XINGYI HE

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SHORT BIO

I am a third-year (2021.09-) Ph.D. student in Computer Science at Zhejiang University (ZJU), supervised by Prof. Xiaowei Zhou. I obtained my bachelor degree in the School of Artificial Intelligence and Automation from the Huazhong University of Science and Technology (HUST) in 2021. Throughout my undergraduate years, I remained dedicated to my studies, achieving a notable GPA and ranked Top-1 successfully four years in my school. I was honored to receive the National Scholarship successfully two years (2018, 2019), which is the highest accolade for undergraduates in China.

My research interests lie in image matching, 3D reconstruction, visual localization, and object pose estimation. Through my research, I hope to help build a beautiful AR/VR world and empower many fields, such as entertainment, travel, medical care, etc.

EDUCATION

Huazhong University of Science and Technology *2017.08 - 2021.06*
B.S. in School of Artificial Intelligence and Automation of Major GPA: 3.97/4.0, Rank: 1/147

Zhejiang University *2021.08 - 2026.06 (expected)*
Ph.D. student in Computer Science and Technology (State Key Laboratory of CAD&CG)

EXPERIENCE

State Key Laboratory of CAD&CG, Zhejiang University *2020.12 - present*
Advised by Prof. Xiaowei Zhou. I work closely with Jiaming Sun and Sida Peng participate in scientific research projects related to Image Matching and Structure-from-Motion.

SenseTime Research, Algorithm Intern *2020.12 - 2022.4*
Advised by Jiaming Sun and research on Image Matching and 6DoF Object Pose Estimation.

SELECTED PUBLICATIONS

Detector-Free Structure from Motion **CVPR 2024**
Xingyi He, Jiaming Sun, Yifan Wang, Sida Peng, Qixing Huang, Hujun Bao, Xiaowei Zhou.
Project Page

Efficient LoFTR: Semi-Dense Local Feature Matching with Sparse-Like Speed **CVPR 2024**
Highlight
Yifan Wang*, **Xingyi He***, Sida Peng, Dongli Tan, Xiaowei Zhou.

AutoRecon: Automated 3D Object Discovery and Reconstruction **CVPR 2023** HighLight
Yuang Wang, **Xingyi He**, Sida Peng, Haotong Lin, Hujun Bao, Xiaowei Zhou.
Project Page

OnePose++: Keypoint-Free One-Shot Object Pose Estimation without CAD Models **NeurIPS 2022**
Xingyi He*, Jiaming Sun*, Yuang Wang, Di Huang, Hujun Bao, Xiaowei Zhou.
Project Page

OTHER PUBLICATIONS

High-Fidelity and Real-Time Novel View Synthesis for Dynamic Scenes **SIGGRAPH Asia 2023**
Haotong Lin, Sida Peng, Zhen Xu, Tao Xie, **Xingyi He**, Hujun Bao, Xiaowei Zhou.

Reconstructing hand-held objects from monocular video **SIGGRAPH Asia 2022**
Di Huang, Xiaopeng Ji, **Xingyi He**, Jiaming Sun, Tong He, Qing Shuai, Wanli Ouyang, Xiaowei Zhou.

Modeling indirect illumination for inverse rendering **CVPR 2022**
Yuanqing Zhang, Jiaming Sun, **Xingyi He**, Huan Fu, Rongfei Jia, Xiaowei Zhou.

OnePose: One-shot object pose estimation without cad models **CVPR 2022**
Jiaming Sun, Zihao Wang, Siyu Zhang, **Xingyi He**, Hongcheng Zhao, Guofeng Zhang, Xiaowei Zhou.

Semi-Dense Feature Matching With Transformers and its Applications in Multiple-View Geometry **T-PAMI 2022**
Zehong Shen, Jiaming Sun, Yuang Wang, **Xingyi He**, Hujun Bao, Xiaowei Zhou.

COMPETITIONS

Image Matching Challenge 2023, CVPR Workshop, Rank 1/494
I am the first contributor and our solution can be found here and was invited to give a talk on CVPR 2023 workshop. We are also honored to be selected as the 2023 Best Solution Write-up by Kaggle officials (A total of 10 teams from worldwide).

Image Matching Challenge 2021, CVPR Workshop, 4th Place
SimLocMatch 2021, CVPR Workshop, 2nd Place
I am the first contributor and the solution can be found here.

SERVING AS REVIEWER

Conferences: CVPR, ICCV, ECCV, NeurIPS, ICLR, ICML, 3DV, ICRA

Journal: IJCV, TIP, TPAMI

TEACHING

Introduction to Computer Vision, Teaching Assistant *Fall, 2023*
Introduction to Computer Vision, Teaching Assistant *Fall, 2022*
Introduction to Computer Vision, Teaching Assistant *Fall, 2021*