Yuhang Chen

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Education

Huazhong University of Science and Technology, China **GPA:** 4.42/5 (89.6/100) **Rank:** 18/313 (top5.7%)
B.E. in Computer Science and Technology ***Sept.*** *2023 –* ***Jun.*** *2027 (Expected)*

Publications

[1] **Quantifying the Gap between Understanding and Generation within Unified Multimodal Models [PDF]**
Chenlong Wang* **Yuhang Chen*** Zhihan Hu* Dongping Chen, Wenhu Chen, Sarah Wiegreffe, Tianyi Zhou†
Accepted at **CVPR 2026 Findings**. *IEEE Conference on Computer Vision and Pattern Recognition*

[2] **Judge Anything: MLLM as a Judge Across Any Modality [PDF]**
Shu Pu, Yaochen Wang, Dongping Chen, **Yuhang Chen**, Guohao Wang1, Qi Qin, Zhongyi Zhang,
Zhiyuan Zhang, Zetong Zhou, Shuang Gong, Yi Gui, Yao Wan, Philip S. Yu,
Accepted at **KDD 2025 Datasets and Benchmarks Track,**. *Knowledge Discovery and Data Mining*

In Submission

[1] **PAPER2WEB: LET'S MAKE YOUR PAPER ALIVE! [PDF]**
Yuhang Chen*, Tianpeng Lv*, Siyi Zhang, Yixiang Yin, Yao Wan†, Philip S. Yu, Dongping Chen†

Research Interest

- **World Model**: Video Generation, Reasoning
- **Multi Modality**: Unified Multimodal Model, Human-Computer Interaction
- **Reasoning**: Reasoning Interpretability, MLLM Reasoning, Efficient Reasoning.
- **XAI**: Model Architecture Optimization.

Research Experience

Research Intern in University of Maryland

Working with Prof. Tianyi Zhou. ***Mar.*** *2025 -* ***Oct.*** *2025*

- Research on **Token Efficient and Interpretable Reasoning**. We explore the inherent thinking pattern of reasoning models and the effectiveness of thinking tokens.
- Explore the **User-centric AI** and LLM capabilities of providing more options and inspiration to users.
- Research on **the gap between understanding and generation within unified multimodal models**. We propose an evaluation framework and a quantifying metric to investigate such a gap, and conduct in-depth empirical study to analyze the underlying mechanism.

Research Intern at ONE Lab in Huazhong University of Science and Technology

Working with Prof. Yao Wan. ***Oct.*** *2024 -* ***Feb.*** *2026*

- Research on **Academic front-end code Generation**. We propose the first benchmark `Paper2Web` and an autonomous system `PWAgent` that utilizes MCP-driven tools to transform static PDFs into interactive, layout-aware project sites.
- Research on **Multimodal Consistency Evaluation**. We introduce a symmetric framework `Judge Anything` to evaluate MLLM-as-a-Judge across 15 any-to-any modality categories.
- Research on **Multimodal Agents**. We explore the integration of MLLMs with autonomous agentic workflows, leveraging multi-step reasoning and tool-use capabilities to enhance model performance in complex, open-ended cross-modal tasks.

Projects

Paper2Web: Develop `PWAgent`, an autonomous system utilizing MCP-driven tools and iterative refinement to transform static PDFs into interactive, layout-aware academic homepages. [Code Repository]

Judge Anything: Propose `TaskAnything` and `JudgeAnything` benchmarks to evaluate MLLM-as-a-Judge across 15 any-to-any modality categories; develop `OmniArena`, an automated platform to mitigate evaluation biases and hallucinations in MMG tasks. (***Dataset and Evaluation Platform of 2025 KDD Paper***)

RISC-V CPU Design: Wire the circuit on Logisi to design CPU functions on RISC-v ISA, implementing 5-stage instruction pipeline, dynamic prediction, and redirection.

GapEval: Propose a bidirectional benchmark to quantify the cognitive coherence between understanding and generation in Unified Multimodal Models (UMMs), revealing the disjointed nature of cross-modal knowledge through empirical studies on knowledge manipulation. (***Dataset of 2026 CVPR Paper***)

CNN Implementation: Construct CNN based on `torch.Tensor`, supporting gradient calculation and backpropagation.

Honors & Awards

Academic Scholarships: Awarded **Outstanding Academic Performance Scholarship** (3 times) and **Technology Innovation Scholarship** (2 times) 2023 – 2025

Computer System Development Capability Competition: Won the **Third Prize** in the national final, focusing on hardware-software co-design and system-level optimization. 2025.07

RuiKang Robot Developer Competition: Awarded the **Second Prize** in the national developer challenge for innovative robotic control and perception algorithms. 2025.09

Global Campus Artificial Intelligence Algorithm Elite Competition: Won **First Prize** at the National Finals in the Algorithm Application Track of the 7th Global Campus Artificial Intelligence Algorithm Elite Competition 2025.12