

YIHENG XIONG

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EDUCATION

Master of Informatics , Technical University of Munich	Oct. 2020 - Dec. 2023
Bachelor of Software Engineering , Nanjing University	Sept. 2016 - Jul. 2020

RESEARCH EXPERIENCE

Research Intern TUM 3D AI Lab	Jan. 2024 - May 2024 <i>Munich, Germany</i>
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- Probabilistic 3D shape generation from a highly-ambiguous RGB image.

Research Assistant TUM 3D AI Lab	Apr. 2022 - Sept. 2022 <i>Munich, Germany</i>
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- 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
<i>Supervisor: Prof. Nassir Navab</i>	<i>Munich, Germany</i>

- 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
<i>Supervisor: Prof. Matthias Nießner</i>	<i>Munich, Germany</i>

- 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

Jan. 2022 - Feb. 2022

Introduction to Informatics (IN8027)

Munich, Germany

- Guided students with minimal programming experience, helping them grasp core concepts and build coding skills;
- Provided tailored support during office hours and offered feedback on assignments to enhance learning outcomes.