

YIHENG XIONG

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EDUCATION

Master of Informatics, Technical University of Munich 2020 - Current

Bachelor of Software Engineering, Nanjing University 2016 - 2020

RESEARCH EXPERIENCE

Prior-RadGraphFormer: A Prior-Knowledge-Enhanced Transformer for Generating Radiology Graphs from X-Rays 2023

Supervisor: Prof. Nassir Navab *Munich, Germany*

- Proposed a novel detection-free method that generates radiology graphs directly from CXR images;
- Enhanced this method by incorporating prior knowledge, leading to improved performance;
- Extensively evaluated our method using RadGraph metrics and the two downstream tasks of report generation and multi-label classification of pathologies.

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

PROJECTS

Structured Report Generation 2022

Supervisor: Prof. Nassir Navab *Munich, Germany*

- Generated structured report dataset from scene graphs labels (RadGraph);
- Proposed Structure Generation Transformer(SGT) where given X-ray images the outputs are structured reports.

[Slides](#)

3D Object Detection and Relocalization in Indoor Scenes 2022

Supervisor: Prof. Matthias Nießner *Munich, Germany*

- Fine-tuned and modified VoteNet and CenterPoint to detect objects on 3RScan and ScanNet dataset;
- Re-defined 3D relocalization and conducted experiments with VoteNet and CenterPoint in 3RScan.

[Report](#)

3D Object Detection in Self-driving Cars 2021

Supervisor: Prof. Matthias Nießner *Munich, Germany*

- Fine-tuned and modified PointNet and PointNet++ on semanticKITTI dataset;
- Adopted modified PointNet++ as backbone in VoteNet and fine-tuned the whole on KITTI 3D object detection dataset.

[Report](#)

WORKING EXPERIENCE

Research Assistant 2022

TUM 3D AI Lab *Munich, Germany*

- Developed ScanNet200 benchmark;
- IOS development based on ARKit.

Research Assistant

TUM Model-based Systems and Qualitative Reasoning Group

2021

Munich, Germany

- Managed and configured AWS cloud server;
- Configured and developed docker images.

Software Development Intern

Nanjing Weiwu Internet Technology Co., Ltd

2019

Nanjing, China

- Developed and maintained websites;
- Managed databases.

SKILLS

Languages	Python, Java, SQL, PHP, Javascript, HTML, Swift
Frameworks	Pytorch, Tensorflow

TEACHING EXPERIENCE

Teaching Assistant

Introduction to Informatics

Jan 2022 - Feb 2022

Munich, Germany

PUBLICATIONS

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.