YIHENG XIONG — CURRICULUM VITAE

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CURRENT POSITION

DFG Training Group KEMAI, Ulm University — **Dec. 2024 - present**
PhD Student in Computer Vision & Machine Learning for Medical Imaging — *Ulm, Germany*

University Hospital of Ulm — **Dec. 2024 - present**
Scientific Employee at Section of Experimental Radiology — *Ulm, Germany*

EDUCATION

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

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

RESEARCH EXPERIENCE

Research Intern — **Technical University of Munich**
TUM 3D AI Lab, Munich, Germany — *Jan. 2024 - Jul. 2024*

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

Research Assistant — **Technical University of Munich**
TUM 3D AI Lab, Munich, Germany — *Apr. 2022 - Sept. 2022*

- Web development for ScanNet200 benchmark;
- iOS application development based on ARKit for ScanNet++ dataset.

Student Researcher — **Technical University of Munich**
TUM CAMP, Munich, Germany — *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.

Student Researcher — **Technical University of Munich**
TUM Visual Computing Lab, Munich, Germany — *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;
- Redefined the concept of 3D relocalization and conducted extensive experiments with VoteNet and CenterPoint on 3RScan 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)**.

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**.

SKILLS

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

TEACHING EXPERIENCE

Teaching Assistant — **Technical University of Munich**
Introduction to Informatics (IN8027) — *Winter Semester 2022*