Hanyin Cheng

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Education

East China Normal University (ECNU), Shanghai, China 2024 – Present
M.S.-Ph.D. student, School of Data Science and Engineering, Decision Intelligence Lab, advised by Prof. Chenjuan Guo and Prof. Bin Yang.

Hainan University (HNU), Haikou, China 2020 – 2024
B.S. student, Software Engineering, GPA ranked top 5%.

Research Interests

My research interests include **Time Series Analysis**, **Foundation Models**, and **Agentic Systems**. Currently, my research mainly focuses on time series foundation models and applications of agentic systems. Beyond fundamental academic research, I am also committed to promoting research with practical application value. My research goal is to advance intelligent systems so that they can autonomously process complex time series data in domains such as finance, industry, and the environment, and ultimately support decision-making in real-world scenarios.

Publications and Preprints

To date, 11 CCF A/CORE A* papers have been accepted or published, including 4 as first author or co-first author.

- *CCD: Capturing Cross-Correlations with Deformable Convolutional Networks for Multivariate Time Series Forecasting* **KDD 2026**
  Hanyin Cheng, Xingjian Wu, Xiangfei Qiu, Yang Shu, Bin Yang, Chenjuan Guo[#]
- *KITE: Knowledge-Guided Probabilistic Modeling for Time Series Forecasting with Exogenous Variables* **ICML 2026**
  Hanyin Cheng, Jingrong Zhou, Yang Shu, Chenjuan Guo[#]
- *CoRA: Boosting Time Series Foundation Models for Multivariate Forecasting through Correlation-aware Adapter* **ICLR 2026**
  Hanyin Cheng, Xingjian Wu, Yang Shu, Zhongwen Rao, Lujia Pan, Bin Yang, Chenjuan Guo[#]
- *A Comprehensive Survey of Deep Learning for Multivariate Time Series Forecasting: A Channel Strategy Perspective* **IJCAI 2026**
  Xiangfei Qiu*, **Hanyin Cheng***, Xingjian Wu, Junkai Lu, Jilin Hu[#], Chenjuan Guo, Christian S. Jensen, Bin Yang
- *STAR: Boosting Time Series Foundation Models for Anomaly Detection through State-aware Adapter* **arXiv 2025**
  Hanyin Cheng, Ruitong Zhang, Yuning Lu, Peng Chen, Meng Wang, Yang Shu, Bin Yang, Chenjuan Guo[#]
- *SEER: Transformer-based Robust Time Series Forecasting via Automated Patch Enhancement and Replacement* **ICML 2026**
  Xiangfei Qiu, Xvyuan Liu, Tianen Shen, Xingjian Wu, **Hanyin Cheng**, Bin Yang, Jilin Hu[#]

- *ASTGI: Adaptive Spatio-Temporal Graph Interactions for Irregular Multivariate Time Series Forecasting* **ICLR 2026**

  Xvyuan Liu, Xiangfei Qiu, **Hanyin Cheng**, Xingjian Wu, Chenjuan Guo, Bin Yang, Jilin Hu[#]

- *Enhancing Time Series Forecasting through Selective Representation Spaces: A Patch Perspective* **NeurIPS 2025 Spotlight**

  Xingjian Wu, Xiangfei Qiu, **Hanyin Cheng**, Zhe Li, Jilin Hu, Chenjuan Guo, Bin Yang[#]

- *DBLoss: Decomposition-based Loss Function for Time Series Forecasting* **NeurIPS 2025**

  Xiangfei Qiu, Xingjian Wu, **Hanyin Cheng**, Xvyuan Liu, Chenjuan Guo, Jilin Hu[#], Bin Yang

- *TSFM-Bench: A Comprehensive and Unified Benchmark of Foundation Models for Time Series Forecasting* **KDD 2025**

  Zhe Li, Xiangfei Qiu, Peng Chen, Yihang Wang, **Hanyin Cheng**, Yang Shu, Jilin Hu, Chenjuan Guo, Aoying Zhou, Christian S. Jensen, Bin Yang[#]

- *MM-Path: Multi-modal, Multi-granularity Path Representation Learning* **KDD 2025**

  Ronghui Xu, **Hanyin Cheng**, Chenjuan Guo, Hongfan Gao, Jilin Hu, Sean Bin Yang, Bin Yang[#]

- *RCRank: Multimodal Ranking of Root Causes of Slow Queries in Cloud Database Systems* **PVLDB 2026**

  Biao Ouyang, Yingying Zhang, **Hanyin Cheng**, Yang Shu, Chenjuan Guo, Bin Yang[#], Qingsong Wen, Lunting Fan, Christian S. Jensen

- *Unlocking the Power of Mixture-of-Experts for Task-aware Time Series Analytics* **arXiv 2025**

  Xingjian Wu, Zhengyu Li, **Hanyin Cheng**, Xiangfei Qiu, Jilin Hu, Chenjuan Guo, Bin Yang[#]

- *FLAME: Flow Enhanced Legendre Memory Models for General Time Series Forecasting* **arXiv 2025**

  Xingjian Wu, **Hanyin Cheng**, Xiangfei Qiu, Zhe Li, Jilin Hu, Chenjuan Guo, Bin Yang[#]

- *Multi-Scale Spatial-Temporal Hypergraph Network with Lead-Lag Structures for Stock Time Series Forecasting* **arXiv 2025**

  Xiangfei Qiu, Liu Yang, **Hanyin Cheng**, Xingjian Wu, Rongjia Wu, Zhigang Zhang, Ding Tu, Chenjuan Guo, Bin Yang, Jilin Hu[#]

Collaborative Projects

- *Agentic Systems for Planning and Optimization in Complex Time Series Tasks* **Huawei University-Industry Collaboration, 2026–2027**
- *Multimodal Industrial Time Series Parsing and Semantic Description* **Huawei University-Industry Collaboration, 2025–2027**
- *Multi-dimensional Covariate Fusion Representation and Fine-tuning Enhancement* **Huawei University-Industry Collaboration, 2025–2026**
- *Foundation Models for Time Series Analysis* **Huawei University-Industry Collaboration, 2023–2025**
- *Anomaly Detection and Root Cause Analysis for Multi-source Heterogeneous Data* **Alibaba University-Industry Collaboration, 2023–2024**

Academic Services

Technical Chair

- Technical Chair, ST-FM Workshop at MDM 2026, 2026.

Conference Reviewer

- International Conference on Neural Information Processing Systems (NeurIPS) 2026.
- International Conference on Machine Learning (ICML) 2026.
- International Conference on Learning Representations (ICLR) 2026.

♡ Honors and Awards

- *ICML 2026 Gold Reviewer Award* **2026.06**
- *Higher Education Press Cup National Undergraduate Mathematical Contest in Modeling, National First Prize* **2022.11**
- *24th China Robotics and Artificial Intelligence Competition, National First Prize* **2022.08**
- *16th Chinese Collegiate Computing Competition: Computer Design Competition, National First Prize* **2023.07**
- *China Collegiate Computing Contest – Network Technology Challenge, National Second Prize* **2023.09**
- *25th China Robotics and Artificial Intelligence Competition, National Second Prize* **2023.06**
- *15th Chinese Collegiate Computing Competition: Computer Design Competition, National Second Prize* **2022.07**
- *China Collegiate Computing Contest – Group Programming Ladder Tournament, National Third Prize* **2023.05**
- *4th National University Computer Capability Challenge, National Third Prize* **2022.12**