Industry Workshop

9 August, Host: *Qingcai Chen*
15:00-17:00, Huashan Hall

Time	Topic	Speaker
15:00-15:30	**Yong Jiang,** Senior Algorithm Expert at Alibaba Tongyi Lab. **Title:** Towards an Autonomous Deep Research Agent	
15:30-16:00	**Xiaoguang Hu**, Professor-level Senior Engineer **Title:** PaddlePaddle 3.0 Accelerates Technological Innovation in Large-scale Foundation Models	
16:00-16:30	**Ziyan Chen**, Vice President of GTCOM 2030 Artificial Intelligence Research Institute. **Title:** Any-Any all-purpose large model technology and application with LLM as the core	Qingcai Chen
16:30-17:00	**Yu Lei**, co-founder and CTO of Shenzhen Deli Technology Co., Ltd. **Title:** Construction methods and application scenarios of the legal big model	

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Towards an Autonomous Deep Research Agent

Yong Jiang

Abstract: This report focuses on the core question of "how to train a deep research agent," exploring paths and methods for building intelligent systems capable of autonomous research. Autonomous research agents must emulate the core capabilities of human researchers, including task decomposition, information retrieval, logical reasoning, result synthesis, and iterative optimization. Key to achieving this goal lies in addressing core technical challenges such as "efficiently acquiring external knowledge," "balancing internal reasoning and external exploration," "efficient agent data production," and "agentic RL." The report covers the team's recent work in deep research, including but not limited to WebWalker, WebDancer, WebSailor, WebShaper, and ZeroSearch.

Bio: Yong Jiang is a senior algorithm expert at Alibaba Tongyi Lab. He holds doctoral degrees from the University of the Chinese Academy of Sciences and ShanghaiTech University, and was a visiting scholar at the University of California, Berkeley. He is engaged in the research and development of technologies related to large models. He has published over 50 papers at top international conferences such as ACL, EMNLP, NAACL, and ICLR, and has won championships in 20 sub-tracks of multiple international competitions. He has also won the Best System Paper Award at SemEval 2022 and SemEval 2023, the Outstanding Paper Award at ACL 2023, and the Outstanding Paper Award at NLPCC 2024. He has served as the area chair for both the ACL Rolling Review and IJCAI. His current research focuses on retrieval-enhanced RAGs and agent-related technologies.

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PaddlePaddle 3.0 Accelerates Technological Innovation in Large-scale Foundation Models

Xiaoguang Hu

Abstract: Deep learning frameworks, serving as the core foundational software bridging underlying computing chips and model applications, are accelerating the pace of technological innovations like large-scale models. In April 2025, the PaddlePaddle officially released its 3.0 version. In June 2025, the ERNIE 4.5 series models developed based on PaddlePaddle were officially open-sourced. This presentation will explore how to use PaddlePaddle 3.0 to accelerate large-scale model technological innovation and industrial applications.

Bio: Xiaoguang Hu, Professor-level Senior Engineer, currently serves as Distinguished Architect at Baidu's Deep Learning Technology Platform Department. His primary research areas include natural language processing, deep learning frameworks, and AI for Science. He designed the new API architecture for PaddlePaddle 2.0, establishing its signature features of static graph and dynamic graph unification and training-deployment integration. He led breakthroughs in PaddlePaddle 3.0's key technologies, including automatic parallelism, neural network compilers, and high-order automatic differentiation.

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Any-Any all-purpose large model technology and application with LLM as the core

Ziyan Chen

Abstract: Multimodal large-scale model technology is rapidly developing and attracting significant attention from both academia and industry. However, most multimodal large-scale models focus on single-directional capabilities, such as visual understanding, visual generation, or audio question-answering. Any-Any large-scale models, on the other hand, can understand and generate multimodal inputs spanning text, images, audio, and video. Because they better align with human perception, thinking, and behavior, they have become a hot topic of research. A mainstream paradigm within any-any large-scale models continues to rely on the understanding and reasoning capabilities of large language models (LLMs), integrating multimodal encoders and decoders to achieve semantic space alignment, task understanding, and content generation for complex multimodal data. This report will focus on any-any large-scale model technology, centered around LLMs, review its current development status, and share innovative technological achievements achieved by GTCOM and case studies of its applications in enterprise practice.

Bio: Dr. Ziyan Chen currently serves as Vice President of the GTCOM 2030 Artificial Intelligence Research Institute and serves as the Rotating Chair of the Knowledge Graph Industry Promotion Group. He has been engaged in the technical research and enterprise applications of large language models and multimodal models, and has led the development of the Gewu large-scale model system. Dr. Chen has presided over or participated in numerous national and provincial projects, including the Ministry of Science and Technology 2030, central government-led local projects, and the National Natural Science Foundation. He has published over 10 high-quality papers in conferences and journals such as IJCAI and JASIST, and has over 30 patents.

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Construction methods and application scenarios of the legal big model

Yu Lei

Abstract: In the face of the rapid development of general-purpose big models both domestically and internationally, this paper explores four mainstream approaches to building industry big models in the legal professional context: prompt engineering, retrieval-enhanced generation, fine-tuning, and pre-training. Among them, prompt engineering and retrieval-enhanced generation are currently the primary application methods, effectively alleviating the problem of model hallucinations, especially when combined with external databases. This paper introduces the application scenarios and specific examples of legal big models in intelligent legal data, legal texts, legal Q&A, smart contracts, and other areas. Regarding the technical security specifications of big models, this paper identifies security risks in four stages: data preparation, pre-training models, model instruction compliance and value alignment, and big model reasoning. It emphasizes that big model applications must attach great importance to security specifications such as data security and privacy protection, model reliability, and content compliance.

Bio: Yu Lei, co-founder and CTO of Shenzhen Deli Technology Co., Ltd., is the Deputy Director of the Artificial Intelligence Laboratory at the Institute of Advanced Technology of the Chinese Academy of Sciences (CAS), and the Secretary-General of the Legal Committee of the Shenzhen Artificial Intelligence Society. He graduated from Sichuan University in 2012 and has worked at internet companies Baidu and Tencent. He has over 10 years of experience in R&D management at large internet companies and possesses extensive technical expertise in big data processing and natural language processing. He leads the team in developing the Deli Legal Big Model.