

杨学 (Xue Yang)

个人主页: <https://yangxue0827.github.io> 研究方向: 计算机视觉/视觉语言大模型/遥感图像解译

教育背景

2019.09 ~ 2023.07 上海交通大学 (985/211), 上海 博士: 计算机科学与技术, 严骏驰教授
2016.09 ~ 2019.07 中国科学院大学, 北京 硕士 (保研): 信号与信息处理
2012.09 ~ 2016.07 中南大学 (985/211), 湖南 本科: 自动化

工作经历

2025.02 (预计) 上海交通大学, 自动化系, 长聘教轨助理教授, 上海
2023.07 ~ 至今 上海人工智能实验室, 通用视觉, 青年研究员, 上海

获奖荣誉

2024 上海交通大学优秀博士学位论文 (全校共 15 人, 工学 8 人)
2023 CCF 优秀博士学位论文奖 (原 CCF 优博, 全国共 9 人)
2022/2023 斯坦福大学评选的全球前 2% 顶尖科学家榜单
2023 上海市优秀毕业生
2022 CCF-CV 学术新锐学者 (全国共 3 名博士生)
2021/2022 博士生国家奖学金
2021 上海交通大学“学术之星”提名奖 (电院唯三)

学术成果

谷歌学术: <https://scholar.google.com/citations?user=2xTlvV0AAAAJ&hl=zh-CN> 引用量: 6300+

会议领域主席: ICLR'25

会议审稿人: CVPR'21-24, ICCV'23, ECCV'22/24, NeurIPS'22-24, ICML'22-24, ICLR'24, AAAI'22-25, ACM MM'21-24, ACCV'24

期刊审稿人: TPAMI, IJCV, TIP, PR, TMM, TNNLS, TCSVT, TGRS, TITS, TOMM, GRSL, RS

文章发表情况: CCF-A/清华-A 类共 30 余篇, 其中第一作者论文 16 篇

会议: CVPR/ICCV/ECCV (7/3/3), NeurIPS/ICML/ICLR (2/1/3), AAAI (2), ACM MM (1)

期刊: TPAMI (2), IJCV (1), IEEE Transactions (4), 《中国科学: 信息科学》(1)

荣誉: ESI 热点论文(1), ESI 高被引论文(6), 最具影响力论文(2)

视觉语言大模型

- Auto MC-Reward: Automated Dense Reward Design with Large Language Models for Minecraft
Hao Li*, **Xue Yang*** (共同一作), Zhaokai Wang*, Xizhou Zhu, Jie Zhou, Yu Qiao, Xiaogang Wang, Hongsheng Li, Lewei Lu, Jifeng Dai. CVPR 2024 (CCF-A)
主页: https://yangxue0827.github.io/auto_mc-reward.html
- InternGPT: Solving Vision-Centric Tasks by Interacting with ChatGPT Beyond Language
Zhaoyang Liu, Yinan He, Wenhai Wang, ..., **Xue Yang**, et al.
Github (3.2k star): <https://github.com/OpenGVLab/InternGPT>

有向目标检测 (部分)

- SCRDet++: Detecting Small, Cluttered and Rotated Objects via Instance-Level Feature Denoising and Rotation Loss Smoothing
Xue Yang, Junchi Yan, Wenlong Liao, Xiaokang Yang, Jin Tang, Tao He
TPAMI 2023 (CCF-A) (**ESI 热点论文, ESI 高被引论文**)
- Detecting Rotated Objects as Gaussian Distributions and Its 3-D Generalization
Xue Yang, Gefan Zhang, Xiaojiang Yang, Yue Zhou, Wentao Wang, Jin Tang, Tao He, Junchi Yan
TPAMI 2023 (CCF-A) (**ESI 高被引论文**)

