

# Zhenyu Li

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## Highlights

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**Highly Cited:** 1000+ citations in total of my publications as a **third-year** PhD student

**Widely Impactful:** ~ **2K** stars on GitHub

**Experienced:** 4+ years of research experience

**Prestigious affiliations:** Meta, TikTok, DiDi, SenseTime Research

**Keywords:** computer vision; deep learning; depth estimation; diffusion model; 3D perception and understanding; multi-modality learning; semi-supervised learning; 3D foundation model

## Experience

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### Research Intern

Meta

Zurich, Switzerland

Aug. 2025 - Feb. 2026

- Researched egocentric body tracking algorithms for AR/VR glasses. It led to a **CVPR 2026** paper.

### Research Intern (*TopSeed* candidate)

TikTok

Beijing, China

Jan. 2025 - July 2025

- Researched benchmarking for depth estimation foundation models. The result was presented in the paper.
- Collaborated the development for **DepthAnything 3 (ICLR 2026 Oral)**.

### Elite Research Intern (Elite Camp 2022)

Didi Cargo (ADAS team)

Beijing, China

Sep. 2022 - Mar. 2023

- Researched semi-supervised algorithms for monocular 3D object detection. The solution improves the model performance with limited labeled data and was presented in the **ICRA 2025** paper.

### Research Intern

SenseTime Research (ADAS team)

Shanghai, China

Jan. 2022 - Jul. 2022

- Researched unsupervised domain adaptation algorithms for monocular 3D object detection. It led to an **ECCV 2024** paper.
- Deployed the aforementioned unsupervised domain adaptation algorithm in an industrial project with GAC Group. Achieved excepted goals.
- Researched domain generalization algorithms for monocular 3D object detection (a follow-up work of the aforementioned paper). It was presented in the paper.
- Collaborated with other team members and researched 3D object detection. It led to an **ICLR 2023** paper.

### Perception Algorithm Development Intern

SenseTime Research (ADAS team)

Shanghai, China

Mar. 2021 - Sep. 2021

- Built up a ReID dataset based on the ground-truth system, trained a ReID model, and developed the ReID model for the ADAS system.
- Built and deployed a multi-object tracking algorithm for the ADAS system (C++), including importing appearance representation from the ReID model and adopting the cascade association strategy.
- Researched multi-modal contrastive learning algorithms for spatial-aware visual representations to benefit 3D-related downstream tasks. It led to an **AAAI 2022** paper.
- Collaborated with other team members and researched 3D object detection. It led to an **IJCAI 2022** paper and an **ECCV 2022** paper.

## Selected First Author Publications

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- **EgoPoseFormer V2: Accurate Egocentric Human Motion Estimation for AR/VR.** *CVPR 2026*. Zhenyu Li, Sai Kumar Dwivedi, Filip Maric, Carlos Chacón, Nadine Bertsch, Filippo Arcadu, Tomas Hodan, Michael Ramamonjisoa, Peter Wonka, Amy Zhao, Robin Kips, Cem Keskin, Anastasia Tkach, Chenhongyi Yang
- **PatchRefiner V2: Fast and Lightweight Real-Domain High-Resolution Metric Depth Estimation.** *ICLR 2026*. Zhenyu Li, Wenqing Cui, Shariq Farooq Bhat, Peter Wonka.
- **Amodal Depth Anything: Amodal Depth Estimation in the Wild.** *ICCV 2025*. Zhenyu Li, Mykola Lavreniuk, Jian Shi, Shariq Farooq Bhat, Peter Wonka. [Project link](#).
- **PatchRefiner: Leveraging Synthetic Data for Real-Domain High-Resolution Monocular Metric Depth Estimation.** *ECCV 2024*. Zhenyu Li, Shariq Farooq Bhat, Peter Wonka. [Project link](#).
- **PatchFusion: An End-to-End Tile-Based Framework for High-Resolution Monocular Metric Depth Estimation.** *CVPR 2024*. Zhenyu Li, Shariq Farooq Bhat, Peter Wonka. [Project link \(1k+ stars on GitHub\)](#).
- **Unsupervised Domain Adaptation for Monocular 3D Object Detection via Self-Training.** *ECCV 2022*. Zhenyu Li, Zehui Chen, Ang Li, Liangji Fang, Qinhong Jiang, Xianming Liu, Junjun Jiang
- **SimIPU: Simple 2D Image and 3D Point Cloud Unsupervised Pre-Training for Spatial-Aware Visual Representations.** *AAAI 2022*. Zhenyu Li, Zehui Chen, Ang Li, Liangji Fang, Qinhong Jiang, Xianming Liu, Junjun Jiang, Bolei Zhou, Hang Zhao. [Project link](#).
- **BinsFormer: Revisiting Adaptive Bins for Monocular Depth Estimation.** *TIP*. Zhenyu Li, Xuyang Wang, Xianming Liu, Junjun Jiang. [Project link](#).
- **DepthFormer: Exploiting Long-Range Correlation and Local Information for Accurate Monocular Depth Estimation.** *MIR*. Zhenyu Li, Zehui Chen, Xianming Liu, Junjun Jiang. [Project link](#).
- **BenchDepth: Are We on the Right Way to Evaluate Depth Foundation Models?.** *Under Review*. Zhenyu Li, Haotong Lin, Jiashi Feng, Peter Wonka, Bingyi Kang.

