

# Kai Liu

Ph.D. student, Zhejiang University

<https://kail8.github.io/>

kail@zju.edu.cn

---

## Research Interests

- **Open-set Recognition**, including uncertainty estimation, out-of-distribution detection, *etc.*
  - **Multi-Modality Learning**, including open-vocabulary detection, foundation models, *etc.*
  - **Large Language Models**, including knowledge injection, hallucination detection, *etc.*
- 

## Education

- **Ph.D. Degree**, **Zhejiang University**, **2020 - Present**
    - College of Biomedical Engineering and Instrument Science, GPA 3.85/4.0
  - **Bachelor Degree**, **Zhejiang University**, **2016 - 2020**
    - CHU KOCHEN Honors College, GPA 3.93/4.0 (Top 5%)
- 

## Experience

- **DAMO Academy**, **Alibaba Group** (May'22 - Present)
    - Research Intern, supervised by Prof. Jieping Ye
- 

## Publications

### [1] Uncertainty-aware Unsupervised Multi-Object Tracking

[Kai Liu](#), Sheng Jin, Zhihang Fu, Ze Chen, Rongxin Jiang, Jieping Ye  
*International Conference of Computer Vision 2023* [[ICCV 2023](#)]

### [2] Category-Extensible Out-of-Distribution Detection via Hierarchical Context Descriptions

[Kai Liu](#), Zhihang Fu, Chao Chen, Sheng Jin, Ze Chen, Mingyuan Tao, Rongxin Jiang, Jieping Ye  
*Conference on Neural Information Processing Systems 2023* [[NeurIPS 2023](#)]

### [3] Optimal Parameter and Neuron Pruning for Out-of-Distribution Detection

Chao Chen, Zhihang Fu, [Kai Liu](#), Ze Chen, Mingyuan Tao, Jieping Ye  
*Conference on Neural Information Processing Systems 2023* [[NeurIPS 2023](#)]

### [4] Rethinking Out-of-Distribution Detection on Imbalanced Data Distribution

[Kai Liu](#), Zhihang Fu, Sheng Jin, Chao Chen, Ze Chen, Rongxin Jiang, Yaowu Chen, Jieping Ye  
[[Under Review](#)]

### [5] ESOD: Efficient Small Object Detection on High-Resolution Images

[Kai Liu](#), Zhihang Fu, Sheng Jin, Ze Chen, Fan Zhou, Rongxin Jiang, Yaowu Chen, Jieping Ye  
*Submitted to IEEE Transaction on Image Processing* [[Under Review](#)]

---

## Professional Service

- Reviewer for ICML, NeurIPS, ICLR, KDD, *etc.*
- 

## Awards

- First-class Excellent Student Scholarship, Zhejiang University, 2019-2020.
- Guanghua Student Scholarship, Zhejiang University, 2018-2019.