

# Yi Xu

✉ [fraudxyiyy@gmail.com](mailto:fraudxyiyy@gmail.com)

🔗 [xyiyy.github.io](https://xyiyy.github.io)

☎ (+86) 18717826769

I am a PhD candidate in Computer Science in the field of computer vision. I work in the areas of video understanding, and weakly/semi-supervised learning. I also have experience in software development including designing and implementing complex algorithm and data structures.

## Education Background

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### Fudan University

*Ph.D. Student in Software and Theory of Computer*

Advisor: Prof. Shuigeng Zhou

Shanghai Key Lab of Intelligent Information Processing

Shanghai, China

Sept.2017 - Exp: Jun 2022

### Shanghai University

*B.S. Student in Computer Science and Technology*

Advisors in ACM-ICPC: Prof. Yunfu Shen and Prof. Weimin Li

Overall GPA: 3.82/4.0 | Major GPA: 3.92/4.0 | Ranking: 1/301

Shanghai, China

Sept.2013. - Jun.2017

## Publications

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### Peer-Reviewed Publications

- **Yi Xu**, Jiandong Ding, Lu Zhang, Shuigeng Zhou  
DP-SSL: Towards Robust Semi-supervised Learning with A Few Labeled Samples  
in Thirty-fifth Conference on Neural Information Processing Systems (**NeurIPS**), 2021.  
[Conference Paper](#): [arxiv: 2110.13740](https://arxiv.org/abs/2110.13740)
- Lu Zhang, Jiandong Ding, **Yi Xu**, Yingyao Liu, Shuigeng Zhou  
Weakly-supervised Text Classification Based on Keywordd Graph  
in the Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2021.  
[Conference Paper](#): [arxiv: 2110.02591](https://arxiv.org/abs/2110.02591)
- Minyi Zhao, **Yi Xu (Co-author)**, Shuigeng Zhou  
Recursive Fusion and Deformable Spatiotemporal Attention for Video Compression Artifact Reduction  
in ACM Multimedia (**MM**), 2021.  
[Conference Paper](#): [arxiv: 2108.02110](https://arxiv.org/abs/2108.02110)
- **Yi Xu**, Minyi Zhao, Jing Liu, Xinjian Zhang, Longwen Gao, Shuigeng Zhou, Huyang Sun  
Boosting the Performance of Video Compression Artifact Reduction with Reference Frame Proposals and Frequency Domain Information  
in Computer Vision and Pattern Recognition Workshop (**Workshop in CVPR**) NTIRE, 2021.  
[Conference Paper](#): [arxiv: 2105.14962](https://arxiv.org/abs/2105.14962)
- **Yi Xu**, Fan Bai, Yingxuan Shi, Qiuyu Chen, Longwen Gao, Kai Tian, Shuigeng Zhou, Huyang Sun  
GIF Thumbnails: Attract More *Clicks* to Your Videos  
in Association for the Advancement of Artificial Intelligence (**AAAI**), 2021.  
[Conference Paper](#)
- Qiuyu Chen, Wei Zhang, Ning Zhou, Peng Lei, **Yi Xu**, Yu Zheng, Jianping Fan  
Adaptive Fractional Dilated Convolution Network for Image Aesthetics Assessment  
in Computer Vision and Pattern Recognition (**CVPR**), 2020.  
[Conference Paper](#)
- Kai Tian, **Yi Xu**, Shuigeng Zhou  
Network as Regularization for Training Deep Neural Networks: Framework, Model and Perfor-

mance

in Association for the Advancement of Artificial Intelligence (AAAI), 2020.(**Oral**)

[Conference Paper](#)

- Zekun Ye, Weijie Deng, Shuigeng Zhou, **Yi Xu**, Jihong Guan  
Optimal Trade Execution Based on Deep Deterministic Policy Gradient  
in International Conference on Database Systems for Advanced Applications (**DASFAA**), 2020.  
[Conference Paper](#)
- **Yi Xu**, Longwen Gao, Kai Tian, Shuigeng Zhou, Huyang Sun  
Non-Local ConvLSTM for Video Compression Artifact Reduction  
in International Conference on Computer Vision (**ICCV**), 2019.  
[Conference Paper: arxiv: 1910.12286](#)
- Kai Tian, **Yi Xu**, Shuigeng Zhou, Jihong Guan  
Versatile Multiple Choice Learning and Its Application to Vision Computing  
in Computer Vision and Pattern Recognition (**CVPR**), 2019.  
[Conference Paper](#)
- Fan Wu, Shuigeng Zhou, Kang Wang, **Yi Xu**, Jihong Guan and Jun Huan  
Simple is Better: A Global Semantic Consistency Based End-to-End Framework for Effective Zero-Shot Learning  
in Pacific Rim International Conferences on Artificial Intelligence (**PRICAI**), 2019(**Oral**)  
[Conference Paper](#)
- **Yi Xu**, Zhi Zhuang, Weimin Li, Xiaokang Zhou  
Effective Community Division based on Improved Spectral Clustering  
in **NeuroComputing**, 2018.  
[Journal Paper](#)

