XIAOCHEN ZHOU

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EDUCATION

Washington University in St. Louis *St. Louis, MO, USA*

- Graduate student in computer science *Dec.2019*
- Current GPA: 4.0

Beihang University *Beijing, China*

- Bachelor of Science in Computer Science and Engineering *Sep.2014 – Jun.2018*

PUBLICATION

- Biao Leng, Cheng Zhang, **Xiaochen Zhou**, Cheng Xu, Kai Xu, "*Learning Discriminative 3D Shape Representations by View Discerning Networks*", accepted by TVCG. *Aug.2018*
- 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*. *Apr.2018*
- Cheng Xu, Biao Leng, Cheng Zhang, **Xiaochen Zhou**, "*Emphasizing 3D Properties in Recurrent Multi--view Aggregation for 3D Shape Retrieval*", accepted by AAAI 2018. *Nov.2017*

ACADEMIC & INTERNSHIP

Image extrapolation through patch match and GANs *Washington University in St. Louis, MO, USA*

Research Intern *Feb.2019 – Present*

- Implemented publications and projects related to image inpainting and extrapolation.
- Generated contour domain database and optimized algorithms for image patch match in contour domain
- Designed novel GANs to reconstruct images.

Partial Style Transform Network with Details Optimization *Washington University in St. Louis, MO, USA*

Research Intern *Feb.2019 –May.2019*

- Deployed irregular image cropping and recovery algorithm with python and OpenCV in homogeneous domain.
- Implemented style transform network in Tensorflow framework and build the end-to-end pipeline for partial selection, whole image style transformation, partial feature refining and optimization.
- Smooth the artifacts generated from image copying and pasting with neural network.

Outdoor Architecture Reconstruction through Single View *Washington University in St. Louis, MO, USA*

Research intern *Nov.2018 – Feb.2019*

- Implemented algorithms to generate camera intrinsic and extrinsic parameters with RANSAC method.
- Designed novel methods for the normal generation of models with no curve surface in camera calibrated space and world space, and reconstructed the models through search algorithm.
- Deployed the pipeline for user labelling, reconstruction and visualization with python and OpenCV.

Research & Development Internship on Re-identification Task *Megvii Face ++ Co., Beijing, China*

Research assistant *Dec.2017 – Jun.2018*

- Managed the vehicle re-identification mission, designed two neural network structures for vehicle re-identification without re-ranking.
- Designed metric learning algorithms to lower the intra-class distance specifically for the vehicle re-identification task.
- Deployed labelling and visualizing system 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 to recognize and classify 3D models through rendered 2D images.
- 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.

Skill Set

- **Programming Languages**: Python, Matlab, Java, HTML
- **Technologies:** Tensorflow, OpenCV, Linux, Caffe ,Unity3D Engine