

YIHENG XIONG

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CURRENT POSITION

PhD Student in Computer Vision & Machine Learning, Ulm University Dec. 2024 - present

EDUCATION

MS in Informatics, Technical University of Munich Oct. 2020 - Dec. 2023

BE in Software Engineering, Nanjing University Sept. 2016 - Jul. 2020

RESEARCH EXPERIENCE

Research Intern Jan. 2024 - May 2024
TUM 3D AI Lab Munich, Germany

- Probabilistic 3D object reconstruction from a highly-ambiguous RGB image. (Mentor: Angela Dai)

Research Assistant Apr. 2022 - Sept. 2022
TUM 3D AI Lab Munich, Germany

- Web development for [ScanNet200 benchmark](#);
- [iOS app](#) development based on ARKit for [ScanNet++ dataset](#).

PUBLICATIONS

* denotes equal contribution and † denotes shared last authorship.

Y. Xiong, A. Dai. PT43D: A Probabilistic Transformer for Generating 3D Shapes from Single Highly-Ambiguous RGB Images. *BMVC 2024 (Oral)*.

[Arxiv](#) | [Code](#) | [Video](#) | [Paper](#)

Y. Xiong*, J. Liu*, K. Zaripova*, S. Sharifzadeh, M. Keicher†, N.Navab†. Prior-RadGraphFormer: A Prior-Knowledge-Enhanced Transformer for Generating Radiology Graphs from X-Rays. *MICCAI workshop 2023*.

[Arxiv](#) | [Paper](#) | [Code](#)

RESEARCH PROJECTS

Structured Medical Report Generation Apr. 2022 - Jul. 2022

- Developed a structured medical report dataset using radiology graph labels (RadGraph) to support this novel task;
- Proposed Structure Generation Transformer that generates structured reports directly from X-ray images, achieving significantly better performance compared to MLP-based baselines in this new task.

[Slides](#)

3D Object Detection and Relocalization in Indoor Scenes Oct. 2021 - Feb. 2022

- Fine-tuned and modified VoteNet and CenterPoint for object detection on 3RScan and ScanNet datasets, achieving more than a twofold improvement in CenterPoint's performance in terms of mean Average Precision (mAP);
- Redefined the concept of 3D relocalization and conducted extensive experiments with VoteNet and CenterPoint on 3RScan dataset.

[Report](#)

SKILLS

Programming Languages	Python, Java, C++, PHP, SQL, Swift
Frameworks & Libraries	PyTorch, TensorFlow
Tools & Environments	Linux, Docker, AWS
Documentation	LaTeX

TEACHING EXPERIENCE

Teaching Assistant

Introduction to Informatics (IN8027)

Jan. 2022 - Feb. 2022

Technical University of Munich