## Selected Co-Author Publications

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- **Depth Anything 3: Recovering the Visual Space from Any Views.** *ICLR 2026 Oral*. Haotong Lin, Sili Chen, Junhao Liew, Donny Y. Chen, Zhenyu Li, Guang Shi, Jiashi Feng, Bingyi Kang
- **Any Resolution Any Geometry: From Multi-View To Multi-Patch.** *CVPR 2026*. Wenqing Cui, Zhenyu Li, Mykola Lavreniuk, Jian Shi, Ramzi Idoughi, Xiangjun Tang, Peter Wonka
- **Learning from Noisy Data for Semi-Supervised 3D Object Detection.** *ICCV 2023*. Zehui Chen, Zhenyu Li, Shuo Wang, Dengpan Fu, Feng Zhao
- **BEVDistill: Cross-Modal BEV Distillation for Multi-View 3D Object Detection.** *ICLR 2023*. Zehui Chen, Zhenyu Li, Shiquan Zhang, Liangji Fang, Qinhong Jiang, Feng Zhao. [Project link](#).
- **Deformable Feature Aggregation for Dynamic Multi-Modal 3D Object Detection.** *ECCV 2022*. Zehui Chen, Zhenyu Li, Shiquan Zhang, Liangji Fang, Qinhong Jiang, Feng Zhao. [Project link](#).
- **StereoCrafter-Zero: Zero-Shot Stereo Video Generation with Noisy Restart.** *Under Review*. Jian Shi, Zhenyu Li, Qian Wang, Peter Wonka. [Project link](#)
- **Lari: Layered Ray Intersections for Single-View 3D Geometric Reasoning.** *Under Review*. Rui Li, Biao Zhang, Zhenyu Li, Federico Tombari, Peter Wonka. [Project link](#)

## Projects

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### Monocular Depth Estimation Toolbox

[Link](#) 

- Developed several monocular depth estimation methods with reproduced results for fair comparisons
- **900+** stars on [GitHub](#)

## Education

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King Abdullah University of Science and Technology (KAUST)  
*PhD in Computer Science, Advisor: Prof. Peter Wonka*

Thuwal, Saudi Arabia  
*Sep. 2023 - Present*

**Harbin Institute of Technology (HIT)***MS in Computer Science, Advisor: Prof. Junjun Jiang. Program rank - 2/80+*

Harbin, China

*Sep. 2021 - Jul. 2023***Harbin Institute of Technology (HIT)***BS in Computer Science, Advisor: Prof. Junjun Jiang. GPA - 89.58/100*

Harbin, China

*Sep. 2017 - Jul. 2021***Awards**

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<b>Dean's List Award</b> , award to top students by <a href="#">KAUST CEMSE</a> for their academic achievements	2024
<b>ICCV VCL 2023 Multitask Learning for Robustness Challenge</b> , 1st place	2023
<b>ECCV SSLAD 2022 3D Object Detection Challenge</b> , 3rd Place	2022
<b>ECCV Mobile AI &amp; AIM 2022 Monocular Depth Estimation Challenge</b> , 2nd Place	2022
<b>China National Scholarship</b>	2022

**Skills**

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**Technical Skills:****Languages (Years of Experience, Last Used):** Python (6 years, current), C (7 years, 2018), C++ (3 years, 2021), Java (6 years, 2019).**Tools & Frameworks:** Pytorch (proficient), Tensorflow (familiar), OpenMMLab Toolbox, *etc.***Soft Skills:****Languages:** Chinese (Mother Tongue), English (Fluent)**Teamwork:** Can collaborate with team members with diverse backgrounds, resulting in enhanced efficiency.**Problem-solving:** Proficient in identifying issues and implementing solutions that exceed project objectives.**Adaptability for Projects:** Can take advantages of previous experiences to adapt to various new projects.**Time Management:** Expert in prioritizing tasks and managing schedules to maximize productivity.