Rui Huang

https://ruihuangai.github.io/



Top 10 in School

UESTC | "Everest Project" Computer Top Talent Experimental Class

Information

Age: 20 C				
UESTC - "Everest Project" Computer Top Talent Experimental Class			2023.09 – 2027.06	
• Grade: 96	.26 Calculus: 97	Linear Algebra: 98	GPA: 3.98/4	Ranking: 1/334
Research			2023.12 – 2025.10	

Generative AI and Multimodal Modeling

 Diffusion Dataset Condensation: Training Your Diffusion Model Faster with Less Data ICLR 2026 (Under Review) First Author

Proposed D²C: Diffusion Dataset Condensation for diffusion models, enabling 100× faster training with 0.8%–4% data via sample selection and semantic enhancement; trained on hundreds of A800/H100 GPUs.

 Can We Generate Images with CoT? Let's Verify and Reinforce Image Generation Step by Step <u>IJCV</u> (Under Review) Core Contributer Github 800+stars

Proposed CoT-Image with step-wise reasoning and novel reward models (PARM/PARM++), improving autoregressive image generation by 24% via test-time verification and preference alignment.

 UniVA: Universal Video Agents towards Next-Generation Video Intelligence ICLR 2026 (Under Review) Core Contributer

UniVA unifies understanding/segmentation/editing/generation into traceable multi-step video workflows via Plan—Act agents, multi-level memory, and MCP-based tool servers, plus UniVA-Bench..

Wavelet-Assisted Multi-Frequency Attention Network for Pansharpening

AAAI 2025 (Oral) Co-First Author

Proposed WFANet for image fusion, combining wavelet transformation with attention, achieving SOTA on multiple datasets.

Smart Power Systems and Load Forecasting

• Complementary Online Learning Network for Probabilistic Load Forecasting Against Extreme Weather IEEE TII (SCI Q1, IF 10.215, First Author) Under Review

Proposed the Complementary Online Learning Network (COLNet) with a Weather-aware gating mechanism for high-precision probabilistic and point forecasting under extreme weather.

Internships

Shanghai AI Lab Research Assistant

Supervised by Ganqu Cui and Ning Ding, mainly researches LLM SFT and RL.

CUHK MM Lab Research Assistant

Conducted CoT-Image research under Prof. Hongsheng Li; studied Video generation.

• HKUST(Guangzhou) Research Assistant

Completed D²C (NeurIPS 2025 submission) as first author; focused on diffusion models and data condensation.

University of Cambridge Visiting Student

Participated in AI track; conducted a load forecasting project and received Excellent Student Award.

Selected Honors and Awards

National Scholarship Top 6 in College SenseTime Scholarship 30 Recipients Nationwide

Ganen Modern Science Fellowship

National College Students' Career Planning Contest First Prize