (VLL) *Graduate Institute of Communication Engineering, National Taiwan University*
2020 – 2022	🔖	**M.Sc. Communication Engineering** at National Taiwan University (NTU). GPA: 4.15 / 4.3 (first year)
2019 – 2020	🔖	**Student Research Intern.** *Institute of Information Science, Academia Sinica*
2017 - 2018	🔖	**Internship** *Digital Learning Center, National Taiwan University* *- Problem-solving using design thinking and Activity planning.*
2015 – 2020	🔖	**B.Sc. Electrical Engineering** at National Taiwan University (NTU). GPA: 3.84 / 4.0 (Dept. rank 27%)

Research Publications

Pre-prints

1. **Wan-Cyuan Fan**, Cheng-Fu Yang, Chiao-An Yang, Yu-Chiang Frank Wang. "No Look Ahead: Target-free Text-guided Image Manipulation." In submission, 2022.

2. **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.

3. Cheng-Fu Yang, Yao-Hung Hubert Tsai, **Wan-Cyuan Fan**, Yu-Chiang Frank Wang, Louis-Philippe Morency, Ruslan Salakhutdinov. "Learning Visual-Linguistic Adequacy, Fidelity, and Fluency for Novel Object Captioning." In submission, 2022.

4. 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 submission, 2022.

5. 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, 2022.

6. **Wan-Cyuan Fan**. "Auto-drawer: Generating and Modifying Images Continually byVisual-Relational Knowledge Graph." Arxiv, 2019.

Conference Proceedings

1. 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.

2. 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.

3. **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.

Miscellaneous Experience

Awards and Achievements

2021	▌	**Master Student Research Scholarship**, Novatek Foundation, Taiwan.
2020	▌	**Top 10 Winner** (World Ranking 7), Large Vocabulary Instance Segmentation Challenge, ECCVW.
2018	▌	**Third prize**, the Contest of Innovation and Entrepreneurship of Biotechnology of Ministry of Education, Taiwan.
2017	▌	**First prize**, the Final Competition of the Clinical Application of Medical Electronic Device Course, National Taiwan University.
2016	▌	**First prize**, the Final Competition of the Clinical Observation and Need Investigation Course, National Taiwan University.

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 ▌ **Conference Reviewer or Program Commitee**.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (2020, 2021)
IEEE International Conference on Computer Vision (ICCV) (2021)
Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI), 2021

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