

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

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. *GRAIL @ MICCAI* 2023.