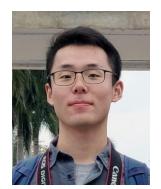# Shenhan Qian

3rd-year graduate student
ShanghaiTech University

Date of Birth: December 5, 1996
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Research Interests

Implicit Neural Representations, Multi-View Reconstruction, Neural Rendering
Keypoint Estimation, Object Detection, Generative Models

Education

ShanghaiTech University   *Shanghai, China*   Jun, 2022
  M.Sc. Computer Science, supervisor: Shenghua Gao
  GPA 3.59/4.0 **(awarded Outstanding Graduate of Shanghai)**

Hunan University   *Changsha, China*   Jun, 2019
  B.Sc. Electrical Engineering and Control Systems
  GPA 3.71/4.0 **(top 4%, awarded First-Class Scholarship for three consecutive years)**

Publications

Dual-Space NeRF: Learning Animatable Avatars and Scene Lighting in Separate Spaces
Yihao Zhi, **Shenhan Qian***, Xinhao Yan*, Shenghua Gao*
International Conference on 3D Vision (3DV), 2022

UNIF: United Neural Implicit Functions for Clothed Human Reconstruction and Animation
***Shenhan Qian**, Jiale Xu, Ziwei Liu, Liqian Ma, Shenghua Gao*
European Conference on Computer Vision (ECCV), 2022

Feature Re-Representation and Reliable Pseudo Label Retraining for Cross-Domain Semantic Segmentation
*Jing Li, Kang Zhou, **Shenhan Qian**, Wen Li, Lixin Duan, Shenghua Gao*
Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2022

Speech Drives Templates: Co-Speech Gesture Synthesis with Learned Templates
Shenhan Qian, Zhi Tu*, Yihao Zhi*, Wen Liu, Shenghua Gao*
International Conference on Computer Vision (ICCV), 2021

KGDet: Keypoint-Guided Fashion Detection
Shenhan Qian, Dongze Lian*, Binqiang Zhao, Tong Liu, Bohui Zhu, Hai Li, Shenghua Gao*
AAAI Conference on Artificial Intelligence (AAAI), 2021

Learning to Recommend Frame for Interactive Video Object Segmentation in the Wild
Zhaoyuan Yin, Jia Zheng*, Weixin Luo, **Shenhan Qian**, Hanling Zhang, Shenghua Gao*
Conference on Computer Vision and Pattern Recognition (CVPR), 2021

Projects

DeepFashion2 Challenge – Landmark Estimation Track (CVPR 2020 Workshop)   Apr, 2020
  3rd Place
Combined a multi-stage detector (HTC) and a landmark estimator (HRNet) to detect clothing landmarks in a top-down manner. Adopted weighted sampling strategies to deal with the imbalanced data distribution.

Lane Detection with an Instance Segmentation Approach   May, 2019

Graduation Project

Re-implementation of LaneNet with instance segmentation, perspective transformation, and curve fitting.

College Student Electronics Design Contest of Hunan Province   Aug, 2018

1st Prize

Built a twin-rotor UAV that can take off, land, and hover steadily. Composed the UAV with 3d-printed parts, microcontrollers, and sensors. Achieved the highest precision of hovering height among all teams.

National College Student Electronics Design Contest   Aug, 2017

2nd Prize in Hunan Province

Built a tilting board system to control the movement of a ball on the board with microcontrollers, servos, and a camera. Accomplished smooth and flexible trajectory control.

Awards

Outstanding Graduate of Shanghai	Jun, 2022
Merit Student of ShanghaiTech University	Jan, 2022
China National Scholarship	Oct, 2021
First-Class Scholarship of Hunan University	2016, 2017, 2018

Experiences

ZMO.AI   Jul, 2021 – Dec, 2021

Computer Vision Research Intern

Articulated human body reconstruction and re-rendering in novel views and poses.

GPU Cluster Administration Team of ShanghaiTech University   Sep, 2019 – Jun, 2021

System Administrator

Maintaining hardware and software of a distributed GPU cluster, improving a system-monitor website.

Skills

Languages:

Native in Chinese, proficient in English (TOEFL iBT: 106), beginner in German.

Programming:

Python, C/C++, MATLAB, LaTex.

Techniques:

Machine learning (NumPy, Scipy, Scikit-learn), Deep learning (PyTorch, TensorFlow)

Image processing (OpenCV), 3D modeling (Trimesh, Blender)

Real-time rendering (PyRender, openFrameworks, OpenGL), Differentiable rendering (PyTorch3D)

Robot programming (ROS), Embedded development (Keil)

Web development (Django, Tornado)

Hobbies

Acoustic guitar, swimming, photography.