YIHENG XIONG

Albert-Einstein-Allee 23, 89081, Ulm - Germany
yiheng.xiong@uni-ulm.de ◇ xiongyiheng.github.io

CURRENT POSITION

PhD Student in Machine Learning for Medical Imaging, **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 application 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 | Paper | Code | Video

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;
- 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 WS22
Introduction to Informatics (IN8027) **Technical University of Munich**