

# YIHENG XIONG

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## EDUCATION

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**Master of Informatics**, Technical University of Munich 2020 - Current

**Bachelor of Software Engineering**, Nanjing University 2016 - 2020

## RESEARCH EXPERIENCE

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

*Supervisor: Prof. Nassir Navab, Kamilia Zaripova and Matthias Keicher* *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](#)

## PROJECTS

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**Structured Report Generation** 2022

*Supervisor: Prof. Nassir Navab, Kamilia Zaripova and Matthias Keicher* *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 and Yujin Chen* *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 and 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

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**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**

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<b>Languages</b>	Python, Java, SQL, PHP, Javascript, HTML, Swift
<b>Frameworks</b>	Pytorch, Tensorflow

**TEACHING EXPERIENCE**

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**Tutor for Introduction to Informatics**

Jan 2022 - Feb 2022