Rui Huang

https://ruihuangai.github.io/

UESTC | "Everest Project" Computer Top Talent Experimental Class

Information

Age：20   **Class of 2023, Sophomore**   **Wechat**：huangrui_dby   **Email**：huang_rui@std.uestc.edu.cn
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Education

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 – 2025.08

Generative AI and Multimodal Modeling

- **Diffusion Dataset Condensation: Training Your Diffusion Model Faster with Less Data**

  Neruips 2025 (CCF-A，**First Author**) Under Review

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**

  IJCV under review(CCF-A) Github 790+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.

- **Wavelet-Assisted Multi-Frequency Attention Network for Pansharpening**

  AAAI 2025 **Oral**（**Co-First Author**） Accepted

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.

- **Causal Mechanism-Enabled Zero-Label Learning for Power Generation Forecasting of Newly-Built PV Sites**

  IEEE TSTE（SCI Q1，IF 7.9，**second author(student)**） Accepted

Proposed a causal mechanism-based unsupervised domain adaptation method (CEDAN) for power prediction in new PV sites, achieving higher accuracy than existing transfer learning methods.

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
National College Students' Career Planning Contest	First Prize	Ganen Modern Science Fellowship	Top 10 in School