XIANGTIAN LI

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EDUCATION

Zhejiang University, School of Mathematical Sciences Hangzhou, China
B.S. in Information and Computing Science Sep 2017 - Jun 2021
GPA: 3.80/4.00, **Ranking**: Top 15%

University of California, Berkeley Berkeley, U.S.
Concurrent Enrollment Student Jan 2020 - May 2020
GPA: 3.80/4.00
Selected courses: *Efficient Algorithms and Intractable Problems; Image Manipulation, Computer Vision and Computational Photography*

ACADEMIC PUBLICATIONS

DTSGAN: Learning Dynamic Textures via Spatiotemporal Generative Adversarial Networks
Xiangtian Li, Yijun Li, Debang Li, Ming-Hsuan Yang.
In submission to Computer Vision and Pattern Recognition (**CVPR**), 2021

RESEARCH EXPERIENCE

Vision and Learning Lab, University of California, Merced Merced, U.S.
Visiting student under the supervision of Prof. Ming-Hsuan Yang July 2020 - Present
Learning Dynamic Textures via Spatiotemporal Generative Adversarial Networks

- 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 the proposed algorithm performs favorably against state-of-the-art methods.
- 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 Hangzhou, China
Research assistant; Advisor: Prof. Wei Chen and Prof. Pengyi Hao May 2019 - May 2020
Weakly supervised segmentation on pelvic X-rays

- 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 Hangzhou, China
Research assistant; Advisor: Prof. Pengyi Hao May 2019 - August 2019
Medical Image Segmentation

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

Advanced Computing and System Laboratory, Zhejiang University Hangzhou, China
Advisor: Prof. Nenggan Zheng Dec 2018 - May 2020
Cell Structure Clustering and Visualization

- Evaluated and identified proper algorithms to execute clustering tasks on electron microscopic images.
- 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 to implement camera calibration and projection.
- Constructed LeNet-5 and completed digit recognition on MNIST dataset.

SELECTED AWARDS AND HONORS

- 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

Core Courses

- **Mathematics:** Foundation of Analysis, Real Variable Analysis, Functional Analysis, Numerical Analysis
- **Computer Science:** Fundamentals of Data Structures, Efficient Algorithms and Intractable Problems, Computer vision, Image Manipulation and Computational Photography

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)