Large Language Models: From Theory to Practice

The landscape of large language models (LLMs) is rapidly evolving, with significant contributions from both open-source and proprietary developments. These models are profoundly impacting various sectors, including business, healthcare, education, and entertainment by automating complex tasks, enhancing customer experiences, and providing new insights from data analysis.

This workshop aims to bridge the gap between the theoretical underpinnings and practical applications of large language models (LLMs). It will cover foundational concepts, recent advancements, ethical considerations, and hands-on applications of LLMs across various industries. The scope includes:

Workshop Topics:

Theoretical Foundations:

- Architectures of large language models, e.g., Transformers, Mamba, RWKV, etc.
- Novel methods and algorithms in LLM's training, fine-tuning, and context personalization
- Optimal training recipes for LLMs
- New developments in aligning large language models with the preferences and objectives of individuals, sub-populations, or the society at large.

Technological Advancements:

- Emerging hardware for LLM's training, inference, and optimizations
- Novel frameworks for distributed training of LLMs
- Novel frameworks for optimal inferences of LLMs
- Methods and techniques for LLM accelerations

Ethical and Societal Implications:

- Examination of bias, fairness, and ethical considerations in the development and deployment of LLMs.
- Evaluation and assessment of LLMs.
- Strategies for responsible AI use, including transparency and governance frameworks.
- Potential impacts of LLMs on individuals, groups, and society.

Practical Applications:

- Case studies on the use of LLMs in industries such as healthcare, finance, telecommunications, customer services, scientific discovery, etc.
- Integrations of LLMs into existing business processes and software ecosystems.
- Demonstration of tools and platforms for developing applications with LLMs.

Workshop Organizers:

Jingwei Zuo, an AI researcher at the Technology Innovation Institute, working on cutting-edge projects in Large Language Models. He got his PhD from Université Paris-Saclay, where he worked on representation learning over complex data, and was granted the Plateau de Saclay Doctoral Prize for the best scientific production in ICST in 2022. His research interests are broadly in machine learning and complex data mining. He regularly serves as a PC member in international conferences in the fields of artificial intelligence, machine learning, and data mining, and as a reviewer for international journals in these domains.

Program committee members:

Reda Alami, Technology Innovation Institute, UAE
Shi Hu, Technology Innovation Institute, UAE
Zuokun Ouyang, University of Orléans, France
Hongpeng Tian, Zhengzhou University, China
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Important Dates:

- Workshop Paper Submission Deadline: September 15, 2024
- Notification of Acceptance: October 15, 2024

Papers are to be submitted as PDF via the site: https://edas.info/N32633.
Please select the corresponding workshop when submitting your paper.