YIHENG XIONG

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Email ⋄ LinkedIn ⋄ Website

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. Daniel Cremers   *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

2021

TUM Model-based Systems and Qualitative Reasoning Group

Munich, Germany

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

Software Development Intern

2019

Nanjing Weiwu Internet Technology Co., Ltd

Nanjing, China

- Developed and maintained websites;
- Managed databases.

SKILLS

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

TEACHING EXPERIENCE

Teaching Assistant

2022

Introduction to Informatics

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.