Yiqing Wang

✉ yq.wang@duke.edu · ☎ (+86) 132-9353-1937 · ⓞ Homepage ·

🎓 Education

Duke University, Durham, North Carolina, the United States   2023 –

Ph.D. Candidate Department of Biomedical Engineering (BME), Vision and Image Processing Lab

Shanghai Jiao Tong University (SJTU), Shanghai, China   2019 – 2023

Bachelor Degree of Eng. major in Biomedical Engineering (BME), minor in Computer Science (CS)

- GPA: 3.84/4.3 (Top 10%)
- Major Coursework: Digital Electronics (99), Microcomputer Principles (96), Biomedical Signals and System (94.5), Biomedical Image Processing (95), Principles of Automatic Control (92)
- Minor Coursework: Discrete Mathematics (94), Software Engineering (87), Computer Network (85), Operating Systems (80)

♡ Honor and Awards

Outstanding Graduate of Shanghai Jiao Tong University	Jun. 2023
Scholarship of School of Biomedical Engineering Alumni Association	Nov. 2022
Merit Student of Shanghai Jiao Tong University	Oct. 2022
Shanghai Municipal Government Scholarship	Oct. 2021
Class A Scholarship of Shanghai Jiao Tong University	Oct. 2020

🔍 Scholar Experiences

IMIT @ SJTU directed by Lichi Zhang   Dec. 2022 – Jun. 2023

Thesis A 2D/3D Registration Method for Full-length Images of Lower Limbs

- Constructed the first 2D-3D registration network for X-rays and CT images of full-length lower limbs
- Adopted the shifted-window self-attention and the cross-attention mechanism for efficient feature extraction
- Proposed SigmoidDiceLoss, which makes the registration of discrete labels continuous and differentiable

CCVL @ JHU directed by Alan Yuille & **VLAA @ UCSC** directed by Yuyin Zhou & Cihang Xie
June. 2022 – Nov. 2022

Summer Internship Multi-view MAE for 3D medical image representation learning

- Presented the first multi-view pipeline for self-supervised medical image analysis
- Achieved a comparable performance to the current state-of-the-art method with less training cost
- Accepted by *MICCAI 2023*

Advanced MRI Lab @ SJTU directed by Hongjiang Wei   Feb. 2022 – Jan. 2023

Internship Brain Region Segmentation and Age Estimation Using QSM

- Created a novel network to segment several key brain areas on QSM images to improve brain age prediction
- Improved brain age estimation compared to previous studies based on T1w MRI
- Accepted by *ISMRM 2023* and submitted to *IEEE Journal of Biomedical and Health Informatics (JBHI)*

CITI @ SJTU directed by Guoyan Zheng   Aug. 2021 – Feb. 2022

Student Project Key Algorithms for 3D Reconstruction from 2D X-rays and Intelligent Diagnosis

- Evaluated popular deep-learning segmentation networks
- Improved the performance of domain adaptation segmentation based on Cross Domain Transformer
- Awarded an outstanding student project

📕 PUBLICATIONS

[1]**Yiqing Wang**, [1]Zihan Li, [1]Zihao Wei, [1]Jieru Mei, Li Liu, Chen Wang, Alan Yuille, Shengtian Sang, Cihang Xie, Yuyin Zhou. SwinMM: Masked Multi-view with Swin Transformers for 3D Medical Image Segmentation. *Medical Image Computing and Computer-Assisted Intervention–MICCAI 2023: 26th International Conference.* (Early Accepted)

[1]**Yiqing Wang**, Yuting Shi, Hongjiang Wei. A Brain Age Estimation Network based on QSM using the Segment Transformer. *2023 International Society for Magnetic Resonance in Medicine (ISMRM).* (Accepted)

[1]Mingxing Chen, [1]**Yiqing Wang**, [1]Yuting Shi, Xiaojun Guan, Yuyao Zhang, Hongjiang Wei. Brain age prediction based on QSM using Segmentation Transformer. *IEEE Journal of Biomedical and Health Informatics (JBHI).* (Submitted)

⚙ SKILLS

Programming Languages Python, C, C++, MatLab
Deep Learning Frameworks PyTorch, TensorFlow, Keras

👤 LANGUAGES

English Fluent
- **TOEFL** Total 107, Reading 30, Listening 29, Speaking 22, Writing 26
- **GRE** Quantitative 170, Verbal 153, Analysis Writing 3.5

Chinese (Mandarin) Native Speaker