Yanming Xiu

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PROFILE

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EDUCATION

Aug 2022 — Present

Ph.D. in Electrical and Computer Engineering, Duke University
Durham, NC, USA

- GPA: 3.83/4.0
- Core Courses: Deep Neural Network (ECE661), Advanced Machine Learning (ECE687), Computer Vision (CS527)

Aug 2018 — Jun 2022

Bachelor of Engineering in Auotmation (Robotics Concentration)), Zhejiang University
Hangzhou, Zhejiang, China

- GPA: 3.85/4.0
- Rank: Top 15%
- Awards: Outstanding Graduates of Zhejiang University (2022); Zhejiang University First Scholarship (2021); Academic Excellent Reward (2021)
- Core Courses: Computer Vision, Robotics, Machine Learning, Embedded Systems, Control Theory

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RESEARCH INTERESTS

Computer Vision

Computer Vision, Medical Imaging, MRI, 3D-Reconstruction

Machine Learning

Deep Learning, Supervised Machine Learning, CNN, Transformer, GAN

RESEARCH PROJECTS

Jan 2023 — Present

MRI Data Harmonization
Duke University

Advisor: Dr. Yun Wang

- Adapted Cycle GAN model to 3D version for MRI data harmonization
- Used other models such as PTNet-3D for MRI harmonization
- Tested the harmonization quality by doing brain segmentation

Nov 2022 — Jun 2023

Hypothalamus Segmentation with Deep Learning
Duke University

Advisor: Dr. Yun Wang

- Collected and organized a hypothalamus MRI dataset;
- Applied deep learning framework such as ResNet and UNet to hypothalamus segmentation task

Sep 2021 — Jan 2022

HRNet based Clothes Landmark Detection and Clothes Folding Robots
HKU (Remote)

Advisor: Prof. Wenping Wang (HKU), Prof. Yiping Feng (ZJU)

Award: Outstanding Student Research Project of Zhejiang University (Third Prize)

- Used HRNet for clothes landmarks detection by predicting the location of key-points
- Applied the detecting system to robotic arm, and test with images obtained directly by the robot
- Programmed the robotic arm to perform clothes folding

Sep 2021 — Nov 2021

Establishing dataset of videos and corpus
HKU (remote)

Advisor: Prof. Wenping Wang

- Recorded videos of simple objects in a simulation robotics system (CoppeliaSim)
- Manually generated descriptive text and key frame information data to describe the position of objects.

| Mar 2020 — May 2021 | **Chipless RFID Tag Detection** | Zhejiang University |

Advisor: Prof. Jiming Chen

- Designed a new type of chipless RFID tag to reduce production cost of tags.
- Tags can be correctly detected in common detection distances for warehouse logistics tasks.

| Mar 2021 — May 2021 | **Bell hitting Robot** | Zhejiang University |

Advisor: Prof. Rong Xiong

- Loaded the robot model in Gazebo;
- Controlled the robot arm and hit the bells for as much times as possible within 1 minute;
- Implemented the torque control algorithm and tested it in real-world robot

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SKILLS

Programming Languages

Python, Matlab, Bash, LaTeX

Frameworks and Tools:

PyTorch, Numpy, Jupyter Notebook, Nibabel, Freesurfer, FSL, ROS, Docker

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LANGUAGES

| English | Good working knowledge | Chinese (Mandarin) | Native speaker |

LEADERSHIP AND EXTRA-CURRICULAR ACTIVITIES

| Aug 2019 — Jan 2020 | **Undergraduate Teaching Assistant in Modern Chinese History** | Zhejiang University |

| Mar 2019 — Jul 2019 | **Leader of Tug-of-War Team** | Zhejiang University |

HOBBIES

Fitness Body Building; Self-driving Trip; Cooking