Tong Zhang

✉ tongz27@uci.edu   📱 +1 949-232-5050   🐙 the-star-sea   🔗 Homepage

Education Background

University of California Irvine (UCI)   Irvine, USA
MS, Computer Engineering, GPA: ongoing   *June 2023 - June 2024*

Southern University of Science and Technology (SUSTech)   Shenzhen, China
Bachelor of Computer Science and Engineering, GPA: 3.65/4   *Sep. 2019 - June 2023*

University of California Irvine (UCI)   Irvine, USA
Semester Exchange, GPA: 3.62/4   *June 2022 - June 2023*

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 an 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