Talk - Qiming Bao - TUESDAY 11th OCTOBER 10AM

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周四 2022/10/6 22:04
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Good morning all,

Hi All,

We are very pleased to welcome our speaker Qiming Bao for our talk on Tuesday 11th October at 10am. Below is the Abstract for the talk.

Please make every effort to attend and we look forward to seeing you all there!

Please find GoTo Meeting details after the Abstract.

Title: Multi-Step Deductive Reasoning Over Natural Language: An Empirical Study on Out-of-Distribution Generalization

Abstract:
Combining deep learning with symbolic logic reasoning aims to capitalize on the success of both fields and is drawing increasing attention. Inspired by DeepLogic, an end-to-end model trained to perform inference on logic programs, we introduce IMA-GloVe-GA, an iterative neural inference network for multi-step reasoning expressed in natural language. In our model, reasoning is performed using an iterative memory neural network based on RNN with a gate attention mechanism. We evaluate IMA-GloVe-GA on three datasets: PARARULES, CONCEPTRULES V1 and CONCEPTRULES V2. Experimental results show DeepLogic with gate attention can achieve higher test accuracy than DeepLogic and other RNN baseline models. Our model achieves better out-of-distribution generalisation than RoBERTa-Large when the rules have been shuffled. Furthermore, to address the issue of unbalanced distribution of reasoning depths in the current multi-step reasoning datasets, we develop PARARULE-Plus, a large dataset with more examples that require deeper reasoning steps. Experimental results show that the addition of PARARULEPlus can increase the model's performance on examples requiring deeper reasoning depths.
Paper link: https://www.cs.ox.ac.uk/isg/conferences/tmp-proceedings/NeSy2022/paper15.pdf

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Tue, Oct 11, 2022 10:00 AM - 11:00 AM (BST)

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