

Jiun Tian HOE

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EDUCATION

Ph.D Candidate, Electrical & Electronic Eng., Nanyang Technological University 2022 - Expected July 2026

- Advisors: [Prof. Yap-Peng TAN](#), [Prof. Xudong JIANG](#)
- Research Interests: Computer Vision, Image Generation/Editing, Human-Object Interaction, ExoEgo Video Generation
- 2 first-author works in AIGC (Image Generation) was accepted at CVPR2024 & CVPR2026; 1 is under review.

Bachelor of Computer Science (Artificial Intelligence), University of Malaya 2018 - 2022

- Advisor: [Prof. Chee Seng CHAN](#)
- Research Interests: Computer Vision, Deep Hashing based Image Retrieval
- Final year project on deep hashing was accepted in NeurIPS 2021 (first-author) and BMVC 2023
- Cumulative GPA: 3.99/4.00

PUBLICATIONS *equal contribution

First-authored Conference Proceedings

1. [Jiun Tian Hoe](#), Weipeng Hu, Xudong Jiang, Yap-Peng Tan and Chee Seng Chan. **OneHOI: Unifying Human-Object Interaction Generation and Editing**. In *CVPR* 2026. [\[Page\]](#)
2. [Jiun Tian Hoe](#), Xudong Jiang, Chee Seng Chan, Yap-Peng Tan, and Weipeng Hu. **InteractDiffusion: Interaction Control in Text-to-Image Diffusion Models**. In *CVPR* 2024. [\[Page\]](#)[\[PDF\]](#)
3. [Jiun Tian Hoe*](#), Kam Woh Ng*, Tianyu Zhang, Chee Seng Chan, Yi-Zhe Song, Tao Xiang. **One Loss for All: Deep Hashing with a Single Cosine Similarity based Learning Objective**. In *NeurIPS* 2021. [\[PDF\]](#)

Co-authored Conference Proceedings

4. Kam Woh Ng, Xiatian Zhu, [Jiun Tian Hoe](#), Chee Seng Chan, Tianyu Zhang, Yi-Zhe Song, Tao Xiang. **Unsupervised Hashing with Similarity Distribution Calibration**. In *BMVC* 2023. [\[PDF\]](#)

Co-authored Journal Articles

5. Xingyue Wang, Weipeng Hu, [Jiun Tian Hoe](#), Jianhui Li, Ping Hu, Yap-Peng Tan. **Progressive Temporal Compensation and Semantic Enhancement for Exo-to-Ego Video Generation**. *Information Fusion*, 2026.
6. Jianhui Li, Weipeng Hu, Xingyue Wang, [Jiun Tian Hoe](#), Ping Hu, Xudong Jiang, Yap-Peng Tan. **Adaptive Memory Refinement and Perception Enhancement for Exo-to-Ego Video Generation**. *Neurocomputing*, 2025.
7. Weipeng Hu, [Jiun Tian Hoe](#), Jianhui Li, Haifeng Hu, Xudong Jiang, Yap-Peng Tan. **Cascaded Dynamic Memory Refinement and Semantic Alignment for Exo-to-Ego Cross-view Video Generation**. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2025. [\[PDF\]](#)
8. Weipeng Hu, [Jiun Tian Hoe](#), Runzhong Zhang, Yiming Yang, Haifeng Hu, Yap-Peng Tan. **Motion-guided Token Prioritization and Semantic Degradation Fusion for Exo-to-Ego Cross-View Video Generation**. *Information Fusion*, 2025.
9. Chao Xie, Linfeng Fei, Huanjie Tao, Yaocong Hu, Wei Zhou, [Jiun Tian Hoe](#), Weipeng Hu, Yap-Peng Tan. **Residual Quotient Learning for Zero-Reference Low-Light Image Enhancement**. *IEEE Transactions on Image Processing*, 2024.

Under Review Manuscripts

10. [Jiun Tian Hoe](#), Weipeng Hu, Wei Zhou, Chao Xie, Ziwei Wang, Chee Seng Chan, Xudong Jiang, Yap-Peng Tan. **InteractEdit: Zero-Shot Editing of Human-Object Interactions in Images**. Currently under review. [\[Page\]](#)
11. Weipeng Hu, [Jiun Tian Hoe](#), Shuai Shen, Haifeng Hu, Xiyang Li, Ming Cai, Xudong Jiang, and Yap-Peng Tan. **Bidirectional Context-aware and Unified Visual-auxiliary Denoising for Exo-to-Ego Video Generation**. Currently under review.