Under Review

- Xinjian Zhang, **Yi Xu**, Su Yang, Longwen Gao, Huyang Sun  
Dance Generation with Style Embedding: Learning and Transferring Latent Representations of Dance Styles  
[Preprint on arXiv: 2104.14802](#)
- Minyi Zhao, Jiandong Ding, Lu Zhang, **Yi Xu**, Jihong Guan, Shuigeng Zhou  
A paper about data augmentation framework has been submitted to a conference

## Internship Experience

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### Tencent

*Jul. 2021 – Now*

Research Intern (Supervisor: Dr. Chen Chen)

in 2021 Tencent Rhino-Bird Elite Training Program

- Weakly-Supervised Temporal Action Localization

### DAMO Academy, Alibaba

*Oct. 2020 – Jul. 2021*

Research Intern (Supervisor: Dr. Jiandong Ding)

- Semi/Weakly-supervised learning for data annotation (with A NeurIPS paper and two internal Patent applications).

### AI Technology Department, Bilibili

*Oct. 2017 – Sept. 2020*

Research Intern (Supervisor: Dr. Longwen Gao)

- GIF thumbnail generation for UGC Video (with an AAAI paper).
- Efficient semantic segmentation.
- Video quality enhancement (with an ICCV paper and two Patent applications).

### Bing Ads group, Microsoft

*Jul. 2016 – Oct. 2016*

Summer Intern (Supervisor: Dr. Qiefeng Wang)

- worked on approaches to the problem of keyword bid estimation for advertisers without corresponding auction history.

## Selected Awards

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Competition Results.....	
NTIRE Quality Enhancement of Heavily Compressed Videos (Workshop in CVPR)	2021
• <b>Winner</b> of Track 1 (fixed QP)	
• <b>Winner</b> of Track 2 (fixed QP)	
• <b>Runner-up</b> of Track 3 (fixed bit-rate)	
NTIRE Nonhomogeneous Dehazing ( <b>4th</b> ) (Workshop in CVPR)	2021
Scholarships.....	
• National Scholarship for Doctoral Students	2021
• Intel Fellowship	2019
• National Scholarship for Undergraduate Students	2016
• The BaoGang Scholarship	2016
Programming Contest Results.....	
I have taken part in algorithmic competitions like Google Code Jam, TopCoder, Codeforces, ACM International Collegiate Programming Contest (ICPC)	
• <b>Annual ACM-ICPC World Finals</b> , Rapid City, USA, World <b>56th</b> position	2017
• <b>Annual ACM-ICPC World Finals</b> , Phuket, Thailand, World <b>51st</b> position	2016
• ACM-ICPC Asia Qingdao Regional Contest, Gold Medal	2016
• ACM-ICPC Asia Shenyang Regional Contest, Gold Medal	2016
• ACM-ICPC Asia Hefei Regional Contest, Gold Medal	2015
• ACM-ICPC Asia Shanghai Regional Contest, Silver Medal	2015
• ACM-ICPC Asia Guangzhou Regional Contest, Silver Medal	2014
• ACM-ICPC Asia Xi'an Regional Contest, Bronze Medal	2014

## Academic Services

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### Teaching Assistant

- Computational Geometry (Prof. Yufei Tao, CUHK) 2019 Summer
- C Programming (Prof. Shuigeng Zhou, Fudan) 2017 Fall

### I have reviewed paper submissions for:

- Conference on Computer Vision and Pattern Recognition (CVPR) 2020, 2021
- British Machine Vision Conference (BMVC) 2020, 2021
- Winter Conference on Applications of Computer Vision (WACV) 2020, 2021, 2022
- Asian Conference on Computer Vision (ACCV) 2020
- AAAI Conference on Artificial Intelligence (AAAI) 2022

## Technology Summary

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- Programming Languages: C/C++ (4+ year), Python (5+ years), Java (1 year), shell
- Technologies: NumPy/SciPy, Pytorch
- Research Interest: Machine Learning, Computer Vision