

Preface

This was the first edition of the Scholarly QALD (Question Answering over Linked Data) Challenge, co-located with the 22nd International Semantic Web Conference (ISWC 2023).

Knowledge Graph Question Answering (KGQA) is a popular task among NLP enthusiasts, however, the KG used is generally open-domain and contains general knowledge. For example, Wikidata, DBpedia and Freebase are the most popular general purpose KGs. In this challenge, we focus on a special class of domain specific KGs, i.e., the scholarly domain. These KGs contain information about research papers, authors, research institutions etc., in a graph format. In particular, we use the DBLP and the SciQA KGs in this challenge.

There were three tasks in this challenge:

Part 1: DBLP-QUAD

Task 1:

For this task, participants had to perform entity linking over the DBLP-QUAD dataset (<https://doi.org/10.5281/zenodo.7643971>), which consists of 10,000 question-SPARQL pairs, and is answerable over the DBLP Knowledge Graph (<https://blog.dblp.org/2022/03/02/dblp-in-rdf/>).

Task 2:

For this task, participants had to perform question answering over the DBLP_QuAD dataset.

Part 2: SciQA

Task 3:

For this task, participants had to perform question answering over ORKG, leveraging the SciQA benchmark (<https://zenodo.org/record/7744048>). The benchmark leverages the Open Research Knowledge Graph (ORKG) which includes over 100,000 resources describing complex research contributions.

We received 7 system submissions in total, for the 3 tasks. Each of the 7 systems were represented by a submitted paper, which were peer reviewed by 2 reviewers each. All 7

papers were accepted for publication, and are a part of this proceedings. System submissions were made on the codalab platform, and the evaluation was performed in an automated fashion. Based on the results of the evaluation, the following papers were selected as winners:

Task 1: DBLP_QuAD Entity Linking

“When context matters: Entity Linking in the Scholarly Domain” - Nadine Steinmetz

Task 2: DBLP_QuAD Question Answering

“NLQxform: A Language Model-based Question to SPARQL Transformer” - Ruijie Wang, Zhiruo Zhang, Luca Rossetto, Florian Ruosch, Abraham Bernstein

Task 3: SciQA Question Answering

“A Structure and Content Prompt-based Method for Knowledge Graph Question Answering over Scholarly Data” - Longquan Jiang, Xi Yan, Ricardo Usbeck

Organization

In this section, we list the people who organized and contributed to the success of this event.

Challenge Chairs

- Debayan Banerjee
- Sushil Awale
- Ricardo Usbeck
- Nandana Mihindukulasooriya
- Mohamad Yaser Jaradeh
- Sören Auer

Challenge Program Committee Members

The challenge program committee helped review the submitted papers. The organizers would like to thank them for their valuable time.

- Mohnish Dubey
- Debanjan Chaudhuri
- Xi Yan
- Cedric Möller
- Junbo Huang

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