XUANJIA ZHAO

/WeChat 18846138276 | xuanjia.zh@gmail.com / xuanjia@hrbeu.edu.cn | Haidian, Beijing

EDUCATION

Harbin Engineering University — Harbin, China
Second-year Master's Student in Computer Science and Technology; ***Overall Rank: 2/221*** — *Sep 2023 – Present*

Harbin Engineering University — Harbin, China
Bachelor of Software Engineering; ***GPA: 86.34/100*** — *Sep 2019 – Jun 2023*

PUBILCATIONS

FastDrag: Manipulate Anything in One Step
X. Zhao*, J. Guan, C. Fan, D. Xu, Y. Lin, H. Pan, P. Feng*
https://github.com/XuanjiaZ/FastDrag
NeurIPS, 2024 *Keywords: Image Generation; Drag-based Image Editing; Diffusion; Latent Optimization*
TL;DR: A novel train-free drag-based image editing method that outperforms existing SOTA approaches in speed by using a one-step latent optimization strategy, proposed for the first time.

Band Prompting Aided SAR and Multi-Spectral Data Fusion Framework for Local Climate Zone Classification
H. Lan, S. Li, M. Xie, ***X. Zhao****, H. Liu, P. Feng, D. Xu, G. He, J. Guan*
ICASSP, 2025 *Keywords: Image Classification; Prompt Engineering; CLIP Optimization*
TL;DR: A novel band prompting aided data fusion framework for LCZ classification, which utilizes textual prompts and a proposed optimized CLIP to achieve efficient fusion of SAR and multi-spectral data.

Align Your Rhythm: Generating Highly Aligned Dance Poses with Gating-Enhanced Rhythm-Aware Feature Representation
C. Fan, J. Guan, ***X. Zhao****, D. Xu, Y. Lin, T. Ye, P. Feng, H. Pan*
ArXiv, 2025 *Keywords: Motion Generation; Rhythm-Aware Representation; Gating Mechanism*
TL;DR: A novel music-driven 3D dance motion generation framework, which leverages gating mechanism to enhance the proposed rhythm-aware feature representation, achieving SOTA performance.

SISP: A Benchmark Dataset for Fine-grained Ship Instance Segmentation in Panchromatic Satellite Images
P. Feng, M. Xie, H. Liu, ***X. Zhao****, G. He, X. Zhang, J. Guan*
ArXiv, 2024 *Keywords: Benchmark Dataset; Instance Segmentation*
TL;DR: A fine-grained ship instance segmentation panchromatic dataset with 56k+ annotations from 0.5m-resolution satellite images, and propose a benchmark model to enhance segmentation performance.

Towards AI Large Model: Remote Sensing Image Intelligent interpretation and Application
P. Feng, Y. Chen, H. Lan, G. He, Y. Li, J. Guan, ***X. Zhao****, et al.*
Harbin Institute of Technology Press; ISBN: 978-7-5767-0992-6 *Keywords: Remote Rensing; Intelligent Interpretation*
TL;DR: Systematically introduce the main contents of remote sensing image intelligent interpretation and application. Focus on object detection, fine-grained target recognition,semantic segmentation, and multimodal remote sensing image joint intelligent interpretation.

RESEARCH DIRECTIONS

Image Generation & Editing: Conduct research on diffusion-based image generation. Serve as first author on a NeurIPS paper *FastDrag*, achieving state-of-the-art quality and speed in drag-based image editing tasks. Proficient in multiple generative techniques including GANs, diffusion models, and autoregressive models. Familiar with 3D reconstruction methods such as NeRF and 3DGS.

Image Object Detection: Focus on object detection in remote sensing image under complex conditions (small, dense, and multi-scale targets). Design preprocessing pipelines for real-world applications, optimized and deployed advanced detection models, and tailoring solutions for practical needs. Familiar with the OpenMMLab framework.

AWARDS & ACHIEVEMENTS

National Scholarship — Ministry of Education of China
Awarded to top 1.14% of masters's students — *2024*

Innovation Pioneer Award — Harbin Engineering University
Awarded to top 10 students of research innovation — *2024*

First-Class Academic Scholarship — Harbin Engineering University
Awarded to top 20% graduate students annually — *2024*

First-Class Academic Scholarship — Harbin Engineering University
Awarded to top 20% graduate students annually — *2023*

Outstanding Student Cadres — Harbin Engineering University
Awarded for exceptional leadership in student organizations — *2022*

National Encouragement Scholarship — Ministry of Education of China
Supporting students with both academic excellence and financial need — *2021*

SKILLS

Programming Languages: Python, C/C++, LaTeX, Markdown, etc

Technologies: PyTorch, Linux, Vim, Docker, Git, etc

SUMMARY

My research interests primarily lie in **Computer Vision**, **Multimodal Learning**, and **Generative Models**, where I aim to contribute innovative ideas and practical solutions.

SERVICES

Reviewer: NeurIPS 2025, ICCV 2025