Guian **Fang**

WORLD MODELS · VIDEO GENERATION

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"Building AI-powered game worlds indistinguishable from reality."

Summary

Ph.D. student at Nus, advised by Prof. Mike Zheng Shou. My research focuses on **Video World Models** and video generation, aiming to build interactive, real-time, and physically plausible world simulators for gaming and embodied AI. I have published at top venues including ECCV, TNNLS, and LREC-COLING, with ongoing submissions to CVPR and ICML. I also have extensive industry experience collaborating with Huawei Noah's Ark Lab, Shanghai AI Lab, Alibaba DAMO Academy, and several AI startups on production-level generative AI systems.

Education

National University of Singapore   *Singapore*

PH.D. IN ELECTRICAL AND COMPUTER ENGINEERING   *Aug. 2024 - Present*

- Advisor: **Prof. Mike Zheng Shou** (Show Lab)
- Research Focus: World Models, Video Generation, Embodied Intelligence

Sun Yat-sen University   *Shenzhen, China*

B.ENG. IN INTELLIGENT SCIENCE AND TECHNOLOGY   *Sept. 2020 - Jul. 2024*

- GPA: **3.7/4.0**, Rank **1st** in final two semesters
- Advisor: **Prof. Xiaodan Liang** (HCP-I2 Lab), co-advised by Prof. Shengcai Liao

Skills

Research	Diffusion Models, Video Generation, World Models, RLHF, Large Language Models, 3D Vision
Frameworks	PyTorch, Diffusers, DeepSpeed, Accelerate, FSDP, JAX/Flax
Programming	Python, C/C++, CUDA, LaTeX, Web (HTML, CSS, JavaScript)
DevOps	Git, Linux, Docker, Slurm, Kubernetes, Weights & Biases
Languages	Chinese (Mandarin, native), English (IELTS 6.5, fluent in reading/writing)

Experience

Video World Model for Interactive Storytelling   *Utopai Studios*

RESEARCH SCIENTIST   *Sept. 2024 - Present*

- Building real-time interactive video world models for next-generation AI-powered storytelling

Controllable Character Animation   *MikoAI Ltd.*

RESEARCH SCIENTIST   *Jul. 2024 - Present*

- FramePrompt: In-context Controllable Animation with Zero Structural Changes (**IJCV submission**)

Text-to-3D World & Multimodal Agents   *Cybever AI*

RESEARCH SCIENTIST   *Sept. 2023 - Jul. 2024*

- Image-to-3D generation pipeline for production environments

Generative AI & RLHF for Text-to-Image   *Huawei Noah's Ark Lab*

RESEARCH INTERN   *Mar. 2023 - Nov. 2023*

- HumanRefiner: Benchmarking Abnormal Human Generation and Refining with Coarse-to-fine Pose-Reversible Guidance (**ECCV 2024**)
- RealignDiff: Boosting Text-to-Image Diffusion Model with Coarse-to-fine Semantic Re-alignment (**TNNLS 2023**)

Large Language Models & Controllable Image Generation   *Shanghai AI Lab (OpenGVLab)*

RESEARCH INTERN   *Jul. 2023 - Nov. 2023*

- **LLaMA-Adapter (5.9k stars)**, **LLaMA2-Accessory (2.8k stars)**
- Improving Compositional Text-to-image Generation with Large Vision-Language Models

Multimodal LLM & Chart Understanding   *Alibaba DAMO Academy*

RESEARCH INTERN   *Aug. 2023 - Nov. 2023*

- ChartThinker: A Contextual Chain-of-Thought Approach to Optimized Chart Summarization (**LREC-COLING 2024**)

Publications

Conference & Journal Papers

- **Guian Fang**, Wenbiao Yan, Yuanfan Guo, Jianhua Han, Zutao Jiang, Hang Xu, Shengcai Liao, & Xiaodan Liang. (2024). **HumanRefiner**: Benchmarking Abnormal Human Generation and Refining with Coarse-to-fine Pose-Reversible Guidance. *European Conference on Computer Vision (**ECCV 2024**)*.