5. On the Arbitrary-Oriented Object Detection: Classification based Approaches Revisited
Xue Yang, Junchi Yan. *IJCV* 2022 (CCF-A) **(ESI 高被引论文)**
6. 基于特征对齐和高斯表征的视觉有向目标检测
杨学, 严骏驰. 《中国科学: 信息科学》, 2023 (CCF-T1)
7. Point2RBox: Combine Knowledge from Synthetic Visual Patterns for End-to-end Oriented Object Detection with Single Point Supervision
Yi Yu*, **Xue Yang*** (共同一作), Qingyun Li, Feipeng Da, Jifeng Dai, Yu Qiao, Junchi Yan
CVPR 2024 (CCF-A)
8. AlphaRotate: A Rotation Detection Benchmark using TensorFlow
Xue Yang, Yue Zhou, Junchi Yan. *ICASSP*, 2024 (CCF-B)
9. H2RBox-v2: Incorporating Symmetry for Boosting Horizontal Box Supervised Oriented Object Detection
Yi Yu*, **Xue Yang*** (共同一作), Qingyun Li, Yue Zhou, Gefan Zhang, Feipeng Da, Junchi Yan
NeurIPS 2023 (CCF-A)
10. H2RBox: Horizontal Box Annotation is All You Need for Oriented Object Detection
Xue Yang, Gefan Zhang, Wentong Li, Xuehui Wang, Yue Zhou, Junchi Yan. *ICLR* 2023 (清华 A)
11. The KFIoU Loss for Rotated Object Detection
Xue Yang, Yue Zhou, Gefan Zhang, Jirui Yang, Wentao Wang, Junchi Yan, Xiaopeng Zhang, Qi Tian
ICLR 2023 (清华 A)
12. MMRotate: A Rotated Object Detection Benchmark using PyTorch
Yue Zhou*, **Xue Yang*** (共同一作), Gefan Zhang, Jiabao Wang, Yanyi Liu, Liping Hou, Xue Jiang, Xingzhao Liu, Junchi Yan, Chengqi Lyu, Wenwei Zhang, Kai Chen. *ACM MM* 2022 (CCF-A, **Oral**)
13. Learning High-Precision Bounding Box for Rotated Object Detection via Kullback-Leibler Divergence
Xue Yang, Xiaojiang Yang, Jirui Yang, Qi Ming, Wentao Wang, Qi Tian, Junchi Yan
NeurIPS 2021 (CCF-A)
14. Rethinking Rotated Object Detection with Gaussian Wasserstein Distance Loss
Xue Yang, Junchi Yan, Qi Ming, Wentao Wang, Xiaopeng Zhang, Qi Tian. *ICML* 2021 (CCF-A)
15. Dense Label Encoding for Boundary Discontinuity Free Rotation Detection
Xue Yang, Liping Hou, Yue Zhou, Wentao Wang, Junchi Yan. *CVPR* 2021 (CCF-A)
16. R³Det: Refined Single-Stage Detector with Feature Refinement for Rotating Object
Xue Yang, Junchi Yan, Ziming Feng, Tao He
AAAI 2021 (CCF-A) **(入选 Paper Digest 评选的最具影响力的 AAAI'21 论文第 1 名)**
17. Arbitrary-Oriented Object Detection with Circular Smooth Label
Xue Yang, Junchi Yan. *ECCV* 2020 (CCF-B, 清华 A)
18. SCRDet: Towards More Robust Detection for Small, Cluttered and Rotated Objects
Xue Yang, Jirui Yang, Junchi Yan, Yue Zhang, Tengfei Zhang, Zhi Guo, Sun Xian, Kun Fu
ICCV 2019 (CCF-A)
19. Automatic Ship Detection in Remote Sensing Images from Google Earth of Complex Scenes Based on Multiscale Rotation Dense Feature Pyramid Networks
Xue Yang, Hao Sun, Kun Fu, Jirui Yang, Xian Sun, Menglong Yan, Zhi Guo
Remote Sensing, 2018 **(ESI 高被引论文)**
20. Theoretically Achieving Continuous Representation of Oriented Bounding Boxes
Zikai Xiao, Guo-Ye Yang, **Xue Yang**, Tai-Jiang Mu, Junchi Yan, Shi-min Hu. *CVPR* 2024 (CCF-A)
21. PointOBB: Learning Oriented Object Detection via Single Point Supervision
Junwei Luo, **Xue Yang** (项目主导), Yi Yu, Qingyun Li, Junchi Yan, Yansheng Li. *CVPR* 2024 (CCF-A)
22. ARS-DETR: Aspect Ratio-Sensitive Detection Transformer for Aerial Oriented Object Detection
Ying Zeng, Yushi Chen, **Xue Yang**, Qingyun Li, Junchi Yan. *TGRS* 2024 (CCF-B)
23. Task Interleaving and Orientation Estimation for High-Precision Oriented Object Detection in Aerial Images
Qi Ming, Lingjuan Miao, Zhiqiang Zhou, Junjie Song, Yunpeng Dong, **Xue Yang**
ISPRS 2023 **(ESI 高被引论文)**

