Mianzhi Pan

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EDUCATION

Nanjing University Jiangsu, China
Ph.D. in Computer Science and Technology, School of Artificial Intelligence Sep 2024 - Present
- Research Focus: AI for science

Nanjing University Jiangsu, China
M.S. in Computer Science and Technology, School of Artificial Intelligence Sep 2022 - Jun 2024
- Research Focus: Vision-language pretrained models
- Core Courses: Reinforcement Learning, Information Theory, Automated Reasoning, Introduction to Machine Learning Theory, Game Theory

Nanjing University Jiangsu, China
B.S. in Brain Science and Artificial Intelligence, Kuang Yaming Honors School Sep 2018 - Jun 2022
- Core Courses: Machine Learning, Operating Systems, Stochastic Processes, Theoretical Physics, Neuroscience

EXPERIENCE

Institute for AI Industry Research (AIR), Tsinghua University Jul 2026 – Present
Research Intern
- LLM for science discovery
- AI for biology

Institute for AI Industry Research (AIR), Tsinghua University Aug 2024 - Nov 2025
Research Intern
- Material representation learning & generative models
- Machine learning interatomic potentials

PUBLICATIONS

* denotes equal contribution.
- **Pan, M.***, Li, J.*, Liu, P., Wang, B., Ouyang, Y., Rong, Y., ... & Zhang, J. "Enhancing spatial reasoning in large language models for metal-organic frameworks structure prediction." **(KDD 26)**
- **Pan, M.***, Tan, T.*, Ouyang, Y.*, Jin, Q., Chu, Y., Ma, W. Y., ... & Zhou, H. "Generative AI-powered inverse design for tailored narrowband molecular emitters." **(Digital Discovery 2025)**
- **Pan, M.**, Li, J., Ouyang, Y., Ma, W. Y., Zhang, J., & Zhou, H. "Towards Extrapolation in Deep Material Property Regression." **(AI4Mat Workshop @ ICLR 2025 Oral)**
- Wang, B.*, Ouyang, Y.*, Li, Y.*, **Pan, M.**, Cui, H., Wang, Y., ... & Zhou, H. "MoMa: A Simple Modular Learning Framework for Material Property Prediction." **(ICLR 2026)**
- Ma, Z.*, **Pan, M.*,** Wu, W., Cheng, K., Zhang, J., Huang, S., & Chen, J. "Food-500 cap: A fine-grained food caption benchmark for evaluating vision-language models." **(ACM MM 2023)**
- Ma, Z., Zong, S., **Pan, M.**, Zhang, J., Huang, S., Dai, X., & Chen, J. "Probing cross-modal semantics alignment capability from the textual perspective." **(EMNLP 2022 Findings)**
- **Pan, M.**, Liu, P., Ouyang, Y., Wang, B., Rong, Y., Zhou, H., & Zhang, J. "QProtFuse: Query-Guided Layer Fusion for Retrieval-Augmented Protein Function Prediction." (In submission)

ACADEMIC SERVICE

Nanjing University Jiangsu, China
Teaching Assistant Mar 2026 - Jun 2026
- Fundamentals of AI Programming

Reviewer: ICLR 2027, KDD 2027, KDD 2026, ACML 2025