

Jue Wang

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EDUCATION

Southern University of Science and Technology

Master in Electronic and Information Engineering.

Shenzhen, China

Aug 2022 – Jun 2025 (Expected)

Northeastern University

Bachelor in Information and Computing Science.

Shenyang, China

Aug 2018 – Jun 2022

INTERNSHIP/PROJECT EXPERIENCE

Multimodal Intelligent Perception System Lab

Internship Leader: Xiaojiang Peng

Shenzhen, China

Dec 2023 – Sep 2024

- Proposed an end-to-end image editing method that combines free-shape masks and language instructions, overcoming the limitations of traditional methods that require precise mask drawing.
- Implemented image editing tasks for complex user instructions, including those requiring reasoning, handling irregular masks of arbitrary shapes, and multi-image replacement.
- Create the Free Shape Mask Instruction Edit (FSIM-Edit) benchmark, which includes a comprehensive dataset with diverse scenarios and editing instructions.

The Center for Optoelectronics Technology

Collaborative Research Leader: Guohua Jiao

Shenzhen Institute of Advanced Technology, China

Aug 2022 – Now

- Proposed a dual-stream segmentation model based on the Cross Attention mechanism, targeting the characteristic that most gases are visible in infrared images but not in visible light.
- Designed a multi-band gas detection system using a six-position rotating filter wheel to precisely identify gas leakage areas across six spectral bands.
- Released the first RGB-T registration dataset about gas detection, including 1,293 image pairs from 8 specific scenarios.

PUBLICATIONS

Wang J, Lin Y, Yuan T, et al. FlexEdit: Marrying Free-Shape Masks to VLLM for Flexible Image Editing[J]. arXiv preprint arXiv:2408.12429, 2024. *AAAI (CCF-A) Under Review*

Wang J, Lin Y, Zhao Q, et al. Invisible Gas Detection: An RGB-Thermal Cross Attention Network and A New Benchmark[J]. <https://doi.org/10.1016/j.cviu.2024.104099>. *CVIU (JCR Q1, CCF-B) Accepted*

AWARDS & ACHIEVEMENTS

- Outstanding Graduate Student 2022-2023, SUSTech. 2024.01
- “Challenge Cup” SUSTech Inramural Competition. 2023.03

VOLUNTEER & CONTRIBUTIONS

Shanghai Artificial Intelligence Laboratory

- Served as an assistant for the OpenMMLab Camp, guiding students in completing computer vision tasks such as image classification, object detection, and semantic segmentation.
- Added type hints to multiple modules in the open-mmlab/mmdetection3d repository for MMDetection3D.
- Added scheduler visualization tools to the open-mmlab/mmocv repository for MMOCR.