JIAN LIU

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EDUCATION

Hong Kong University of Science and Technology, Kowloon, Hong Kong　　2025.09 – 2028.09
- Computer Science and Engineer Major, advised by Prof. Song Guo
- Working towards a Phd Degree
- Group Leader in PEILab

Harbin Institute of Technology, Harbin, China　　2022.09 – 2024.12
- Computer Science Major, advised by Prof. Xianming Liu
- Working towards a Master Degree
- GPA: 91.89 (rank 3)

Harbin Institute of Technology, Harbin, China　　2018.09 – 2022.06
- Software Engineer Major, Faculty of Computing
- Bachelor Degree with Outstanding Graduates
- GPA: 93.57 (rank 2)

PUBLICATIONS

- *Mesh-Pro: Asynchronous Advantage-guided Ranking Preference Optimization for Artist-style Quadrilateral Mesh Generation*
  Zhen Zhou, **Jian Liu***, Biwen Lei, Jing Xu, Haohan Weng, Yiling Zhu, Zhuo Chen, Junfeng Fan, Yunkai Ma, Dazhao Du, Song Guo, Fengshui Jing, Chunchao Guo
  Under Reveiw by CVPR 2026.

- *QuadGPT: Native Quadrilateral Mesh Generation with Autoregressive Models*
  Jian Liu, Chunshi Wang, Song Guo, Haohan Weng, Zhen Zhou, Zhiqi Li, Jiaao Yu, Yiling Zhu, Jing Xu, Biwen Lei, Zhuo Chen, Chunchao Guo
  Accepted by ICLR 2026.

- *Mesh-RFT: Enhancing Mesh Generation via Fine-grained Reinforcement Fine-Tuning*
  Jian Liu*, Jing Xu*, Song Guo, Jing Li, Jingfeng Guo, Jiaao Yu, Haohan Weng, Biwen Lei, Xianghui Yang, Zhuo Chen, Fangqi Zhu, Tao Han, Chunchao Guo
  Accepted by NeurIPS 2025 Spotlight (Top 3.2%).

- *Auto-Connect: Connectivity-Preserving RigFormer with Direct Preference Optimization*
  Jingfeng Guo*, **Jian Liu***, Jinnan Chen, Shiwei Mao, Changrong Hu, Puhua Jiang, Junlin Yu, Jing Xu, Qi Liu, LiXin Xu, Zhuo Chen, Chunchao Guo
  Accepted by NeurIPS 2025.

- *Boosting Mesh Generation with Coordinates Merging*
  Jian Liu, Haohan Weng, Biwen Lei, Xianghui Yang, Zibo Zhao, Zhuo Chen, Chunchao Guo, Song Guo, Tao Han
  Accepted by ICML 2025.

- *Scaling Mesh Generation via Compressive Tokenization*
  Haohan Weng, Zibo Zhao, Biwen Lei, Xianghui Yang, **Jian Liu**, Zeqiang Lai, Zhuo Chen, Yuhong Liu, Jie Jiang, Chunchao Guo, Tong Zhang, Shenghua Gao, C. L. Philip Chen
  Accepted by CVPR 2025.
  Arxiv Github Project Page

- *AFBench: A Large-scale Benchmark for Airfoil Design*
  Jian Liu, Jianyu Wu, Hairun Xie, Guoqing Zhang, Jing Wang, Wei Liu, Wanli Ouyang, Junjun Jiang, Xianming Liu, Shixiang Tang, Miao Zhang.
  Accepted by NeurIPS 2024 D&B Track.
  Arxiv Github Project Page

INTERNSHIPS

Tencent, TEG Group   Supervised by Chunchao Guo

Qingyun Research Intern in 3D generation.   2024.08–Now

- Engaged in AIGC-3D research, participated in the development of the large-scale Hunyuan-3D model, with a primary focus on generating Low-Poly Mesh.

Shanghai AI Lab, AI4Science Group   Supervised by Shixiang Tang, Wanli Ouyang

Research Intern in 3D design.   2023.09–2024.07

- Gained insights into 3D content generation by running models such as Zero-123, SyncDreamer, MVDream, and Wonder3D for multi-view diffusion, and SceneTex for texture generation projects. Completed a survey titled "A Comprehensive Survey on 3D Content Generation," ready for submission to ACM Computing Surveys.
- Conducted research on intelligent manufacturing, starting from scratch to investigate airfoil design. Completed the manufacturing of airfoil data and established a baseline for airfoil generation and editing. Authored a paper, AFBench: A Large-scale Benchmark for Airfoil Design, with results submitted to NeurIPS 2024.

MEGVII, AIC Group and TF Group   Supervised by Zhewei Huang Shuchang Zhou

Research Intern.   2022.05–2023.08

- Conducted research on RGB and depth fusion for depth completion, achieving **1**st place in RGB+TOF Depth Completion at the MIPI Challenge 2022, validation leaderboard, **ECCV 2022** Workshop
- Conducted research on domain adaptation for semantic segmentation, achieving **4**th place in VisDA-2022, test leaderboard, **NIPS 2022** Workshop
- Conducted research on 3D occupancy prediction, achieving the **Innovation Award** in 3D Occupancy Prediction at the Autonomous Driving Challenge, **CVPR 2023** Workshop

Alibaba, Local Services Group   Supervised by Zhengyu Meng

Software Dev Engineer Intern.   2021.08–2021.10

- Completed a project on real-time/offline tag integration. Through this internship, I gained insights into Alibaba's product selection data pipeline and the use of multiple platforms, which led to an offer for a full-time position.

PROJECTS

Hunyuan3D 2.x, @Tencent
- GitHub repository with **10k+** stars.
- An advanced large-scale 3D synthesis system for generating high-resolution textured 3D assets.
- I'm one of the core contributors of Low-poly Generation

Wing-Wing System, @WAIC 2024
- Main contributors to the solution, specific code implementations.
- Provided a visual interface and supported promotional efforts.
- Recognized as a flagship project by the AI4Science Group.

Robust Depth Estimation Challenge @ICRA 2024
- First place in the Challenge.
- Participants include researchers from Baidu Research, Megvii Research, Tsinghua University, among others.

3D Occupancy Prediction Challenge @CVPR 2023
- First place in the purely academic category.
- Received the Innovation Award; NVIDIA was another recipient of this award.

Awesome-AIGC-3D, Survey Repo

- GitHub repository with **600+** stars.
- Attracted multiple authors who cited their work, including researchers from MSRA, NUS, Georgia Institute of Technology, etc.

HIT-CS-Master, Course Project
- GitHub repository with **200+** stars.
- Provided a comprehensive learning path and experimental code for first-year master students in the Computer Science department.

HONORS

- Outstanding Graduate of Heilongjiang Province, China, 2025
- Outstanding Graduate of Harbin Institute of Technology, 2025
- China National Scholarship, 2024
- Outstanding Intern at Shanghai AI Lab, 2024
- Champion in Robust Depth Estimation at the RoboDrive Challenge, @ICRA 2024
- Innovation Award for 3D Occupancy Prediction in Autonomous Driving Challenge, @CVPR 2023
- Outstanding Graduate of Harbin Institute of Technology, 2022
- China National Scholarship, 2021
- First-Class Scholarship at Harbin Institute of Technology, 2019, 2020, and 2021
- First Prize in the Mathematics Competition for Chinese College Students, 2019

SERVICES

- Conference reviewers at ACMMM 2025, NeurIPS 2025

SKILLS

- Language: IELTS 6.5
- Programming Language: Python, JAVA, C++
- Other Tools & Framework: PyTorch, docker, conda, git, LaTeX