TMLR

TRUSTWORTHY MACHINE LEARNING AND REASONING

TMLR Group

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Trustworthy and Efficient Learning and Reasoning Algorithms, Theories and Systems

About TMLR Group

Trustworthy Machine Learning and Reasoning (TMLR) Group, an online-offline-mixed machine learning research group, locates in different cities, including Hong Kong, Melbourne, Shanghai, Nottingham and Sydney. We share the vision for the future ML technology: building trustworthy and efficient learning and reasoning algorithms, theories and systems. The mission of TMLR Group (HK) is dedicated to pioneering research in trustworthy and efficient learning and reasoning in Hong Kong and Greater Bay Area. The values of TMLR Group (HK) are target-driven, moving fast and global metrics. For a detailed overview of our work, please visit our research page: https://bhanml.github.io/research.html.

Research Directions

Our research focuses on developing next-generation foundation models that are both intelligent and dependable. Key areas include:

- **Trustworthy and Efficient Foundation Models**: Advancing the fundamental methodology of agentic tool use, reinforcement learning, post-training, and self-evolving systems. This direction aims to enhance reasoning capabilities and system efficiency to boost the application to real-world scenarios and scientific discovery.
- **Causal-aware and Neuro-Symbolic Foundation Models**: Embedding causal representation and symbolic structure into foundation models to enable mechanistic understanding and structured reasoning. This direction aims to make their decision process more interpretable, generalizable, and aligned with human intelligence.

Grants and Resources

Our group is strongly supported by a diverse portfolio of prestigious grants and collaborations with industry leaders.

- **Government Grants**: We have secured government grants, including RGC Young Collaborative Research Grant, RGC General Research Fund, RGC Early CAREER Scheme; NSFC General Program, NSFC Young Scientists Fund; GDST Basic Research Fund; RIKEN Collaborative Research Fund, RIKEN BAIHO Award.
- **Industry Awards and Resources**: We have secured faculty research awards and resources from global tech giants, including Microsoft, Google, NVIDIA, ByteDance, Baidu, Alibaba, Tencent, ZhipuAI, and TCL.

Global Collaborators

We believe in the power of collaboration and maintain strong ties with leading academic institutions and industry pioneers worldwide.

- **Academic Partners**: RIKEN, MPI, CMU, Stanford, UT Austin, Cornell, UIUC, UW–Madison, UCSC, MBZUAI, UTokyo, USYD, UTS, UMel, CUHK, HKUST, NTU, NUS, and many other top universities.
- **Industry Partners**: Microsoft Research, NVIDIA Research, ByteDance AI Lab, ByteDance Seed, Baidu Research, Alibaba DAMO Academy, Tencent AI Lab, Tencent WeChat, TCL Research, and many other top labs.

Join Us! We Are Hiring

We are actively seeking talented and self-motivated individuals to join our team. We have openings for PhD Students, Postdoctoral Researchers, Research Assistants, and Research Interns. We offer competitive stipends, access to state-of-the-art GPU resources, and dedicated mentorship to foster your academic and professional growth.

To apply, please email your CV and a brief research plan to Prof. Bo Han.

Prof. Bo Han, TMLR Group (HK)

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