

# Yue Zhou

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Nationality: Chinese

Place and Date of Birth: Shanghai, 26.09.1996

## EDUCATION

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<b>Technical University of Munich</b> , Munich, Germany	15.09.2019 - 22.05.2022
- M.Sc. in Informatics, focus on Robotics, Cognition, Intelligence	GPA: 1.5/1.0
- Master thesis grade: 1.0, published in Medical Image Analysis (IF:10.9)	
- Passed with distinction	
<b>Hochschule Zittau/Görlitz</b> , Zittau, Germany	01.09.2018 - 01.09.2019
- B.Eng. in Mechatronics; Exchange student (Double Degree Program)	GPA: 1.3/1.0
<b>Tongji University</b> , Shanghai, China	01.09.2015 - 01.09.2018
- B.Sc. in Mechatronics	GPA: 90/100

## EXPERIENCE

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**CAMP Chair, Technical University of Munich (TUM)** Munich, Germany  
*Ph.D. Candidate, full-time* 01.01.2025 - Now

- Supervised by Prof. Nassir Navab
- Ultrasound image analysis, including anomaly detection and deformation correction
- Exploring vision-language models in the medical domain, including vision language pretraining, fine-grained alignment etc.

**Siemens** Beijing, China  
*AI Researcher, full-time, directly report to german headquarter* 01.11.2022 - 20.12.2024

- Industrial AI Expertise: Develop innovative AI solutions focus on customers' pain-point to promote automation in factory operations, enhancing efficiency and productivity,
- Focus on Computer Vision: Specialize in computer vision algorithms such as anomaly detection, few-shot learning, and object detection to tackle complex manufacturing challenges.
- Deployment Success: Deployed and scaled a battery pack foreign object detection system on BMW's electric vehicle production line in Shenyang, ensuring reliability and operational excellence.
- Pilot Success: Engineered quality inspection for PCB boards via few-shot fine-grained AD model for PCB boards, reducing false alarms by 50% and improving quality control processes.
- Research Success: Collaborated with Tencent AI Lab on generalized anomaly detection research, demonstrating cutting-edge advancements in the field.

**SenseTime** Shanghai, China  
*Computer vision research intern (full-time employee since 05.07.2022)* 24.06.2021 - 21.10.2022

- Develop and optimized AI applications for AR/VR hardware platforms
- AI application including: object classification, object detection, image matting,

**Subtle Medical** Shanghai, China  
*Intern as CV Researcher for medical image* 01.04.2021 - 15.06.2021

- AI algorithm for PET image super-resolution with higher PSNR / SSMI metrics
- Cross-modality segmentation (Unsupervised Domain Adaption) with cycle-consistency idea

**ZF Friedrichshafen AG** Friedrichshafen, Germany  
*Internship and bachelor thesis at ZF R&D headquarters* 01.03.2019 - 31.08.2019

- In-vehicle HMI programming for concept vehicle in ZF "Inno19" project, "Inno19" project is an important annual auto exhibition in ZF
- Implementation of payment by scanning function in built-in HMI based on Alipay SDK

## PUBLICATION

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**MICCAI 2025 Yue Zhou**, Yuan Bi, Wenjuan Tong, Wei Wang, Nassir Navab, Zhongliang Jiang . UltraAD: Fine-Grained Ultrasound Anomaly Classification via Few-Shot CLIP Adaptation.[pdf][project page]

**Medical Image Analysis 2023 (IF: 10.9)** Zhongliang Jiang\*, **Yue Zhou**\*, Dongliang Cao, Nassir Navab. DefCor-Net: Physics-Aware Ultrasound Deformation Correction.[pdf][code]

**Robotic Automation Letter 2021 (IF: 5.2)** Zhongliang Jiang\*, **Yue Zhou**\*, Yuan Bi, Mingchuan Zhou, Wendler Thomas, Nassir Navab. Deformation-aware 3D Robotic Ultrasound[pdf][video] (*oral presentation in IROS 2021*)

\* contributed equally to this work

## PROJECTS

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### Learning-based Ultrasound Image Deformation Correction

*Master thesis at IFL Lab, Klinikum Rechts der Isar*

Munich, Germany

Oct 2021 – Apr 2022

- a novel anatomy-aware deformation correction approach based on a coarse-to-fine, multi-scale deep neural network
- incorporates biomedical knowledge by estimating pixel-wise stiffness online using a U-shaped feature extractor
- significantly improves the accuracy of deformation correction to recover the original geometry
- published in Medical Image Analysis (IF:10.9)

### Deformation-aware Ultrasound Image Analysis

*Research assistant at IFL Lab, Klinikum Rechts der Isar*

Munich, Germany

Sept 2020 – May 2021

- proposes a patient-specified stiffness-based method to correct the tissue deformations in robotic 3D US acquisitions
- the method can effectively correct the force-induced deformation and finally generate 3D tissue geometries
- published in RAL (IF: 5.2) and oral presentation in IROS

### Unsupervised Multimodal Image Registration Using Generative Models

*Internship course at TUM*

Munich, Germany

Oct 2020 – Apr 2021

- use GAN to transfer MR to US with disentanglement concept to learn a good latent space
- adopt a registration network to address MR and US registration based on the previous learned latent space

## SKILLS

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- **Programming:** Python (Pytorch preferred), MATLAB, C/C#
- **Software:** Unity, TIA Portal
- **Languages:** Chinese (Native), English (Fluent), German (A2)

## Hobbies

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Swimming, Music, Hiking, Cooking