

Xingchen Zeng

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RESEARCH INTERESTS

My research seeks to empower Large Language Models with human-like comprehension and creation of structured visual content, unlocking new capabilities in AI-driven design, reasoning, and communication.

EDUCATION

The Hong Kong University of Science and Technology (Guangzhou), Guangzhou, China Sep 2023 — Current
PhD student in Data Science and Analytics,
supervised by Prof. Wei Zeng and Prof. Wei Wang

Central South University, Changsha, China Sep 2019 — June 2023
Bachelor of Engineering: Data Science and Big Data Technology (Graduate with Distinction) GPA: 91.13/100
supervised by Prof. Jiazhi Xia

ACADEMIC EXPERIENCE

The Hong Kong University of Science and Technology (Guangzhou) Guangzhou, China
Research Assistant Oct 2022 — June 2023
Visualization Group of Central South University Changsha, China
Research Intern Apr 2021 — Sept 2022

UNDER REVIEW

- **Xingchen Zeng**, Zhewei Su, Hengming Zhang, Juyong Jiang, Jiazhi Xia, Wei Zeng. DaVinci: Reinforcing Visual-Structural Syntax in MLLMs for Generalized Scientific Diagram Parsing. Submitted to *ICLR 2026*, 2024. <https://openreview.net/pdf?id=OAXECnLxuk>
- **Xingchen Zeng**, Yuanbang Liu, Jianing Hao, Wei Zeng. Chart-G1: Visually Grounded Chart Reasoning by Rewarding Multimodal Large Language Models. Submitted to *PacificVis2026 TVCG Track*, 2024.

PUBLICATIONS

- **Xingchen Zeng**, Haichuan Lin, Yilin Ye, Wei Zeng. Advancing Multimodal Large Language Models in Chart Question Answering with Visualization-Referenced Instruction Tuning. *IEEE Transactions on Visualization and Computer Graphics* (In Proc. *IEEE VIS2024*), 2024. <https://doi.org/10.1109/TVCG.2024.3456159>
- **Xingchen Zeng**, Ziyao Gao, Yilin Ye, Wei Zeng. IntentTuner: An Interactive Framework for Integrating Human Intentions in Fine-tuning Text-to-Image Generative Models. In *Proceedings of the CHI Conference on Human Factors in Computing Systems*, 2024. <https://doi.org/10.1145/3613904.3642165>
- **Xingchen Zeng**, Haowen Zhou, Zhicong Li, Chenqi Zhang, Juncong Lin, Jiazhi Xia, Yanyi Yang, Xiaoyan Kui. iHELP: Interactive Hierarchical Linear Projections for Interpreting Non-Linear Projections. *Journal of Visualization*, 26(3): 631-648, 2023. <https://doi.org/10.1007/s12650-022-00900-4>
- Yilin Ye, Junchao Huang, **Xingchen Zeng**, Wei Zeng. Parametric-Generalized-Kernel Boosted Dimensionality Reduction for Gaussian Kernel Estimation in Projection Space. *Proceedings of Forty-Second International Conference on Machine Learning*, 2025.
- Yihan Hou, **Xingchen Zeng**, Yusong Wang, Manling Yang, Wei Zeng. GenColor: Generative Color-Concept Association in Visual Design, In *Proceedings of the CHI Conference on Human Factors in Computing Systems*, 2025.
- Yilin Ye, Shishi Xiao, **Xingchen Zeng**, Wei Zeng. ModalChorus: Visual Probing and Alignment of Multi-modal Embeddings via Modal Fusion Map. *IEEE Transactions on Visualization and Computer Graphics* (In Proc. *IEEE VIS2024*), 2024. <https://doi.org/10.1109/TVCG.2024.3456387>

SERVICES

- **Review:** CHI2025, VINCI2024, CHI LBW2025, IEEE Computer Graphics and Applications
- **Volunteer:** GAMES2022, VINCI2023

TEACHING EXPERIENCE

- **Teaching Assistant:** Data Exploration and Visualization, PG Course, 2024 Fall, HKUST(GZ)

- **Teaching Assistant:** Mathematical Modeling, UG Competition, 2024 Summer, HKUST(GZ)

REFERENCES

Prof. Wei Zeng

Assistant professor

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Scholar Profiles: Hong Kong University of Science and Technology (Guangzhou) — Google Scholar

Prof. Wei Wang

Professor

E-mail: weiwcs@ust.hk

Scholar Profiles: Hong Kong University of Science and Technology (Guangzhou) — Google Scholar

Prof. Jiazhi Xia

Professor

E-mail: xiajiazhi@csu.edu.cn

Scholar Profiles: Central South University — Google Scholar