

Yanming Xiu

Durham, NC, United States

PROFILE

Email: yx246@duke.edu

Homepage: ym-xiu.github.io

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 Automation (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
-

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

SKILLS

Programming Languages

Python, Matlab, Bash, LaTeX

Frameworks and Tools:

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

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