Haowei Lin

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Education

Sept 2023 – Jul 2028
School of Intelligence Science and Technology, Peking University
Ph.D. Student in Machine Learning
Advisor: Prof. Jianzhu Ma and Prof. Yitao Liang

Aug 2019 – Jul 2023
Tong Class, Yuanpei College, Peking University
Candidate for B.E. in Artificial Intelligence (Honor Track)
GPA: 3.85/4.00 (rank 1-st in Major)   top 5% in Yuanpei College (among all Majors, 12/305)
Bachelor Thesis: *IneqGPT: A Neural-Symbolic Approach towards Automated Inequality Proving*
Research advisor: Prof. Bing Liu (Distinguished Professor of UIC)

Research Interests

Computational Biology: Protein / Molecule Generation, Drug Design.

Machine Learning: OOD Detection, Continual Learning, Neural-Symbolic Methods.

NLP: Large Language Model, Pre-training, Scaling Law.

Publication

(* denotes equal contribution)

[1] **Class Incremental Learning via Likelihood Ratio Based Task Prediction**
Haowei Lin, Yijia Shao, Ningxin Pan, Weinan Qian, Yiduo Guo, Bing Liu.
The Eleventh International Conference on Learning Representations (**ICLR 2023**).

[2] **FLatS: Principled Out-of-Distribution Detection with Feature-Based Likelihood Ratio Score**
Haowei Lin, Yuntian Gu.
The 2023 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2023**).

[3] **Continual Learning of Language Models**
Zixuan Ke*, Yijia Shao*, **Haowei Lin***, Tatsuya Konishi, Gyuhak Kim, Bing Liu.
The Eleventh International Conference on Learning Representations (**ICLR 2023**).

[4] **Continual Training of Language Models for Few-Shot Learning**
Zixuan Ke, **Haowei Lin**, Yijia Shao, Hu Xu, Lei Shu, and Bing Liu.
The 2022 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2022**).

[5] **Adapting a Language Model While Preserving its General Knowledge**
Zixuan Ke, Yijia Shao, **Haowei Lin**, Hu Xu, Lei Shu, and Bing Liu.
The 2022 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2022**).

[6] **CMG: A Class-Mixed Generation Approach to Out-of-Distribution Detection**
Mengyu Wang*, Yijia Shao*, **Haowei Lin**, Wenpeng Hu, Bing Liu.
The 33th European Conference on Machine Learning (**ECML-PKDD 2022**).

Professional Experience

Search Group, ByteDance, *2022 Summer Intern*
○ Research and Development Engineer Intern mentored by Bingzhen Wei, Shini Chen, and Junyang Su.
○ Design and launch a set of intent analysis models for Douyin Search Engine.

Teaching Assistant
○ Spring 2024, Introduction to Artificial Intelligence, Peking University.
○ Spring 2023, Mathematical Foundation for Artificial Intelligence, Peking University.
○ Fall 2022 & 2023, Natural Language Processing with Deep Learning, Peking University.
○ Fall 2022, Introduction to Theoretical Computer Science, Peking University.
○ Fall 2021, A Preliminary Seminar on Artificial Intelligence, Peking University.

Conference Reviewer
○ ICML: 2022 (Outstanding Reviewer Award), 2023, 2024; NeurIPS: 2022, 2023;
ICLR: 2024; ACL(ARR): 2024; COLM: 2024; CVPR: 2024.

Skills, Interest & Others

Programming Languages: Python, C/C++, LATEX, Bash, SQL, HTML, CSS, JavaScript
Frameworks & Tools: PyTorch, Scikit-learn, Django, Git, CUDA, Spark, Bootstrap4
Languages: Mandarin (native), English (proficient, TOEFL 105), Hokkien (native)
Interests: Guitar, Painting, Piano, Badminton, Movies