



# ZHUOFAN XIA | 夏卓凡

Mobile: +86 135-1226-0137  
[xzf23@mails.tsinghua.edu.cn](mailto:xzf23@mails.tsinghua.edu.cn)  
[Personal Homepage](#)

## EDUCATION

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<b>Ph.D.   Control Science and Engineering</b> Tsinghua University, advised by Prof. Gao Huang and Prof. Shiji Song	Aug. 2020 – 2026 (Expected) Beijing, China
<b>B.Eng.   Automation</b> Tsinghua University	Aug. 2016 – June 2020 Beijing, China
<ul style="list-style-type: none"><li>Thesis: <i>Forecasting Air Pollutant Concentration using Graph Neural Networks</i></li><li>Advised by Prof. Gao Huang and Prof. Shiji Song</li></ul>	
<b>High School</b> YaoHua High School, Junior & Senior	Aug. 2010 – June 2016 Tianjin, China

## PUBLICATIONS

\*Equal Contribution. †Corresponding Author.

### Accepted Papers

<b>GSVA: Generalized Segmentation via Multimodal Large Language Models</b> Zhuofan Xia*, Dongchen Han*, Yizeng Han, Xuran Pan, Shiji Song, Gao Huang†	CVPR 2024 Poster
<b>Budgeted Training for Vision Transformer</b> Zhuofan Xia*, Xuran Pan*, Xuan Jin*, Yuan He, Hui Xue, Shiji Song, Gao Huang†	ICLR 2023 Poster
<b>Vision Transformer with Deformable Attention</b> Zhuofan Xia*, Xuran Pan*, Shiji Song, Li Erran Li, Gao Huang†	CVPR 2022 <b>Best Paper Finalists</b>
<b>3D Object Detection with Pointformer</b> Xuran Pan*, Zhuofan Xia*, Shiji Song, Li Erran Li, Gao Huang†	CVPR 2021 Poster
<b>Slide-Transformer: Hierarchical Vision Transformer with Local Self-Attention</b> Xuran Pan*, Tianzhu Ye*, Zhuofan Xia, Shiji Song, Gao Huang†	CVPR 2023 Poster
<b>Adaptive Rotated Convolution for Rotated Object Detection</b> Yifan Pu*, Yiru Wang*, Zhuofan Xia, Yizeng Han, Yulin Wang, Weihao Gan, Zidong Wang, Shiji Song, Gao Huang†	ICCV 2023 Poster

### In Submission

<b>DAT++: Spatially Dynamic Vision Transformer with Deformable Attention</b> Zhuofan Xia, Xuran Pan, Shiji Song, Li Erran Li, Gao Huang† <ul style="list-style-type: none"><li>Extended journal version of <i>Vision Transformer with Deformable Attention</i>.</li></ul>	Preprint
<b>Agent Attention: On the Integration of Softmax and Linear Attention</b> Dongchen Han*, Tianzhu Ye*, Yizeng Han, Zhuofan Xia, Shiji Song, Gao Huang†	Preprint
<b>Generalized Activation via Multivariate Projection</b> Jiayun Li, Yuxiao Cheng, Yiwen Lu, Zhuofan Xia, Yilin Mo†, Gao Huang	Preprint

## INTERNSHIPS

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- Research Intern** July 2021 – Apr. 2023  
Alibaba Inc. Beijing, China
- Worked on dynamic neural network mechanism on Vision Transformers.
  - Paper accepted to ICLR 2023.
- Research Intern** July 2019 – Dec. 2019  
SenseTime Inc. Beijing, China
- Developed several strategies of data augmentation for document table recognition.

## HONORS AND AWARDS

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- Friend of Tsinghua – Ubiquant Scholarship of Tsinghua University** Fall 2023  
Comprehensive excellence
- Friend of Tsinghua – Hefei Talent Scholarship of Tsinghua University** Fall 2022  
Comprehensive excellence
- Friend of Tsinghua – Samsung Scholarship of Tsinghua University** Fall 2021  
Comprehensive excellence
- Friend of Tsinghua – Evergrand Scholarship of Tsinghua University** Fall 2019  
Academic excellence
- Outstanding Social Work Scholarship of Tsinghua University** Fall 2019  
Outstanding social work
- Friend of Tsinghua – ZhangRonghua Scholarship of Tsinghua University** Fall 2018  
Academic excellence
- Outstanding Social Work Scholarship of Tsinghua University** Fall 2018  
Outstanding social work
- Academic Excellence Scholarship of Tsinghua University** Fall 2017  
Academic excellence

## TEACHING ASSISTANT EXPERIENCE

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- Modeling and Optimization of Complex Networked Systems** 80250463  
Instructor: Prof. Shiji Song and Prof. Gao Huang Tsinghua University
- Worked as TA in 2021 Fall, 2022 Fall, 2023 Fall.

## SKILLS

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- **Languages:** Chinese (Native), English
- **Programming:** C/C++, C#, Python, MATLAB
- **Deep Learning Toolkits:** TensorFlow, PyTorch, Caffe
- **Document Creation:** Microsoft Office Suite,  $\LaTeX$ , Markdown