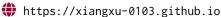
# Xiang Xu, Ph.D.

xuxiang0103@gmail.com





# **Employment History**

2021 – 2023 Algorithm engineer, Leapmotor Technologies Co. Ltd.

## **Education**

Ph.D. in Computer Science and Technology
Nanjing University of Aeronautics and Astronautics, Nanjing, China
Advisor: Prof. Qingshan Liu

2018 – 2021 M.S. in Control Science and Engineering
Nanjing University of Information Science and Technology, Nanjing, China
Advisor: Prof. Qingshan Liu

2014 − 2018 ■ B.S. in Electrical Engineering and Automation
Nanjing University of Information Science and Technology, Nanjing, China

### **Research Publications**

#### **Journal Articles**

- L. Kong, **X. Xu**, J. Ren, et al., "Multi-modal data-efficient 3d scene understanding for autonomous driving," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 47, no. 5, pp. 3748–3765, 2025.
- **X. Xu**, L. Kong, H. Shuai, and Q. Liu, "Frnet: Frustum-range networks for scalable lidar segmentation," *IEEE Transactions on Image Processing*, vol. 34, pp. 2173–2186, 2025.
- L. Zhu, S. Wang, Z. Zhao, **X. Xu**, and Q. Liu, "Ced-net: Contextual encoder-decoder network for 3d face reconstruction," *Multimedia Systems*, vol. 28, no. 5, pp. 1713–1722, 2022.
- H. Shuai, **X. Xu**, and Q. Liu, "Backward attentive fusing network with local aggregation classifier for 3d point cloud semantic segmentation," *IEEE Transactions on Image Processing*, vol. 30, pp. 4973–4984, 2021.

#### **Conference Proceedings**

- L. Kong, D. Lu, **X. Xu**, L. X. Ng, W. T. Ooi, and B. R. Cottereau, "Eventfly: Event camera perception from ground to the sky," in *IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 2025, pp. 1472–1484.
- L. Kong, **X. Xu**, J. Cen, *et al.*, "Calib3d: Calibrating model preferences for reliable 3d scene understanding," in *IEEE/CVF Winter Conference on Applications of Computer Vision*, 2025, pp. 1965–1978.
- **X. Xu**, L. Kong, H. Shuai, L. Pan, Z. Liu, and Q. Liu, "Limoe: Mixture of lidar representation learners from automotive scenes," in *IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 2025, pp. 27 368–27 379.
- **X. Xu**, L. Kong, S. Wang, C. Zhou, and Q. Liu, "Beyond one shot, beyond one perspective: Cross-view and long-horizon distillation for better lidar representations," in *IEEE/CVF International Conference on Computer Vision*, 2025.

- **X. Xu**, L. Kong, H. Shuai, *et al.*, "4d contrastive superflows are dense 3d representation learners," in *European Conference on Computer Vision*, 2024, pp. 58–80.
- H. Shuai, **X. Xu**, and Q. Liu, "Waterfall-net: Waterfall feature aggregation for point cloud semantic segmentation," in *Chinese Conference on Pattern Recognition and Computer Vision*, 2022, pp. 28–40.
- **X. Xu**, G. Huang, L. Hu, and Y. Wang, "Semantic-aware object detection for 3d point cloud," in *International Conference on Optics and Machine Vision*, vol. 12173, 2022, pp. 259–265.

#### arXiv Preprints

- L. Kong, X. Xu, Y. Liu, et al., Largead: Large-scale cross-sensor data pretraining for autonomous driving, 2025. arXiv: 2501.04005.
- **X. Xu**, L. Kong, H. Shuai, et al., Superflow++: Enhanced spatiotemporal consistency for cross-modal data pretraining, 2025. arXiv: 2503.19912.
- J. Sun, C. Qing, **X. Xu**, et al., An empirical study of training state-of-the-art lidar segmentation models, 2024. arXiv: 2405.14870.
- X. Wu, **X. Xu**, L. Kong, et al., Point transformer v3 extreme: 1st place solution for 2024 waymo open dataset challenge in semantic segmentation, 2024. arXiv: 2407.15282.

# Miscellaneous Experience

## **Research Projects**

2023 MMDetection3D: OpenMMLab next-general platform for general 3D object detection OpenMMLab, Shanghai AI Laboratory

#### **Selected Honors**

- The first place in the 2024 Waymo Open Dataset Challenge.
- 2018 Outstanding Freshman Scholarship, Nanjing University of Information Science and Technology.
- The First Prize of National Undergraduate Electronics Design Contest in Jiangsu Division.