

ZHI YU

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✉ [EMAIL](#)

🐙 github.com/ZhiYu-2002

EDUCATION

University College London

M. Sc. in Advanced Biomedical Imaging

Sep. 2024 - Sep. 2025

Overall Course Score: -

Harbin Institute of Technology

B. E. in Bioengineering

Sep. 2020 - Jun. 2024

Overall GPA: 3.6/4.0

- **Core Module:** Calculus; Java; C; Biostatistics; Linear Algebra; Biochemistry; Molecular Biology; Cell Biology; Organic Chemistry; Genetic Engineering; Cell Engineering; Immunology; Unit Operation; Biomedical Imaging Techniques;

RESEARCH EXPERIENCE

Deep Learning-Based Cine MRI Segmentation for Cardiac Function Assessment

Jan. 2025 - Present

Advisor:

Daniel Stuckey, Prof.

- Segment EDV and ESV from short-axis cardiac MR images with Horos to calculate left ventricular metrics.
- Use UNet3+ to perform automatic deep learning-based cardiac MR images segmentation on acquired images.

Laparoscopic Surgical Instruments Binary Segmentation

Sep. 2023 - Jan. 2024

Advisor:

Wenpeng Gao, Assoc. Prof.

- Designed novel network based on U-Net and Transformer, trained on Endovis2017 dataset, verified components efficiency. achieved surgical instrument tracking and outperformed existing approaches. - [Code Available](#)

Phase Detection of Surgical Instruments

Jun. - Jul. 2022

Advisor:

Wenpeng Gao, Assoc. Prof.

- Extracted images from Cholec80 videos and modified labels, fine-tuned and trained AlexNet with acquired images.

INTERNSHIPS

PeRCeiVe Lab, University of Catania (Remote)

Jan. 2025 - Present

Advisor:

Concetto Spampinato, Prof.

- Fine-tuned existing networks and compared performances on Kvasir and NCI-ISBI 2013 Dataset for saliency prediction.
- Generated saliency maps as prompts for SAM 2-based segmentation using network with best performance
- Work will be submitted to MICCAI

PUBLICATIONS

Surface Deformation Tracking in Monocular Laparoscopic Video - [LINK](#)

2023

- Z. Liu, W. Gao, J. Zhu, **Z. Yu** and Y. Fu

TECHNICAL SKILLS

Programming language: Python, C++, C

Libraries & Frameworks: PyTorch, Qt, MySQL

STANDARDIZED TEST

GRE: Quantitive 163, Verbal 151, AW 3.5 (2023)