

# Xingyi Zhou

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Google Scholar/ Github

## Education

- 2017–2022 **The University of Texas at Austin, Austin, TX,**  
(expected) Department of Computer Science, Ph.D. candidate.  
Advisor: Dr. Philipp Krähenbühl
- 2013–2017 **Fudan University, Shanghai, China,**  
School of Computer Science, Bachelor in Science.

## Research Experience

- 2018–Present **Research Assistant, Deep Learning Lab, UT Austin, Austin, TX,**  
with Dr. Philipp Krähenbühl.  
Object detection; object tracking; general object representation.
- 2021 **Research Intern, Facebook AI Research, Remote,**  
with Dr. Ishan Misra.  
Large-vocabulary object detection.
- 2019–2021 **Research Intern, Intel Intelligent Systems Lab, Santa Clara, CA/ Remote,**  
with Dr. Vladlen Koltun.  
Multi-object tracking; object detection on multiple datasets.
- 2018 **Software Engineering Intern, Google Research, Mountain View, CA,**  
with Tyler Zhu and Dr. Kevin Murphy.  
Human pose estimation; human mesh reconstruction.
- 2017–2018 **Research Assistant, Graphics & AI Lab, UT Austin, Austin, TX,**  
with Dr. Qixing Huang.  
3D computer vision; pose estimation.
- 2014–2017 **Research Assistant, Institute for Media Computing, Fudan Univ., Shanghai, China,**  
with Dr. Wei Zhang.  
Hand pose estimation; fine-grained image classification; decision trees.
- 2016 **Research Intern, Microsoft Research Asia (MSRA), Beijing, China,**  
with Dr. Yichen Wei.  
Human/ hand pose estimation.

## Publications

- 2021 **Detecting Twenty-thousand Classes using Image-level Supervision,** Xingyi Zhou, Rohit Girdhar, Armand Joulin, Philipp Krähenbühl, Ishan Misra, arXiv, 2022, [Paper] [Code].
- 2021 **Global Tracking Transformers,** Xingyi Zhou, Tianwei Yin, Vladlen Koltun, Philipp Krähenbühl, in submission.
- 2021 **Simple multi-dataset detection,** Xingyi Zhou, Vladlen Koltun, Philipp Krähenbühl, arXiv, 2021, [Paper] [Code].

- 2021 **Probabilistic two-stage detection**, Xingyi Zhou, Vladlen Koltun, Philipp Krähenbühl, arXiv, 2021, [Paper] [Code].
- 2021 **Multimodal Virtual Point 3D Detection**, Tianwei Yin, Xingyi Zhou, Philipp Krähenbühl, NeurIPS, 2021, [Paper] [Code].
- 2021 **Center-based 3D Object Detection and Tracking**, Tianwei Yin, Xingyi Zhou, Philipp Krähenbühl, CVPR, 2021, [Paper] [Code].
- 2020 **Tracking Objects as Points**, Xingyi Zhou, Vladlen Koltun, Philipp Krähenbühl, ECCV, 2020 (spotlight), [Paper] [Code].
- 2019 **Objects as Points**, Xingyi Zhou, Dequan Wang, Philipp Krähenbühl, arXiv, 2019, [Paper] [Code].
- 2019 **Bottom-up Object Detection by Grouping Extreme and Center Points**, Xingyi Zhou, Jiacheng Zhuo, Philipp Krähenbühl, CVPR, 2019, [Paper] [Code].
- 2018 **StarMap for Category-agnostic Viewpoint and Keypoint Estimation**, Xingyi Zhou, Arjun Karapur, Linjie Luo, Qixing Huang, ECCV, 2018, [Paper] [Code].
- 2018 **Unsupervised Domain Adaptation for 3D Keypoint Estimation via View Consistency**, Xingyi Zhou, Arjun Karapur, Chuang Gan, Linjie Luo, Qixing Huang, ECCV, 2018, [Paper] [Code].
- 2017 **Towards 3D Human Pose Estimation in the Wild: A weakly-supervised Approach**, Xingyi Zhou, Qixing Huang, Xiao Sun, Xiangyang Xue, Yichen Wei, ICCV, 2017, [Paper] [Code].
- 2016 **Deep Kinematic Pose Regression**, Xingyi Zhou, Xiao Sun, Wei Zhang, Shuang Liang, Yichen Wei, ECCV workshops, 2016, [Paper] [Code].
- 2016 **Model-based Deep Hand Pose Estimation**, Xingyi Zhou, Qingfu Wan, Wei Zhang, Xiangyang Xue, Yichen Wei, IJCAI, 2016, [Paper] [Code].

## Horners

- Apr 2021 **Facebook Fellowship**.
- Jan 2020 **Facebook Fellowship Finalist**.
- Nov 2019 **Adobe Fellowship Finalist**.
- Sep 2017 **Provost's Graduate Excellence Fellowship**, UT Austin.
- Jun 2017 **Shanghai Outstanding Graduate**.
- Aug 2016 **Award of Excellence**, Stars of Tomorrow Internship Program, Microsoft Research Asia.

## Competition Awards

- June 2021 **2nd place**, CVPR 2021 Waymo real-time 3D detection challenge.
- Aug 2020 **1st place**, ECCV 2020 Robust vision challenge, object detection track.
- Aug 2020 **1st place**, ECCV 2020 Robust vision challenge, instance segmentation track.
- Jun 2020 **2nd place/ Best student submission**, ICRA 2020 nuScenes 3D detection challenge.
- Dec 2014 **Gold medal**, ACM International Collegiate Programming Contest (**ACM-ICPC**) Regional.
- Nov 2012 **First prize**, National Olympiad in Informatics in Provinces (**NOIP**), Zhejiang Provinces.

## Presentations

- Jan 2021 **Center-based 3D object detection and tracking**, VALSE Webinar [Video].

- Aug 2020 **Learning a unified label space for robust object detection**, *ECCV 2020 Robust vision challenge workshop [Video]*.
- Aug 2020 **CenterNet2**, *ECCV 2020 Joint COCO and LVIS Challenge workshop [Slides]*.
- May 2019 **Generalized keypoint estimation**, *UT research preparation exam [Slides]*.
- Mar 2018 **Modeling geometry in pose estimation**, *seminar presentation at UT Austin [Slides]*.
- Jan 2018 **Towards 3D human pose estimation in the wild**, *GAMES Webinar [Video]*.

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## Professional Services

### Conference reviewer.

ECCV 2018, CVPR 2019 (outstanding reviewer), ICCV 2019, BMVC 2019, ICLR 2020, AAAI 2020, CVPR 2020, ECCV 2020 (outstanding reviewer), NeurIPS 2020, ICLR 2021, CVPR 2021, ICML 2021, CVPR 2021 (outstanding reviewer), NeurIPS 2021

**Journal reviewer**, TPAMI, TIP, IJCV, CVIU.

**Teaching assistance**, Neural Networks, Fall 2019.

**Web master and student host**, UT Forum for Artificial Intelligence.

### Open-source softwares.

CenterNet (6k+ stars), CenterTrack (1.9k+ stars), ExtremeNet (900+ stars), CenterNet2 (900+ stars), pytorch-pose-hg-3d (500+ stars)

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## Skills

- Languages Python, C/ C++, Lua
- Frameworks PyTorch, Tensorflow, Torch, Caffe