

```
tcb/box tcb/boxSect
tcb/box/begin0 tcb/box/begindefault
tag=tcb/box tcb/box/begindefault
tcb/box/end0 tcb/box/enddefault
tcb/box/enddefault
tcb/box/title tcb/box/titleCaption
tcb/box/title0 tcb/box/titledefault para/semantictcb/box/title tcb/box/titledefault
tcb/box/draw2 tcb/box/drawdefault 2
tcb/box/drawdefault
tcb/box/init0 tcb/box/initdefault minipage/beforenoopminipage/afternoop
tcb/box/initdefault
tcb/box/upper0 tcb/box/upperdefault minipage/beforetag/dflminipage/aftertag/dfl
tcb/box/upperdefault
tcb/box/lower0 tcb/box/lowerdefault minipage/beforetag/dflminipage/aftertag/dfl
tcb/box/lowerdefault
tcb/drawing/init0tcb/drawing/initdefaulttcb/drawing/initdefault
```

Jinglin (Ollie) Jian

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EDUCATION

The Scripps Research Institute San Diego, California, US
Ph.D. Program Aug 2025 - May 2029

Advisor: Prof. Stefano Forli; Current Focus: AI for Drug Discovery
Recipient of the **Kellogg Fellowship**, funded by the Kellogg Family and the ALSAM Foundation

University of Illinois Urbana-Champaign (UIUC) Illinois, US
M.S. in Information Sciences Aug 2023 - May 2025

Course: ML for Bioinformatics, Text Information Systems, Large Language Models, Data Mining

Peking University (PKU) Beijing, China
B.Econ. in Economics Minor Sep 2021 - Jul 2023

Course: Statistics, Applied Econometrics, Causal Inference Models

Beijing Normal University (BNU) Beijing, China
B.S. in Computer Science and Education Sep 2017 - Jul 2021

Course: Data Structure, Database, WebDev, OOP, Information Retrieval, Intelligent System, Data Mining

PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?hl=en&user=pXY2xYkAAAAJ>

[Ongoing] **Jian, J.**, ..., & Chen, Q. The AI Scientist in Health: Potential, Challenges, and the Road Ahead.

[BPS'26] Torres-Paris, C., ..., **Jian, J.**, Holcomb, M., Forli, S., & Racki, L.R. Allosterically inhibiting *Pseudomonas aeruginosa*'s polyphosphate kinase 2A by disrupting its oligomerization. *Biophysical Society Annual Meeting* (2026). Jian 1

[ACL'26 Submitted] Wang, Q., ..., **Jian, J.**, Guo, X., & Li, R. Human-AI Co-Discovery. *in submission*

[Published] Hou, R., Zhou, D., & **Jian, J.** GeoCM: Exploring Consistency Models and EGNNs for Molecular 3D Structure Prediction. *UIUC Machine Learning for Bioinformatics Workshop* (2024).

[AIED'24] Xiao, Y. & **Jian, J.** Which Animal Would You Like to See on Your Flashcards? Designing Visual Aids Together with Kids Using GIMs. *The 25th International Conference on Artificial Intelligence in Education*.

RESEARCH EXPERIENCE

[TechRxiv'25] **Exploring Agentic Multimodal Large Language Models: A Survey for AIScientists** *June 2025 – Nov 2025*

Advisor: Prof. Qingyu Chen (Yale), Prof. Zhiyong Lu (NIH), Prof. Qingyun Wang (William & Mary)

- Lead author of a survey framing AIScientists from a machine learning centric and agentic multimodal LLM perspective.

[arXiv'24] **GeoCM: Exploring Consistency Models and EGNNs for Molecular 3D Structure Prediction** *Oct 2024 – Present*

Advisor: Prof. Ge Liu (UIUC)

- Utilized **Equivariant Graph Neural Networks (EGNN)** and **Consistency Models (CM)** to train a self-supervised model to predict molecular 3D structures.
- Established two metrics **Coverage Rate** and **Matching Error** to compare GeoCM models against other models, demonstrating GeoCM claimed a new SOTA.

[Big Data'24] **Fast and Accurate Drug Discovery Framework** *Jan 2024 – Oct 2024*

Advisor: Prof. Yang Zhang (UIUC) and Dr. Jin Chen (Cleveland Clinic)

- Developed an enhanced parallel **Monte Carlo Tree Search** framework, considering aptamers' high-affinity and specificity for target proteins, achieving **98-fold** computational efficiency and **7.59-fold** improved sequence quality.

