

XIAOCHEN ZHOU

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EDUCATION

Washington University in St. Louis, GPA 4.0

- ♦ Master of Science in Computer Science

St. Louis, MO

Aug 2018 – May 2020

Beihang University, GPA 3.5

- ♦ Bachelor of Science in Computer Science and Engineering

Beijing, China

Aug 2014 – May 2018

PUBLICATION

- ♦ Biao Leng, Cheng Zhang, **Xiaochen Zhou**, Cheng Xu, Kai Xu, “Learning Discriminative 3D Shape Representations by View Discerning Networks”, accepted by TVCG.
- ♦ Cheng Xu, Cheng Zhang, **Xiaochen Zhou**, Biao Leng, “Improved Panoramic Representation via Bidirectional Recurrent View Aggregation for 3D model Retrieval”, accepted by IEEE Computer Graphics and Application.
- ♦ Cheng Xu, Biao Leng, Cheng Zhang, **Xiaochen Zhou**, “Emphasizing 3D Properties in Recurrent Multi-view Aggregation for 3D Shape Retrieval”, accepted by AAAI 2018.

ACADEMIC & INTERNSHIP

Image extrapolation through patch match and GANs

WashU VLG lab, MO

Research Intern

Jun 2019 – May 2020

- ♦ Implemented publications and projects related to image inpainting and extrapolation with Tensorflow.
- ♦ Designed and implemented novel U-Net based GANs for image reconstruction through image layout.
- ♦ Designed image extension method based on patch matching algorithms and optimized pix2pix method.
- ♦ Built end-to-end pipeline for layout detection, image extension and image reconstruction with Python.

Style Transform Network with Local Details Optimization

Washington University in St. Louis, MO

Research Intern

Feb 2019 – May 2019

- ♦ Deployed image affine transformation with camera intrinsic and extrinsic calibration in python and OpenCV.
- ♦ Built pipeline for image affine transformation, image style transformation and local detail optimization.
- ♦ Implemented style transform network and optimized the artifacts noises generated from local style transform with neural network in Keras framework.

Outdoor Architecture Reconstruction through Single View

Washington University in St. Louis, MO

Research intern

Nov 2018 – Feb 2019

- ♦ Implemented algorithms for computing camera calibration parameters with RANSAC method.
- ♦ Designed methods for generating normal vector of plants in camera and world coordinate system.
- ♦ Reconstructed 3D point cloud model through one single-view image based on search algorithm.
- ♦ Deployed the pipeline for user labeling, reconstruction and visualization platform with python and OpenCV.

Machine Learning Engineer on Re-identification

Megvii Face ++ Co., Beijing, China

Machine Learning Engineer

Dec 2017 – Jun 2018

- ♦ Deployed the ResNet framework and designed two network structures for vehicle re-identification.
- ♦ Implemented and optimized human re-identification models on vehicle re-identification datasets.
- ♦ Designed metric learning methods to boost the performance of vehicle re-identification different gesture.
- ♦ Deployed labeling and visualizing platform using Python and OpenCV for video and image datasets.

View-based 3D Model Recognition via Deep Learning Method

Beihang University, Beijing, China

Research assistant

Sep 2016 – Feb 2018

- ♦ Devised neural networks for 3D models recognition through multiple rendered 2D images, boosting 5% more than the State-of-the-Art. Projects accepted by journals and conferences.
- ♦ Designed two different evaluation units to judge the quality of rendered images and aggregated the unit with classification network, which achieved impressive improvement on different criteria.
- ♦ Used LSTM in ordered feature extraction and aggregated extracted information as features for 3D shapes.
- ♦ Implemented and modified hard-sampling methods in metric learning for recognition tasks.

Teaching

- ♦ Teaching assistant for CSE 559A Computer Vision in Washington University in St. Louis.
- ♦ Mentor for Challenge Cup National College Academic Science and Technology Competition.

Skill Set

- ♦ **Program Language:** Python, Matlab, C++, C, HTML, CSS
- ♦ **Skills:** Tensorflow, Pytorch, Caffe, Keras, OpenCV, Linux