

# WEICHEN FAN

📍 Singapore 📞 (65)86953799

💻 <https://weichenfan.github.io/Weichen> 🌐 <https://github.com/weepiess>

✉ fanweichen2383@gmail.com

## EDUCATION

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<b>National University of Singapore, Singapore</b> <i>Master of Electrical and Computer Engineering CAP:3.75/5.0</i>	<i>Aug 2021 - Aug 2022</i>
<b>University of Electronic Science and Technology of China, China</b> <i>Bachelor of Integrated Circuit Design and Integrated System GPA:3.65/4.0</i>	<i>Sep 2017 - June 2021</i>
<b>University of Electronic Science and Technology of China, China</b> <i>Minor in Robotics Engineering GPA:3.82/4.0</i>	<i>Dec 2017 - June 2020</i>

## WORK EXPERIENCE

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### NTU

#### **Research Engineer**

*June 2024 - Present*

- Conducting research on text-to-video model.

### HyperGAI

#### **Research Scientist**

*Oct 2023 - June 2024*

- Conducting research on long video generation and build a video-framework that can support 1M context length (1-minute videos).

### Sensetime

#### **Computer Vision Researcher**

*July 2022 - Sep 2023*

- Conducting research on multimodal large language models(MLLMs).
- Conducting research on AI for Assembly Sequence Planning(ASP).
- Created a generic Sim2Real data engine that can be used for autonomous driving, gaming, and healthcare.
- Participating in research of SLAM especially in VO and 3D reconstruction.
- Collaborating with MMLab@CUHK, etc.

#### **Research Intern**

*May 2021 - July 2022*

- Participating in research of Transfer Learning algorithm especially in Domain Adaptation and Domain Generalization.
- Conducting research on out-of-distribution(OOD) detection.

## PUBLICATIONS

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- [1]. Yan Tai\*, **Fan, W.\***, Z. Zhang, Ziwei Liu. (2023). Link-Context Learning in Multimodal LLMs. **CVPR 2024**. [\[paper link\]](#)
- [2]. H. Gao\*, **Fan, W.\***, L. Qiu, X. Yang, Z. Li, X. Zuo, Y. Li, H. Ren, “SAVAnet: Surgical action-driven visual attention network for autonomous endoscope control”, IEEE Transactions on Automation Science & Engineering (**T-ASE**), 2022. [\[paper link\]](#)
- [3]. **Fan, W.\***, Chen, J\*, Ziwei Liu. (2023). Hierarchy Flow For High-Fidelity Image-to-Image Translation. In Proceedings of **TPAMI**. [\[paper link\]](#)
- [4]. Z Lin, C Liu, R Zhang, P Gao, L Qiu, H Xiao, H Qiu, **C Lin** ... & Qiao, Y. (2023). Sphinx: The joint mixing of weights, tasks, and visual embeddings for multi-modal large language models. arXiv preprint arXiv:2311.07575.
- [5]. P Gao\*, L Zhuo\*, Z Lin\*, C Liu\*, J Chen\*, R Du\*, E Xie\*, X Luo\*, L Qiu\*, Y Zhang, **C Lin** ... & Li, H. (2024). Lumina-T2X: Transforming Text into Any Modality, Resolution, and Duration via Flow-based Large Diffusion Transformers. arXiv preprint arXiv:2405.05945.
- [6]. **Fan, W.**, Chen, J., Ma, J., Hou, J., & Yi, S. (2022). StyleFlow For Content-Fixed Image to Image Translation. arXiv preprint arXiv:2207.01909.

[7]. **Fan, W.**, Yang, Y., Qiu, K., Wang, S., & Guo, Y. (2022). InvNorm: Domain Generalization for Object Detection in Gastrointestinal Endoscopy. arXiv preprint arXiv:2205.02842.

**AWARD**

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- **Silver Award in EMEDIC GLOBAL 2021** — 2021
- **Best presentation in EMEDIC GLOBAL 2021** — 2021
- **Robomaster Robotics Competition** - First Prize (3/173 worldwide) — 2019