# Chang Ma

City, Hong Kong
cma@cs.hku.hk

[my website]
[Google Scholar]

Third year Ph.D student at The University of Hong Kong, focusing on the intersection of Agent decision making and AI4Science.
**Areas of expertise:** Natural Language Processing, Computational Biology, Large Language Model Agents, Trustworthy ML

## EDUCATION

**PhD, Computer Science,** The University of Hong Kong, co-advised by Lingpeng Kong and Tao Yu — **September 2022–**
**Bachelor of Science, Machine Intelligence,** Peking University — **September 2018 — July 2022**

## EXPERIENCE

**Research Intern** — **June 2025 —**
gREDs Regev Lab — Genetech, Bay Area

**Associate Member** — **Jan 2025 — May 2025**
Language Group — Sea AI Lab, Singapore

**Research Intern** — **April 2023 — December 2023**
Foundation Model Group — Microsoft Research AI for Science, Beijing China

**Research Intern** — **January 2021 — October 2021**
DeepGraph Lab, hosted by Jian Tang — MILA - Quebec AI Institute, Montreal Canada

**Research Intern** — **November 2021 — July 2022**
Bing Advertisement Group — Microsoft, Beijing China

## PUBLICATIONS

**Large Language Model Reasoning and Agents**

- **Ma** et al, *Non-myopic Generation of Language Models for Reasoning and Planning.* **ICLR 2025**
- **Ma, Zhang, Zhu & Yang** et al, *AgentBoard: An Analytical Evaluation Board of Multi-turn LLM Agents.* **NeurIPS 2024 Oral**
- Zhao et al, *Empowering Large Language Model Agents through Action Learning.* **COLM 2024**
- Feng et al, *A Survey on Large Language Model-Based Social Agents in Game-Theoretic Scenarios.* **TMLR**
- Xu et al, *Genius: A Generalizable and Purely Unsupervised Self-Training Framework For Advanced Reasoning.* **Preprint**
- Xu et al, *$\phi$-Decoding: Adaptive Foresight Sampling for Balanced Inference-Time Exploration and Exploitation.* **Preprint**
- Zhang et al, *Breaking the Data Barrier – Building GUI Agents Through Task Generalization.* **Preprint**
- Sun et al, *A Survey of Neural Code Intelligence: Paradigms, Advances and Beyond.* **Preprint**

**AI4Science Topics**

- **Ma** et al, *Retrieved Sequence Augmentation for Protein Representation Learning.* **EMNLP 2024**
- Zhao et al, *GIMLET: A Unified Graph-Text Model for Instruction-Based Molecule Zero-Shot Learning.* **NeurIPS 2023**
- Xu et al, *PEER: A Comprehensive and Multi-Task Benchmark for Protein Sequence Understanding.* **NeurIPS 2022**
- Zhu et al, *TorchDrug: A Powerful and Flexible Machine Learning Platform for Drug Discovery.* **Preprint**
- Zhao et al, *Benchmarking and Enhancing Large Language Models for Biological Pathway Reasoning* **Preprint**

**Trustworthy and Theoretical ML**

- **Wang & Ma** et al, *A Challenging Benchmark for Low-Resource Learning.* **ACL 2024 Findings**
- **Zhao, Ma & Dong** et al, *Certified Robustness Against Natural Language Attacks by Causal Intervention.* **ICML 2022**
- **Ma & Zhang** et al, *Switch-GPT: An Effective Method for Constrained Text Generation under Few-Shot Settings.* **AAAI 2022 Abstract**
- Yuan et al, *KS-Lottery: Finding Certified Lottery Tickets for Multilingual Language Models.* **NAACL 2025 Oral**
- Zhao et al, *Domain Adaptation via Maximizing Surrogate Mutual Information.* **Long Presentation at IJCAI 2022**

## SERVICE

2022-      Review for ICML, NeurIPS, ICLR, AAAI, AISTATS, ARR, TMLR

## AWARDS & HONORS

2024      Oral Award ( **NeurIPS 2024, Top 0.4%** )
2024      Top Reviewers ( **NeurIPS 2024, Top 10%** )
2020      Peking University Learning Excellence Award
2019      First Prize ( **National Mathematical Modeling Competition for College Students** )