

# JIAN LIU

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## EDUCATION

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**Harbin Institute of Technology**, Harbin, China 2022.09 – 2025.03

- Computer Science Major, advised by Prof. Xianming Liu
- Working towards a Master Degree
- GPA: 91.69 (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

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- *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.  
Submitted to [NeurIPS](#) 2024.  
[Arxiv](#) [Github](#) [Project Page](#)
- *A Comprehensive Survey on 3D Content Generation*  
**Jian Liu**, Xiaoshui Huang, Tianyu Huang, Lu Chen, Yuenan Hou, Shixiang Tang, Ziwei Liu, Wanli Ouyang, Wangmeng Zuo, Junjun Jiang, Xianming Liu.  
Ready for submission to [ACM Computing Surveys](#).  
[Arxiv](#) [Github](#)
- *Stealing Stable Diffusion Prior for Robust Monocular Depth Estimation*  
Yifan Mao, **Jian Liu**(equal contribution), Xianming Liu.  
Ready for submission to [ICRA](#) 2025.  
[Arxiv](#) [Github](#) [Project Page](#)
- *REPS: Reconstruction-based Point Cloud Sampling*  
Guoqing Zhang, Wenbo Zhao, **Jian Liu**(project leader), Xianming Liu.  
Submitted to [ECCV](#) 2024.  
[Arxiv](#) [Github](#)
- *OccTransformer: Improving BEVFormer for 3D camera-only occupancy prediction*  
**Jian Liu**, Sipeng Zhang, Chuixin Kong, Wenyuan Zhang, Yuhang Wu, Yikang Ding, Borun Xu, Ruibo Ming, Donglai Wei, Xianming Liu.  
[CVPR23](#) Autonomous Driving Challenge, 3D Occupancy Prediction Track.  
[Arxiv](#) [Talk](#)
- *DINO-SD: Champion Solution for ICRA 2024 RoboDepth Challenge*  
Yifan Mao, Ming Li, **Jian Liu**(equal contribution), Zihan Qin, Jiayang Liu, Jialei Xu, Cunxi Chu, Wenbo Zhao, Junjun Jiang, Xianming Liu.  
[ICRA24](#) RoboDrive Challenge, Depth Estimation Track.  
[Arxiv](#) [Talk](#)

## INTERNSHIPS

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**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<sup>st</sup>** 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<sup>th</sup>** 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.

## HONORS

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Leetcode contest rate in the **top 0.66%**, achieved a best global rank **13/35706** in Weekly Contest 400

**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

## SKILLS

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- Programming Language: Python, JAVA, C++
- Other Tools & Framework: PyTorch, docker, conda, git, L<sup>A</sup>T<sub>E</sub>X