

XIANGTIAN LI

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EDUCATION

Zhejiang University, School of Mathematical Sciences

B.S. in Information and Computing Science

GPA: 3.79/4.00, **Ranking:** Top 15% of 40

Hangzhou, China

Sep 2017 - Jun 2021

University of California, Berkeley

Concurrent Enrollment Student

GPA: 3.80/4.00

Berkeley, U.S.

Jan 2020 - May 2020

Selected courses: *Efficient Algorithms and Intractable Problems; Image Manipulation, Computer Vision and Computational Photography*

RESEARCH EXPERIENCE

Vision and Learning Lab, University of California, Merced,

Research assistant; Advisor: Prof. [Ming-Hsuan Yang](#)

Learning Dynamic Textures via Spatiotemporal Generative Adversarial Networks

Merced, U.S.

July 2020 - Present

In submission of CVPR 2021

- Proposed a spatiotemporal generative network which learns dynamic textures from a single video clip.
- Designed an encoder attached to the network for future predictions.
- Demonstrated that the proposed algorithm performs favorably against state-of-the-art methods through extensive experiments.
- Designed an encoder that allows the unconditional model to transform an input frame into a video sequence.

State Key Lab of CAD&CG, Zhejiang University

Research assistant; Advisor: Prof. [Wei Chen](#) and Prof. [Pengyi Hao](#)

Weakly supervised segmentation on pelvic X-rays

Hangzhou, China

May 2019 - May 2020

- Constructed U-Net to attain ROIs of the femur with a FWIoU of 0.93 and MeanIoU of 0.85.
- Utilized Dense161 Network to classify different types of bone fractures in the femur with an accuracy of 91%.
- Proposed an innovative weakly supervised segmentation method to complete fracture segmentation only based on text labels

RealDoctor Research Center of Zhejiang University

Research assistant; Advisor: Prof. [Pengyi Hao](#)

Medical Image Segmentation

Hangzhou, China

May 2019 - August 2019

- Launched structure combining ResNet and UNet, leveraging ResNet for downsampling and UNet for up-sampling, achieving a faster training time and a higher accuracy.
- Pioneered segment task completion on LUNA dataset through utilization of VNet architecture.
- Navigated preparation of dataset employing dense161 to classify fracture types.

Advanced Computing and System Laboratory, Zhejiang University

Advisor: Prof. [Nenggan Zheng](#)

Cell Structure Clustering and Visualization

Hangzhou, China

Dec 2018 - May 2020

- Evaluated and identified proper algorithms to execute clustering tasks on electron microscopic image.
- Achieved visualization of the cell structure with Davies-Bouldin performance of 0.85 on small samples.
- Learned the automated reconstruction of neuronal morphology based on local geometrical and global structural models.

SELECTED COURSE PROJECTS

CS194-26: Image Manipulation, Computer Vision and Computational Photography Jan 2020 - May 2020

- Demonstrated a fully automated colorization approach for separating three color components and applying image processing and techniques to align them together and reproduce full-color images. [\[website\]](#)
- Implemented ANMS, feature matching and RANSAC to automatically find the keypoints and blend the images into a panorama. [\[website\]](#)
- Final Project: Neural Style Transfer. [\[website\]](#)

Computer Vision Project [\[code\]](#) Nov 2019 - Jan 2020

- Utilized eigenface to complete human face recognition.
- Combined calibration and bird-eye method and implemented camera calibration and projection.
- Constructed LeNet-5 and complete digit recognition on MNIST dataset.

SELECTED AWARDS AND HONORS

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| • Nandu Innovation Scholarship | 2020 |
| • First Class Scholarship for Academic Excellence | 2019 |
| • Merit Student, Zhejiang University | 2019 |
| • Honorable Mention in Mathematical Contest in Modeling | 2019 |
| • Academic Excellence, Zhejiang University | 2018 |
| • Third Class Scholarship for Academic Excellence | 2018 |
| • Bronze Medal in National University Piano Competition | 2018 |

ADDITIONAL INFORMATION

Programming Language and Tools

- Python, C/C++, MATLAB, SQL
- TensorFlow, PyTorch, LaTeX

Extracurricular Experiences

- Vice president of Wenqin Keyboard Band of Zhejiang University (2018 - present)
- Member of QiuShiChao Video Group (2017 - 2019)

Standard Test

- TOEFL: 106 (R28, L28, S22, W28)
- GRE: 322+4 (152+170+4)