



Zuhao Liu

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WORK EXPERIENCE

Graduate Researcher

INSAIT, Sofia University [05/06/2024 – Current]

City: Sofia | Country: Bulgaria

- Doing research in the video generation field. Due to the current trajectory-controlled video generation models having poor performance in object interaction, we propose a new pipeline named InTraGen to improve the interaction effect and a new rendered dataset for interaction evaluation. Submitted a paper titled InTraGen: Trajectory-controlled Video Generation for Object Interactions to CVPR 2025. Guided by Dr. Danda Paudel and Prof. Luc Van Gool.

AI Research Intern

NetEase Inc. [29/12/2022 – 10/11/2023]

City: Guangzhou | Country: China

- Led the research of image-to-image translation and image generation. The research results were published at ICCV 2023 as the joint first author
- Contributed to the development of diffusion-based image generation models, effectively utilized for concept art generation in various game projects of the company
- Designed and implemented an interactive image cutout model successfully applied in company's game project

EDUCATION AND TRAINING

Master of Research

Sun Yat-sen University [01/09/2022 – Current]

City: Guangzhou | Country: China | Website: <https://www.sysu.edu.cn/sysuen/>

Bachelor of Engineering (Dual degree program)

University of Electronic Science and Technology of China [30/08/2018 – 20/06/2022]

City: Chengdu | Country: China | Website: <https://en.uestc.edu.cn/>

Bachelor of Engineering (Dual degree program)

University of Glasgow [30/08/2018 – 22/06/2022]

City: Glasgow | Country: United Kingdom | Website: <https://www.gla.ac.uk/> | Final grade: First-class honour degree

PUBLICATIONS

[2023]

[Generating Anomalies for Video Anomaly Detection With Prompt-Based Feature Mapping](#)

Zuhao Liu, et al., IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

[2023]

[General Image-to-Image Translation with One-Shot Image Guidance](#)

Bin Cheng*, Zuhao Liu*, et al., IEEE/CVF International Conference on Computer Vision (ICCV)

[2020]

[**NAS-SCAM: Neural Architecture Search-Based Spatial and Channel Joint Attention Module for Nuclei Semantic Segmentation and Classification**](#)

Zuhao Liu, et al., Medical Image Computing and Computer Assisted Intervention (MICCAI)

[2021]

[**Automatic Attention Learning Using Neural Architecture Search for Detection of Cardiac Abnormality in 12-Lead ECG**](#)

Zuhao Liu, et al., IEEE Transactions on Instrumentation and Measurement (Volume: 70)

[2021]

[**Automatic segmentation of organs-at-risks of nasopharynx cancer and lung cancer by cross-layer attention fusion network with TELD-Loss**](#)

Zuhao Liu, et al., Medical Physics, 48.11 (2021)

[2023]

[**Estimator meets equilibrium perspective: A rectified straight through estimator for binary neural networks training**](#)

Xiao-Ming Wu, Dian Zheng, Zuhao Liu, et al. International Conference on Computer Vision (ICCV)

[2021]

[**An end-to-end atrial fibrillation detection by a novel residual-based temporal attention convolutional neural network with exponential nonlinearity loss**](#)

Yibo Gao, Huan Wang, Zuhao Liu, Knowledge-Based Systems 212 (2021): 106589

[2020]

[**C SAF-CNN: Cross-layer spatial attention map fusion network for organ-at-risk segmentation in head and neck CT images**](#)

Zuhao Liu, et al. 2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)

LANGUAGE SKILLS

Mother tongue(s): Chinese

Other language(s):

English

LISTENING C1 READING C1 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HONOURS AND AWARDS

[22/06/2022] University of Glasgow

Bachelor of Engineering with Honours of the First Class

[20/06/2022] University of Electronic Science and Technology of China

Outstanding Graduate

[30/08/2022] Organizing Committee of Chinese Collegiate Computing Competition

First Prize of Chinese Collegiate Computing Competition

[20/10/2023] Tencent

Tencent Scholarship

DIGITAL SKILLS

Computer Vision Applications / Machine Learning Algorithms / Programming (Python, C, C++) / Problem-solving Ability / Artificial Intelligence Application / Game Engines