Peng Li

Foundation Models for Robot Learning
Fudan University ⋄ Shanghai, 200433, P.R.China
lip21@m.fudan.edu.cn (+1) 312-241-6488 artpli.github.io artpli

Education

M.Eng. Computer Science, Fudan University 2021.09 –2024.06 (Expected)
FudanNLP Group, Adviser: Prof. Xipeng Qiu

B.Eng. Data Science, East China Normal University 2016.09 – 2020.06
AntNLP Group, Adviser: Prof. Yuanbin Wu

Preprints and Publications

* indicates equal contribution.

1. **MANGO: A Benchmark for Evaluating Mapping and Navigation Abilities of Large Language Models**
Peng Ding*, Jiading Fang*, Peng Li*, Kangrui Wang*, Xiaochen Zhou*, Mo Yu, Jing Li, Matthew Walter, Hongyuan Mei
Submitted to *ICLR 2024*. (OpenReview)

2. **Statler: State-Maintaining Language Models for Embodied Reasoning**
Takuma Yoneda*, Jiading Fang*, Peng Li*, Huanyu Zhang*, Tianchong Jiang, Shengjie Lin, Ben Picker, David Yunis, Hongyuan Mei, Matthew R. Walter.
Submitted to *ICRA 2024*. (ArXiv)

3. **MOSS Technical Report**
♢ MOSS is the first ChatGPT-like LLM in China, the first plugin-augmented LLM in China, and fully open-sourced.
Tianxiang Sun, Xiaotian Zhang, Zhengfu He, Peng Li, Qinyuan Cheng, Hang Yan, Xiangyang Liu, Yunfan Shao, Qiong Tang, Xingjian Zhao, Ke Chen, Yining Zheng, Zhejian Zhou, Ruixiao Li, Jun Zhan, Yunhua Zhou, Linyang Li, Xiaogui Yang, Lingling Wu, Zhangyue Yin, Xuanjing Huang, Xipeng Qiu
To appear 2023. (Open-sourced with 11.6k+ stars)

4. **CodeIE: Large Code Generation Models are Better Few-Shot Information Extractors**
Peng Li*, Tianxiang Sun*, Qiong Tang, Hang Yan, Yuanbin Wu, Xuanjing Huang, Xipeng Qiu.
Accepted by *ACL 2023*. (ArXiv)

Research Experience

Toyota Technological Institute at Chicago (TTIC) **May 2023 – Present**
TTIC NLP & Robotics Lab, Advisers: Prof. Hongyuan Mei and Prof. Matthew R. Walter *Chicago, U.S.*

- Utilized a second LLM to simultaneously manage the status information of objects while employing the first codewriting LLM to write the robot's policy code for decision-making tasks. The results from three robotics tasks indicate that its performance surpasses the Code-as-Policies method.
- Constructed a benchmark with interactive novels to assess the mapping and navigation abilities of LLMs. Evaluated the effectiveness of several LLMs including ChatGPT, Claude, LLaMA, RWKV, and analyzed the influencing factors.
- Proposed and currently implementing a general reinforcement learning framework to enable LLMs to continuously enhance their reasoning and planning abilities through interaction with the real environment. Building world models that learn from real-world interactions.

Shanghai AI Laboratory **May 2023 – Present**
OpenLMLab, Advisers: Dr. Hang Yan and Dr. Kai Chen *Shanghai, China*

- Implemented the functionality to call external tools like search engines, calculators, equation solvers, and drawing tools for LLM of Shanghai AI Lab (InternLM) and enhanced its performance.
- Researching on how to prepare pre-training data to train more powerful LLMs for mathematical and coding tasks.

Services

Reviewer: EMNLP (2021, 2022, 2023), ICRA (2024)
Teaching Assistant: Introduction to Artificial Intelligence (Fudan; 2022), Machine Learning (Fudan; 2022, 2023)

Skills

Programming: Python, C/C++, LaTex; Scikit-learn, PyTorch, TensorFlow
Language: Mandarin, English