

Brandon Jinxiu Liu

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EDUCATION

- **South China University of Technology (SCUT), School of Future Technology** Guangdong, China
B.Eng, Majoring in Artificial Intelligence, Junior Undergraduate Aug 2021 - Jun 2025
Main Courses: Deep Learning and Computer Vision(4.0/4.0), Course Design of Deep Learning and Computer Vision (4.0/4.0, Best project), C++ Programming Foundations (4.0/4.0), Python Programming (4.0/4.0), Data Structure (4.0/4.0), Advanced Language Programming Training (4.0/4.0), Artificial Intelligence and 3D Vision (4.0/4.0), Calculus (4.0/4.0), Optimization Method(4.0/4.0)

RESEARCH INTERESTS

Multi-modal Learning and Generation

Diffusion Model based Image/Video/3D Generation

LLM/MLLM enhanced Image/Video/Visual Story Generation

REPRESENTATIVE PUBLICATION

- R3CD: Scene Graph to Image Generation with Relation-aware Compositional Contrastive Control Diffusion
Accepted by AAAI 2024, Vancouver, Canada
Jinxiu Liu, Qi Liu
- OpenStory: A Large-Scale Open-Domain Dataset for Subject-Driven Visual Storytelling
Accepted by CVPR 2024@VDU (Oral Presentation) Seattle, USA
Zilyu Ye*, **Jinxiu Liu***, Zhiyang Chen, Ziwei Xuan, Mingyuan Zhou, Qi Liu, Guo-Jun Qi (*equal contribution)
- Prompt Image to Life: Training-free Text-driven Image-to-video Generation
ECCV 2024, under review
Jinxiu Liu, Yuan Yao, Bingwen Zhu, Weijian Luo, Fanyi Wang, Yanhao Zhang, Yuxiao Wang, Qi Liu, Jiebo Luo, Guo-Jun Qi
- PiGIE: Proximal Policy Optimization Guided Diffusion for Fine-Grained Image Editing
ACM MM 2024, under review
Tiancheng Li*, **Jinxiu Liu***, Weijian Luo, Huajun Chen, Qi Liu (*equal contribution)
- **Deep Neural Network Compression by Spatial-wise Low-rank Decomposition**
Applied Intelligence, under review, positive reviews
Xiaoye Zhu*, **Jinxiu Liu***, Ye Liu, Michael Ngo, Zihan Ji (* equal contribution, IF: 5.019)

COLLABORATIVE PUBLICATION

- PoseAnimate: Zero-shot High Fidelity Pose Controllable character animation
Accepted by IJCAI 2024, Jeju, Korea
Bingwen Zhu, Fanyi Wang, Peng Liu, Jingwen Su, **Jinxiu Liu**, Yanhao Zhang, Zuxuan Wu, Yu-Gang Jiang, Guo-Jun Qi
- FreeA: Human-object Interaction Detection using Free Annotation Labels
TIP, under review
Yuxiao Wang, Zhenao Wei, Xinyu Jiang, Yu Lei, Weiyang Xue, **Jinxiu Liu**, Qi Liu

EXPERIENCE

- **Remote Research Intern, Stanford University, supervised by Prof. Jiajun Wu, Mar 2024 - Current**
 - I propose a mask and trajectory control video diffusion model to serve as the prior of 4D Scene Generation.
 - I propose a video diffusion driven deformation field, which improves the subject appearance temporal consistency.
- **Research Intern, Westlake University & OPPO Research Institute, supervised by Prof. Guo-Jun Qi (IEEE Fellow), Sep 2023 - Current**
 - A framework is proposed for story video generation based on multimodal large language models, which can generate long stories and maintain the consistency of the main task across different scenes. We plan to submit our work to NIPS.
 - A Large-Scale Open-Domain Dataset for Subject-Driven Visual Storytelling is proposed and a paper is accepted by CVPR 2024@VDU as **Oral** presentation, and the update version is scheduled to be submitted to NIPS dataset&benchmark track.
 - Conduct research on text&image to video generation and a paper is submitted to ECCV 2024, titled Prompt Image to Life: Training-free text-driven image-to-video generation, which uses only the basic stable diffusion model, without introducing any training modules, to achieve training-free text-driven image-to-video generation.
- **Research Intern, SCUT, supervised by Prof. Qi Liu (IEEE Senior Member), Dec 2022 - Current**
 - Developed a novel scene graph to image generation framework based on **diffusion models** and **contrastive control mechanisms**. And addressed the challenges of abstract relations in scene graphs and generated images that matched the scene graph specifications.
 - A paper is accepted by AAAI 2024 (**First Author**)
- **Course Design of Deep Learning , mentored by Prof. Mingkui Tan (IEEE Senior Member) and Prof. Huiping Zhuang**
 - Developed a text-based dialogue system called MiniHuggingGPT, a mini multi-modal application like HuggingGPT and MiniGPT-4, which can leverage three large-scale models for image captioning, image generation, and text conversation using natural language commands by instruction finetuning.
 - Provided a web-based interface based on gradio for easy interaction with the system and showcased various examples of its capabilities
 - Awarded as the **Best Course Design (1/39)**.
- **Research Training Program, SCUT, work with Prof. Ye Liu and Prof. Michael Ng, Jun 2022 - Aug 2022**
 - Developed a new method for compressing convolutional neural networks based on spatial-wise low-rank decomposition and preserved the higher-order structure of the filter weights and exploited their local low-rankness in different spatial resolutions
 - Submitted a paper to Applied Intelligence (**Co-First-Author**):

HONORS AND AWARDS

- The Taihu Innovation Scholarship (**ranked 1/160 comprehensively**, 8000, Wuxi city governments)
- TCL Corporate Scholarships (**ranked 1/25 comprehensively**, 20000, TCL Technology)
- SCUT Scholarship (**ranked 1/25 comprehensively**, 20000, SCUT)
- The Mathematical Contest in Modeling & The Interdisciplinary Contest in Modeling(MCM/ICM), **Meritorious Winner (Top 7% globally)**
- Asia and Pacific Mathematical Contest in Modeling (APMCM) – The Second Prize (Top 15% globally)