- **Guian Fang**, Zutao Jiang, Jianhua Han, Guansong Lu, Hang Xu, Shengcai Liao, Xiaojun Chang, & Xiaodan Liang. (2023). **RealignDiff**: Boosting Text-to-Image Diffusion Model with Coarse-to-fine Semantic Re-alignment. *IEEE Transactions on Neural Networks and Learning Systems (**TNNLS 2023**)*.

- Mengsha Liu, Daoyuan Chen, Yaliang Li, **Guian Fang**, & Ying Shen. (2024). **ChartThinker**: A Contextual Chain-of-Thought Approach to Optimized Chart Summarization. *Joint International Conference on Computational Linguistics, Language Resources and Evaluation (**LREC-COLING 2024**)*.

- **Guian Fang**, Mengsha Liu, et al. (2023). Online Evidence Enhanced and Fine-Grained Fake News Detection. *Neural Computing and Applications (**NCAA**)*.

Under Review / Preprints

- **Guian Fang**, et al. (2025). **Joint Forcing**: Causal Video Generation via Bidirectional-to-Causal Diffusion Transformer. *Under review at **CVPR 2026***.

- **Guian Fang**, et al. (2025). **AnyFlow**: Any-Step Video Post-Training with Flow Map Distillation. *Under review at **ICML 2026***.

- **Guian Fang**, Yuchao Gu, & Mike Zheng Shou. (2025). **FramePrompt**: In-context Controllable Animation with Zero Structural Changes. *Under review at **IJCV***.

- Jay Zhangjie Wu, **Guian Fang**, et al. (2024). Towards A Better Metric for Text-to-Video Generation. *arXiv preprint*.

- Jay Zhangjie Wu, **Guian Fang**, et al. (2025). **VEditBench**: Holistic Benchmark for Text-Guided Video Editing. *arXiv preprint*.

- Song Wen, **Guian Fang**, Renrui Zhang, Peng Gao, Hao Dong, & Dimitris Metaxas. (2023). Improving Compositional Text-to-image Generation with Large Vision-Language Models. *arXiv preprint*.

- Xudong Lu, Renrui Zhang, **Guian Fang**, et al. (2024). **FocusDiff**: Foreground Self-Decoupling Customization for Text-to-Image Generation. *arXiv preprint*.

Honors & Awards

Competition

2021	**1st Place**, "Smart Campus" Hackathon competition	*Guangzhou, China*
2021	**3rd Place**, National College Students Mathematical Modeling Competition (Huashu Cup)	*Tianjin, China*
2022	**Silver Prize**, Intelligent Algorithm Competition of the Game Cup	*Shenzhen, China*
2022	**3rd Place**, 3rd National College Computer Ability Challenge	*Shenzhen, China*
2022	**2nd Place**, Asia and Pacific Mathematical Contest in Modeling	*Beijing, China*
2022	**Silver Medal**, China Collegiate Algorithm Design & Programming Challenge Contest	*Shanghai, China*
2022	**2nd Place**, The 2022 Social Computing Innovation Competition	*Hangzhou, China*
2023	**1st Place**, 4th National College Computer Ability Challenge	*Shenzhen, China*

Scholarship

2021	**Recipient**, Ethic Award scholarship	*Shenzhen, China*
2022	**Recipient**, Huawei Intelligent Foundation Scholarship	*Shenzhen, China*
2022	**Recipient**, National Encouragement scholarship	*Shenzhen, China*
2023	**1st Place**, SYSU Outstanding Student Scholarship (Top **5%**)	*Shenzhen, China*
2023	**1st Place**, National Scholarship (Rank **1st**)	*Shenzhen, China*
2023	**1st Place**, Li Xuerou Foundation Scholarship (Among the top **10** students in the college)	*Shenzhen, China*