[arXiv'24] **Team of AI-made Scientists (TAIS)** *Aug 2023 – Feb 2024*

Advisor: Prof. Haohan Wang (UIUC)

- ML can discover disease-predictive genes from gene expression data. We introduced **TAIS**, a LLM-based framework for automatic streamlining ML analysis, outperforming **GPT4/MetaGPT/AutoGPT**.
- Fetched data from the **GEO/TAGC** database. Created the **GenoTEX**, a NEW benchmark for evaluating the exploration of genomics data, with aligning gene symbols, logging, and statistical corrections.
- Created several **agents** as scientists, via autonomously creating codes (**template-based prompting**), execution (**subprocess**), outputs/errors capture (**logger**), and built communication within (**Data Engineer, Code Reviewer, and Domain Expert agents**).

[Bachelor's Thesis] **Semi-automatic Knowledge Graph Construction** *Sep 2020 - Jul 2021*

Advisor: Prof. Qinhua Zheng (BNU)

- Developed a **semi-automatic** ML paradigm for **knowledge graph creation** for addressing time-consuming issues by combining **supervised ML** with **human-in-the-loop** incorporation.
- Developed a benchmark dataset for educational entities by annotating transcriptions using BIO tagging.
- Iterated a supervised **BiLSTM-CRF** model for **entity recognition** and dynamic term re-ranking (**mutual information and human feedback**), improving F1-score (0.54 → **0.76**).

PROFESSIONAL EXPERIENCE

Software Developer Intern

May 2024 – Aug 2024

Supervisor: David Bachtler and Ian Cowen, ReDirect

- Engineered subscription functionality using Flutter framework and implemented unit testing.

Teaching Assistant, IS 589 Independent Study *Aug 2023 – Dec 2023*

Supervisor: Prof. Haohan Wang, University of Illinois Urbana-Champaign

- Developed and published a comprehensive ML tutorial, the “Gold-Standard-Pipeline-Guide”, teaching students to analyze gene expression data for disease-related gene discovery. [GitHub]
- The resource has been forked by 9 students who applied it to their own research projects.

Research Assistant

Aug 2023 – Aug 2024

Supervisor: Prof. Mackenzie Alston, University of Illinois Urbana-Champaign

- Conducted literature review (randomized controlled trials) using Zotero and scraped 2000+ emails.

Head on Online Learning Department & Teacher Volunteer

May 2019 – Aug 2022

China Starry Night (NGO) [Web]

- Designed online educational videos to help intangible cultural heritage artisans in rural regions share traditional crafts, enabling younger generations to preserve cultural treasures.
- Courses published on Bilibili (China's leading video platform) garnered 10,000+ views.
- Presented at the 5th China Education Innovation Expo (National Award - Top 1%).

SELECTED PROJECTS

- **Demo of ChemTutor: AI Q&A system with Chemistry Textbooks** [Code] 2024
#LLM #Q&A system #RAG #LangChain
- **HMM-DRL Model for Data-driven Auto-Trading** [Paper] 2022
#Reinforcement Learning #Hidden Markov Model #Time Series Data #Financial Index
- **Evolution of Key Themes in Learning Sciences** [Web] 2020
#Text Mining #LDA-Topic Model #TF-IDF #Data Visualization

HONORS AND AWARDS

- **Kellogg Fellowship**, The Scripps Research Institute Aug 2025 – Aug 2028
- **National Innovation and Entrepreneurship Training Award (1%)**, Ministry of Education 2021
- **Outstanding Teaching Practice (1%)**, Beijing Normal University 2021
- **Jianghaiziqiang Fellowship (1%)**, Beijing Normal University 2020
- **First-class Scholarship for Competition Excellence (1%)**, Beijing Normal University 2019
- **First-class Scholarship for Academic Excellence (10%)**, Beijing Normal University 2017 - 2021

SKILL SET

Machine Learning & NLP	TensorFlow, PyTorch, LangGraph, LangChain, sklearn, NLTK
Programming Language	Python, Java, C, JavaScript, HTML, Stata
Framework & Database	React, Node.js, RESTful API, MySQL, MongoDB, Neo4j
Cloud	AWS, EC2, API Gateway
Code Management & Others	Git/Github, Docker, Tableau, Unit Testing, L ^A T _E X