24. G-rep: Gaussian representation for arbitrary-oriented object detection
Liping Hou, Ke Lu, **Xue Yang**, Yuqiu Li, Jian Xue. *Remote Sensing* 2023 (ESI 高被引论文)
25. RSDet++: Point-based Modulated Loss for More Accurate Rotated Object Detection
Wen Qian, **Xue Yang**, Silong Peng, Junchi Yan, Xiujuan Zhang. *TCSVT* 2022 (CCF-B)
26. Learning Modulated Loss for Rotated Object Detection
Wen Qian, **Xue Yang**, Silong Peng, Junchi Yan, Yue Guo
AAAI 2021 (CCF-A) (入选 Paper Digest 评选的最具影响力的 AAAI'21 论文第 10 名)

目标检测/实例分割

27. Parameter-Inverted Image Pyramid Networks
Xizhou Zhu*, **Xue Yang*** (共同一作), Zhaokai Wang*, Hao Li, Wenhan Dou, Junqi Ge, Lewei Lu, Yu Qiao, Jifeng Dai.
28. Toward Open Vocabulary Aerial Object Detection with CLIP-Activated Student-Teacher Learning
Yan Li, Weiwei Guo, **Xue Yang**, Ning Liao, Dunyun He, Jiaqi Zhou, Wenxian Yu
ECCV 2024 (CCF-B, 清华 A)
29. PatchDCT: Patch Refinement for High Quality Instance Segmentation
Qinrou Wen, Jirui Yang, **Xue Yang**, Kewei Liang. *ICLR* 2023 (清华 A)
30. Rethinking Classification and Localization for Cascade R-CNN
Ang Li, **Xue Yang**, Chongyang Zhang. *BMVC* 2019 (CCF-C)

文字检测与识别

31. Bridging Synthetic and Real Worlds for Pre-training Scene Text Detectors
Tongkun Guan, Wei Shen, **Xue Yang**, Xuehui Wang, XiaoKang Yang. *ECCV* 2024 (CCF-B, 清华 A)
32. Self-supervised Character-to-Character Distillation for Text Recognition
Tongkun Guan, Wei Shen, **Xue Yang**, Qi Feng, Zekun Jiang, Xiaokang Yang. *ICCV* 2023 (CCF-A)
33. Self-supervised Implicit Glyph Attention for Text Recognition
Tongkun Guan, Chaochen Gu, Jingzheng Tu, **Xue Yang**, Qi Feng, Yudi Zhao, Wei Shen
CVPR 2023 (CCF-A)

底层视觉

34. Dual-path Image Inpainting with Auxiliary GAN Inversion
Wentao Wang, Li Niu, Jianfu Zhang, **Xue Yang**, Liqing Zhang. *CVPR* 2022 (CCF-A)
35. Parallel Multi-Resolution Fusion Network for Image Inpainting
Wentao Wang, Jianfu Zhang, Li Niu, Haoyu Ling, **Xue Yang**, Liqing Zhang. *ICCV* 2021 (CCF-A)

开源项目

1. **AlphaRotate (项目发起者): A Rotation Detection Benchmark using TensorFlow**
Github (1.1k star): <https://github.com/yangxue0827/RotationDetection>
AlphaRotate 是第一个基于 TensorFlow 的开源旋转检测工具箱。
2. **MMRotate (项目发起者): A Rotated Object Detection Benchmark using PyTorch**
Github (1.8k star): <https://github.com/open-mmlab/mmrrotate>
MMRotate 是一个基于 PyTorch 的开源旋转检测工具箱。
3. **JDet (主要人员)**
Github (181 star): <https://github.com/Jittor/JDet>
JDet 是一个由清华大学胡事民院士团队领衔的基于国产深度学习框架 Jittor 开发的旋转检测工具箱。
4. **DetectionTeamUCAS (项目发起者)**
Github (2.5k star): <https://github.com/DetectionTeamUCAS>
该账号包含许多由本人重新实现的通用检测和旋转检测算法。