

# YIXUAN WU

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Research Interests: Multi-modal Learning, Computer Vision, Medical Data



## Education

### Zhejiang University

*Ph.D. in Big Data Science, Advisor: Prof. Jian Wu, Danny Z. Chen (Notre Dame)*

Sep 2021 – June 2026 (Expected)

Hangzhou, Zhejiang

### Yale University

*Visiting student in Biostatistics, Advisor: Prof. Vasilis Vasiliou, Hongyu Zhao*

June 2019 – Sep 2019

New Haven, CT

### Zhejiang University

*Bachelor of Science, Advisor: Prof. Haimin Xu, GPA: 3.8/4.0*

Sep 2017 – June 2021

Hangzhou, Zhejiang

## Publications

- **Yixuan Wu**, Zhao Zhang, Xie Chi, Feng Zhu, Rui Zhao. *Advancing Referring Expression Segmentation Beyond Single Image*. In ICCV, 2023.
- **Yixuan Wu**, Jintai Chen, Jiahuan Yan, Yiheng Zhu, Danny Z. Chen, Jian Wu. *GCL: Gradient-Guided Contrastive Learning for Medical Image Segmentation with Multi-Perspective Meta Labels*. In ACMMM, 2023 (**Oral**).
- **Yixuan Wu**, Bo Zheng, Jintai Chen, Danny Z. Chen, Jian Wu. *OneSeg: Self-learning and One-shot Learning based Single-slice Annotation for 3D Medical Image Segmentation*. In MICCAI, 2022 (**Oral**).
- **Yixuan Wu**, Kuanlun Liao, Jintai Chen, Jinhong Wang, Danny Z. Chen, Honghao Gao, Jian Wu. *D-Former: A U-shaped Dilated Transformer for 3D Medical Image Segmentation*[J]. In Neural Computing and Applications, 2023.
- Yizhou Wang\*, **Yixuan Wu\***, Shixiang Tang, Weizhen He, Xun Guo, Feng Zhu, Lei Bai, Rui Zhao, Jian Wu, Tong He, Wanli Ouyang. *Hulk: A Universal Knowledge Translator for Human-Centric Tasks*. Under review in TPAMI.
- Chi Xie\*, Zhao Zhang\*, **Yixuan Wu\***, Feng Zhu, Rui Zhao, Shuang Liang. *Described Object Detection: Liberating Object Detection with Flexible Expressions*. In NeurIPS, 2023.
- Jiahuan Yan\*, Jintai Chen\*, **Yixuan Wu**, Danny Z. Chen, Jian Wu. *T2G-Former: Organizing Tabular Features into Relation Graphs Promotes Heterogeneous Feature Interaction*. In AAAI, 2023 (**Oral**).
- Yiheng Zhu, Zhenqiu Ouyang, Ben Liao, Jialu Wu, **Yixuan Wu**, Chang-Yu Hsieh, Tingjun Hou, Jian Wu. *MolHF: A Hierarchical Normalizing Flow for Molecular Graph Generation*. In IJCAI, 2023.

## Internships

**Shanghai AI Laboratory** | *Researcher on Human-Centric Vision-Language Foundation Model*

April 2023 – Present

- Developed an encoder-decoder-based large foundation model to unify various 2D and 3D vision-language human-centric tasks, e.g., pedestrian detection, human parsing, pedestrian attribute recognition, action recognition, person reID, pose estimation, and mesh recovery.
- Establish an all-weather and multitask dataset and benchmark for human-centric foundation model of human-centric fine-grained recognition tasks.

**SenseTime Research** | *Researcher on Universal Vision-Language Model*

Sep 2022 – March 2023

- Created a multi-modal detection/segmentation dataset named  $D^3$  with class names characterized by intricate and flexible long expressions (traditional dataset's class names are simple nouns instead).
- Extended traditional Referring expression segmentation (RES) task to real-world scenarios where images are clustered and negative samples exist, and proposed a baseline method for this new setting (GRES).

**IFLYTEK Research** | *Vision Algorithm Engineer*

April 2021 – Sep 2021

- Deployed object detection algorithmic models to internal platforms, and maintained large-scale clusters of platforms.

**DiDi Global Inc.** | *Medical Data Analyst*

Sep 2020 – March 2021

- Used SQL for structural data operation, and Python for medical data mining and analysis, providing decision support for operating department.

## Leadership

### Dance Sports Association

Sep 2018 – Sep 2020

*President, Captain*

Zhejiang University

- As the president, organized to hold monthly club activities, i.e., Christmas Dance Party, Sports-Dance Training, etc.
- As the captain of Latin Dance Team, led the team to participate in national competitions and had won the first prize.

## Skills

**English:** TOEFL 110, CET-6, CET-4

**Programming:** Python, Java, C, HTML/CSS, R, SAS, SPSS, SQL