

Education

- 2024 – **Hong Kong Polytechnic University**, Ph.D. in Computing.
Present Advisor: Prof. **Wenqi Fan** and Prof. **Qing Li**
- 2021 – 2024 **Sichuan University**, M.E. in Computer Science and Technology, *GPA: 3.76/4*.
Advisor: Prof. **Min Zhu**, Lab: Vision Computing Lab
- 2017 – 2021 **Sichuan University**, B.E. in Computer Science and Technology, *GPA: 3.77/4*.
Under the Wu Yuzhang Honors program

Research Interests

AI4Science, Graph Machine Learning, Large Language Models & Data Mining

Publications & Preprints

J - Journal, C - Conference, P - Preprint

- J1 **Yi Zhou**, Xinyi Wang, Lin Yao, Min Zhu. "LDAformer: Predicting LncRNA-Disease Associations based on Topological Feature Extraction and Transformer Encoder". *Briefings in Bioinformatics (BIB)*, 2022. (JCR-Q1, IF: 13.994)
- J2 Wenwen Gao, Shangsong Liu, **Yi Zhou**, Fengjie Wang, Feng Zhou, Min Zhu. "GBDT4CTRVIS: Visual Analytics of Gradient Boosting Decision Tree for Advertisement Click-Through Rate Prediction". *Journal of Visualization (JoV)*, 2024.
- J3 Jiamin Zhu, Meixuan Wu, **Yi Zhou**, Nan Cao, Haotian Zhu, Min Zhu. "Dowsing: A Task-Driven Approach for Multiple-View Visualizations Dynamic Recommendation". *Journal of Visualization (JoV)*, 2024.
- C1 **Yi Zhou**, Xian Guan, Meixuan Wu, Chengzhou Ouyang, Min Zhu. "Timely-MDA: A Benchmark for Generalizable MiRNA-Disease Association Prediction". *International Conference on Bioinformatics and Biomedicine (BIBM)*, 2024.
- P1 Wenqi Fan, **Yi Zhou**, Shijie Wang, Yuyao Yan, Hui Liu, Qian Zhao, Le Song, Qing Li. "Computational Protein Science in the Era of Large Language Models (LLMs)".

Patents

PT- Patent; USE - Under Substantial Examination

- PT1 Min Zhu, Fuqiu Chen, Chunlin Long, **Yi Zhou**, Xinyi Wang. "A Visualization Method for Chromatin Hierarchy Analysis Based on Genetic Data". CN113946730A.
- PT5 (USE) Min Zhu, Meixuan Wu, Jiamin Zhu, **Yi Zhou**, Haotian Zhu. "An Analytical Task Perception Method that Integrates Deep Learning Models and Rules". CN116303737A.
- PT4 (USE) Min Zhu, Jiamin Zhu, Meixuan Wu, **Yi Zhou**, Haotian Zhu. "A Dynamic Visualization Recommendation Method Based on User Tasks". CN116204704A.
- PT3 (USE) Min Zhu, Xiyao Li, Chunlin Long, **Yi Zhou**, Xinyi Wang. "A Prediction Method for Chromatin Topological Association Domain Boundary Based on Multimodal Fusion". CN115831217A.
- PT2 (USE) Min Zhu, **Yi Zhou**, Xinyi Wang, Lin Yao. "Method and System for Long Non-coding RNA-Disease Association Prediction Based on Self-Attention Mechanism". CN115171780A.

Research Experience

- Jul 2024 – **Research in AI for Protein.**
Now - Authored a comprehensive survey on protein language models, highlighting foundation models and their adaptation advancements in the field of computational protein science. [P1, [arXiv](#)]
- Jan 2021 – **Research in Biomedical Network Analysis, Project "Visual Analysis of Heterogeneous Graph for Disease-Regulatory Factor", supported by the General Program of National Natural Science Foundation of China (Grant No.62172289).**
Jun 2024 - Drafted the research framework for biomedical entity link prediction in the project proposal.
- Proposed LDAformer, a lncRNA-disease association prediction method achieving state-of-the-art performance. [J1, [DOI](#), PT2 (USE), [GitHub](#)]
- Contributed to the development of a visual analytic system for RNA-disease network, enabling interactive exploration and analysis of specific biological data. [[Online Demo](#)]
- Developed Timely-MDA, a benchmark for miRNA-disease association prediction, designed to improve generalizability and reproducibility in the field. [C1, [DOI](#), [GitHub](#)]
- Dec 2020 – **Research in Data Visualization and Analytics.**
Apr 2023 - Participated in the development of Dowsing, a recommendation approach for generating and optimizing multiple-view visualizations, enhancing user-driven data exploration. [J3, PT4 (USE), PT5 (USE), [DOI](#), [Webpage](#), [Online Demo](#)]
- Participated in the development of GBDTCTRVis, a visual analytic system for GBDT-based advertisement click-through rate prediction. [J2, [DOI](#), [Video](#)]
- Contributed to Project "Platform for Visual Analysis of Chromatin Multi-Level Structures and Gene Regulation Relationships", supported by Chengdu Science and Technology Program (Grant No.2021-YF05-02071-SN). Drafted the project proposal, and developed a visual analytic platform with functions like topological association domain prediction. [PT1, PT3 (USE)]

Teaching & Services

- Fall 2023 & **Teaching Assistant**, Sichuan University.
Spring 2024 - Data Visualization (311301030)
Fall 2024 **Teaching Assistant**, Hong Kong Polytechnic University.
- Introduction to Artificial Intelligence and Data Analytic (COMP1004)
Journal Reviewer.
- Expert Systems With Applications (ESWA)
- Jul 2022 – **Mentor of Bioinformatics Group**, Vision Computing Lab.
Jun 2024 Mentored Meixuan Wu, Xiyao Li, Wanjing Zhang, Lin Gan, Xian Guan and Chengzhou Ouyang.
- Sep 2021 – **Living Manager**, Vision Computing Lab.
Aug 2023 Responsible for all non-working tasks in the lab.

Honors & Awards

- 2024 Outstanding Undergraduate Teaching Assistant at Sichuan University
2024 Outstanding Graduate of Sichuan University
2023 Outstanding Graduate Student of Sichuan University
2023 First-class of Excellent Graduate Scholarship by Sichuan University
2023 Tencent Scholarship of Sichuan University
2021 Certificate of Honor from Wu Yuzhang Honors College

Skills

- Programming Python, PyTorch, PyTorch Geometric, SQL, Linux command, Git
Languages Chinese, English (IELTS: 7.0), Fuzhou dialect