12. Weipeng Hu, Jiun Tian Hoe, Xingyue Wang, Xiyang Li, Haifeng Hu, Ping Hu, Ziwei Wang, Xudong Jiang, Yap-Peng Tan. **Dual Disentanglement and Semantic Refinement for Exo-to-Ego Video Generation**. Currently under review.

SKILLS

AI/ML	PyTorch, Huggingface Stack (Accelerate, Diffusers, Transformers, Datasets, PEFT), TensorFlow, WandB, Gradio, Diffusion Models, LoRA, AIGC, Computer Vision, Image/Video Synthesis, Multi-GPUs training
Programming	Python, Java, C/C++, C#, Bash, HTML5/CSS3/Javascript, L ^A T _E X
Development	Git, Linux, Docker, Kubernetes, Slurm
Other Frameworks	Flask, Unity3D, Spring, ReactJS
Languages	English (Advanced-CEFR C1), Chinese (Native), Malay (Fluent), Hokkien (Native)

SERVICES

Reviewer	CVPR, NeurIPS, ECCV, ICCV, BMVC, AAAI	
Teaching Assistant	IE0005 Introduction to Data Science and AI	2025
NTU	IM2073 Introduction to Design & Project	2025
	EE2073 Introduction to EEE Design & Project	2024
	IE4001 Software Engineering	2024
	IE1005 Computational Thinking to Programming	2023
Teaching Assistant	WIA1002 Data Structure	2020
UM	WIA1002 Data Structure	2019
	WIX1002 Fundamental of Programming	2019

AWARDS AND ACHIEVEMENTS

Honourable Mention Award	PREMIA Best Student Paper Award, Pattern Recognition and Machine Intelligence Association	2024	[URL]
Research Scholarship Award	Nanyang Technological University	2022	
Book Prize (First class graduate)	University of Malaya	2022	[URL]
FYP Competition Champion	Signal and Image Processing and Analysis track, IEEE Malaysia	2021	[URL]
36th out of 2312	IKCEST “The Belt and Road” International Big Data	2019	
2nd Place	Hong Leong Bank Can You Hack It Hackathon	2019	[URL]
Top 5	Unblockathon	2019	
10th Place	ProSolve Programming Competition	2018	
Second Place	UM Programming League Open Category	2018	
Second Place	UM e-Health Hackathon	2018	
Overall Champion	Robotrix, Malaysia Matriculation Colleges	2018	
Gold Medal	iCompex, Ministry of Higher Education Malaysia	2016	

EXPERIENCE

Ph.D Researcher	Aug 2022 - Present
Nanyang Technological University	<i>Singapore</i>
<ul style="list-style-type: none"> Designed relational-aware AIGC models (text-to-image diffusion) for human-object interaction image generation and editing; 2 first-author papers at CVPR 2024 & CVPR 2026. Implemented and trained/fine-tuned diffusion models using PyTorch, Hugging Face (Diffusers, Accelerate, PEFT), and WandB on multi-GPU setups. InteractDiffusion (CVPR 2024) has received 65+ citations and 125+ GitHub stars to date. Co-developed exo-to-ego (third-to-first person view) video generation models; published in top-tier journals like TPAMI. 	

Student Researcher

University of Malaya

Jan 2021 - Jul 2022

Kuala Lumpur, Malaysia

- Researched efficient deep hashing for large-scale image retrieval; first-author work published at NeurIPS 2021 (209 citations, 98 stars) and co-authored work at BMVC 2023.
- Core contributor to [CiSIP-FIRe](#), an open-source image retrieval benchmark framework with 72+ stars.

AI Engineer Intern

MoneyLion Malaysia Sdn Bhd

Mar 2019 - Jan 2021

Kuala Lumpur, Malaysia

- Maintained and optimized an AI rule-based decision engine and model deployments using Java (Spring, Project Loom), Python (Flask, PyTorch, TensorFlow), and Kubernetes.

References available upon request
