

Tong Zhang

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🌐 [the-star-sea](https://the-star-sea.github.io)

🏠 [Homepage](#)

Education Background

Southern University of Science and Technology (SUSTech)

Bachelor of Computer Science and Engineering, GPA: 3.65/4

Shenzhen, China

Sep. 2019 - June 2023

University of California Irvine (UCI)

Semester Exchange, GPA: 3.62/4

Irvine, USA

June 2022 - June 2023

University of California Irvine (UCI)

MS, Computer Engineering, GPA: ongoing

Irvine, USA

June 2023 - June 2024

Academic Experience

Human-Readable SVG Generation for Simple Images with Vision Language Models

UIUC

Assistant Prof. Haohan Wang

June 2023 - Nov. 2023

PyTorch

- proposed S^2VG^2 , the first method combined with a vision language model for SVG generation
- introduced a specialized dataset named SVG-SHAPE, designed for evaluating SVG generation methods and reasoning of LLMs
- demonstrated state-of-the-art performance in SVG reasoning of LLMs and vision metrics (Submitted to CVPR2024)

One-shot Controllable Head Avatar with Vertex-feature Transformer

UCI

Prof. Xiaohui Xie

Apr. 2023 - June 2023

PyTorch

- proposed CVTHead, a one-shot controllable head avatar framework, which is the first work that performs point-based neural rendering from a monocular face image.
- evaluated our method in comparison to other methods for cross-identity reenactment
- demonstrated state-of-the-art approaches on VoxCeleb1 and VoxCeleb2, while additionally improving efficiency (Accepted by WACV2024)

Trajectory Prediction and Driving Video Caption

AIR, Tsinghua University

Assistant Prof. Hao Zhao

May 2022 - Sep. 2022

NumPy, PyTorch

- predicted trajectory on a new interactive motion dataset through AgentFormer and Trajectron++
- trained a novel end-to-end transformer generating description and explanation of driving video
- demonstrated state-of-the-art performance in driving video captioning (Accepted by ICRA 2023)

Lightweight OCR Models Support for OpenCV

Google Summer of Code 2022

OpenCV

May 2022 - Sep. 2022

PyTorch, ONNX, C++

- implemented the detection part of PP-OCrv2 model in OpenCV Zoo by ONNX
- implemented high level C++ API of PP-OCrv2 model in OpenCV
- implemented evaluation metrics of text detection (AP, Recall, Precision, Hmean) in OpenCV Zoo

Publications

Tong Zhang, Haoyang Liu, Peiyan Zhang, Yuxuan Cheng and Haohan Wang, "Beyond Pixels: Exploring Human-Readable SVG Generation for Simple Images with Vision Language Models", *Submitted to The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)*, 2024

Haoyu Ma, Tong Zhang, Shanlin Sun, Xiangyi Yan, Kun Han and Xiaohui Xie, "CVTHead: One-shot Controllable Head Avatar with Vertex-feature Transformer", *Accepted by IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2024

Bu Jin, Xinyu Liu, Yupeng Zheng, Pengfei Li, Hao Zhao, Tong Zhang, Yuhang Zheng, Guyue Zhou and Jingjing Liu, "ADAPT: Action-aware Driving Caption Transformer", *Accepted by IEEE International Conference on Robotics and Automation (ICRA)*, 2023