

# Chang Jin

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## Education

### Tongji University

Master of Computer Science

Shanghai, China

Sep 2023 - Present

- GPA: **4.83**/5.00
- Related Courses: Machine Learning: Theories and Applications(5.0/5.0), Data Mining(5.0/5.0)

### École Polytechnique Fédérale de Lausanne (EPFL)

Exchange Master Program of Computer Science

Lausanne, Switzerland

Feb 2025 - Jul 2025

- GPA: **5.62**/6.00
- Related Courses: Modern Natural Language Processing(5.5/6.0)

### Tongji University

Bachelor of Computer Science

Shanghai, China

Sep 2018 - Jun 2023

- GPA: **4.91**/5.00
- Ranking: **3**/121
- Related Courses: Algorithm Analysis and Design(5.0/5.0), Machine Learning(5.0/5.0), Artificial Intelligence Principles and Technologies(5.0/5.0)

## Publications

### When Silence Is Golden: Temporal and Non-Temporal Reasoning and Selective Abstention in LLMs

May 2025

Xinyu Zhou, **Chang Jin** (co-first author), Carsten Eickhoff, Seyed Ali Bahrainian  
Submitted to *EMNLP 2025*

### Effective and Explainable Molecular Property Prediction by a Chain-of-Thought Enabled LLM and Multi modal Molecular Information Fusion

May 2025

**Chang Jin**, Siyuan Guo, Shuigeng Zhou\*, Jihong Guan\*

Published on *Journal of Chemical Information and Modeling (JCR Q1)*

### M3-20M: A Large-Scale Multi-Modal Molecule Dataset for AI-driven Drug Design and Discovery

Jun 2025

Siyuan Guo, Lexuan Wang, **Chang Jin**, Jinxian Wang, Han Peng, Huayang Shi, Wengen Li, Jihong Guan, Shuigeng Zhou

Published on *Journal of Bioinformatics and Computational Biology*

### Enhanced Adaptive Graph Convolutional Network for Long-Term Fine-Grained SST Prediction

Aug 2023

Han Peng, **Chang Jin** (co-first author), Wengen Li\*, Jihong Guan

Published on *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JCR Q1)*

### On Evaluating the Predictability of Sea Surface Temperature Using Entropy

Apr 2023

**Chang Jin**, Han Peng, Hanchen Yang, Wengen Li\*, Jihong Guan

Published on *Remote Sensing (JCR Q1)*

## Research Experience

### Research on Constrained Decoding Methods for Structured Text Generation in Large Language Models

Feb 2025 - Present

Advisor: Prof. Robert West (EPFL)

- Investigated capabilities of various LLMs to generate JSON objects that adhere to given JSON Schemas.
- Analyzed probability distributions during constrained decoding to reveal how schema constraints affect LLM generation behavior.
- Contributed a JSON Schema-based evaluation task to the open-source project **lm-evaluation-harness (9.5k stars)**, enabling structured-output LLM evaluation.

### Research on Enhancing Abstention Mechanisms of Large Language Models for Temporal Reasoning Tasks

Sep 2024 – Present

Advisor: Dr. Ali Bahrainian (Joint Lab, University of Tübingen & Brown University)

- Developed Chain-of-Thought reasoning and reinforcement learning based techniques to enhance LLM understanding of temporal knowledge.
- Improved model abstention mechanisms, enabling LLMs to abstain from answering unanswerable queries, reducing hallucinations and errors.
- **Publications:** Co-first author: manuscript submitted to EMNLP 2025 (high-impact international NLP conference).

### Research on Drug Molecule Discovery Using Large Language Models

Sep 2023 – Present

Advisor: Prof. Jihong Guan (Tongji University) & Prof. Shuigeng Zhou (Fudan University)

- Constructed M3-20M, a large-scale multi-modal molecular dataset with over 20 million molecules.
- Developed LLM-MPP, a Chain-of-Thought enhanced multimodal LLM for molecular property prediction, achieving state-of-the-art performance in prediction accuracy and interpretability.
- **Publications:**
  - First author: “**Effective and Explainable Molecular Property Prediction by a Chain-of-Thought Enabled LLM and Multimodal Molecular Information Fusion**”, *Journal of Chemical Information and Modeling (JCR Q1)*.
  - Co-author: “**M3-20M: A Large-Scale Multi-Modal Molecule Dataset for AI-driven Drug Design and Discovery**”, *Journal of Bioinformatics and Computational Biology*.

### Research on Spatio-temporal Modeling

Mar 2021 – Jun 2023

Advisor: Prof. Jihong Guan & Prof. Wengen Li (Tongji University)

- Developed EA-GCN, a spatio-temporal deep learning model for long-term fine-grained sea surface temperature (SST) prediction, achieving state-of-the-art performance.
- Proposed a temporal-correlated entropy method to evaluate SST predictability from global and local perspectives, aiding marine and climate monitoring.
- **Publications:**
  - Co-first author: “**Enhanced Adaptive Graph Convolutional Network for Long-Term Fine-Grained SST Prediction**”, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JCR Q1)*.
  - First author: “**On Evaluating the Predictability of Sea Surface Temperature Using Entropy**”, *Remote Sensing (JCR Q1)*.

## Honors and Awards

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Outstanding Graduate of Tongji University	Jun 2023
First-Class Scholarship of Tongji University (top 5%)	2019, 2021
Second Prize of China Undergraduate Mathematical Contest in Modeling, Shanghai	2020

## Skills

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**Programming Languages:** Python, C++, C

**Python Packages:** PyTorch, TensorFlow, PyG, sklearn and other packages related to deep learning.

**English Skills:** IELTS: 7.5 (Listening: 7.5, Reading: 8.5, Writing: 7.5, Speaking: 6.5)