Invited Talk: Natural Language Processing and Reasoning (Study Group on Reasoning, Knowledge, and Causality)

1 message

Xiting Wang <xitwan@microsoft.com>   16 December 2022 at 18:21
To: "qbao775@aucklanduni.ac.nz" <qbao775@aucklanduni.ac.nz>

Dear all,

@Bei Chen invited Dr. Qiming Bao to give a talk on Natural Language Processing and Reasoning on Dec. 16. Feel free to forward the meeting to related FTEs and interns. 😊

Abstract: Natural language processing is an important direction in computer science and artificial intelligence. It studies various theories and methods enabling effective communication using natural language between humans and computers. Natural language is a science that combines linguistics, computer science, and mathematics. Natural language processing involves natural language, that is, the language that people use every day, so it is closely related to the study of linguistics, but it is very different. Natural language processing is not the general study of natural language but the study of computer systems, especially software systems and algorithms, that can effectively realize natural language communication. Natural language processing has many application scenarios, including machine translation, automatic summarization, text classification, question answering, text semantic comparison, etc.

Reasoning requires understanding existing information to obtain unknown information. There are generally three different reasoning, deductive reasoning, inductive
reasoning and abductive reasoning. Deductive reasoning uses rules and premises to derive conclusions. Inductive reasoning determines rules based on premises and conclusions. Abductive reasoning is determined by the conclusion and rules to determine the premises.
In the case of natural language reasoning, all premises, rules and conclusions are described by natural language. Current natural language reasoning usually considers designing a computer system or building a model that can learn and handle tasks that requires
reasoning. On the other hand, it is exploring how to automatically generate natural language reasoning datasets to enrich the corpus for model learning.

In this talk, I will present the history and background knowledge of natural language processing and reasoning and give some examples or application scenarios. I
may also introduce some of my current research and introduction of our research groups.

Biography:

Qiming Bao is a Ph.D. candidate at the Strong AI Lab & LIU AI Lab, School of Computer Science, The University of Auckland, New Zealand.

His supervisors are Professor Michael Witbrock and Dr Jiamou Liu. His research interests include natural language processing and reasoning. He had more than three years of research and development experience. He had published several top conferences in AI/NLP/Reasoning fields including AAAI/EAAI, ACL, IJCLR and other conferences and journals.

Research Groups:

Strong AI Lab at The University of Auckland:
https://www.ai.ac.nz/sail/

LIU AI Lab at The University of Auckland:
https://www.liuailab.org/

This is to book your time for our study group. I updated the schedule for the next round.

Here is a draft plan for our study group. Feel free to contact me if any questions or suggestions.

9/12: Bei – Invited talk on event graph knowledge for reasoning

9/26: Shuai – Reasoning Related Paper Reading

10/10: Zhiwei

10/24: Wanjun/Nan

11/7: Zeqi

11/21: Xiting

12/5: Justin

12/19: Bei

1/9: Shuai

1/16: Zhiwei

The link for our teams site: Workshop Discussion - Reasoning, Knowledge, and Causality - Home (sharepoint.com).

The email alias for our workshop is "Workshop Discussion – Reasoning, Knowledge, and Causality".

Regards,

Xiting

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