View Reviews

Paper ID
763

Paper Title
Maverick: Discovering Exceptional Facts from Knowledge Graphs

Track Name
Demo

REVIEWER #1

REVIEW QUESTIONS

1. Overall Rating
Weak Reject

2. Audience Experience (What I am going to see)
Somewhat engaging (interesting demonstration scenario, relatively simpler user experience)

3. What is the problem the system solves
Difficult and interesting

4. Technical contributions
Interesting ideas but not as fundamental

5. Summary of the paper and justification for your rating
The paper presents Maverick, a system for discovering exceptional facts about an entity of interest from an underlying knowledge graph. The authors use an intuitive and meaningful way to define the exceptionality of an entity of interest. Specifically, they use query context (defined by matching graph query patterns) and an attribute sub-space, which means that the given entity of interest is exceptional under the given context-attribute sub-space pair. The proposal is based on the authors' prior work which will appear in SIGMOD 2018 as a full research paper. In addition to creating an end-to-end system and a user-interface, the authors also add a cache server in order to avoid recomputation across entities with similar results.

The content is technically sound, the proposed demonstration scenarios are interesting and will be engaging for the audience. Though the UI is not full of different features/capabilities, the ones present would give an exciting experience to the audience. Additionally, the authors have also shared a link to the working system, which allows the reviewers to interface with the system.

Edit after the discussion phase:
Following a detailed discussion with the reviewers, I lowered my rating for the paper. As rightly identified during the discussion phase, the system is far from ready for demonstration at the conference. In its current state, it just works with queries for which the results have been pre-computed. I tried running a new query ("Lenardo DiCaprio") on the system accessible at: http://idir-server4.uta.edu/maverick/film, and when I clicked on the "Exceptional Facts" link, I got the message that the task is pending. When I tried running the same query after 5 days, I still got the same message. The authors should be vocal about such assumptions and ongoing work in their system while submitting the paper. When such a limitation is identified by the reviewers this has a much more adverse effect when compared to when the authors acknowledge such limitations on their own. I thus, am not in favour of this paper being accepted to the demonstrations track.

Some minor points:
* The last paragraph of Section 1 is an exact reproduction of the abstract. Thus, this content is not adding anything new. I would request the authors to either remove or if not, rewrite this paragraph. I would recommend the authors to remove this paragraph, and include details about the following:
1. The authors have not provided any detailed information about the exceptionality functions. It would be good if the authors include explanataions or definitions of the same.
2. The authors should explain Fig. 2b in Section 5 in a more elaborate manner.

* Please correct the following typos:
1. Page 3, 1st Column: At three different places in the first paragraph, "EE" -> "CE".
2. Page 3, 2nd Column: "used to generates P's". generates -> generate
3. Page 3, 2nd Column: "The rational behind". rational -> rationale
4. Page 3, 2nd Column: "To further limited the". limited -> limit

REVIEWER #2

REVIEW QUESTIONS

1. Overall Rating

Weak Accept

2. Audience Experience (What I am going to see)
Somewhat engaging (interesting demonstration scenario, relatively simpler user experience)

3. What is the problem the system solves
Challenging but somewhat narrowly scoped

4. Technical contributions
Interesting ideas but not as fundamental

5. Summary of the paper and justification for your rating
This work presents a system for discovering exceptional facts from knowledge graphs named Maverick, in which a user portal and a cache sever are hightlighted.
This demo proposes some interesting ideas, and the techinal details come from a sigmod 2018 by the authors.

This demo is interesting, and has a few merits.

1. The major problem lies in that the demo proposal is not self-explaining, which makes it hard to follow.

For example, in section 2, three exceptionality functions (Isolation, Outlierness and One-of-the-few) are mentioned without definition/illustration. Dilema arises as the said research paper is not available for reference for the time being; it is the responsiblility of the authors to avoid such dilema.

2. With regard to the presentation, there are a number of issues/concerns.
1) The last paragraph in secton 1 is totally a waste of space; content of each sentence could be found on page 1. It takes up to half column (1/4 page) while the whole proposal is just 4-page.
2) Typing errors exist, e.g., in the 3rd paragraph of section 3, EE -> CE.

REVIEWER #3

REVIEW QUESTIONS

1. Overall Rating
Reject

2. Audience Experience (What I am going to see)
Somewhat engaging (interesting demonstration scenario, relatively simpler user experience)

3. What is the problem the system solves
Difficult and interesting

4. Technical contributions
Novel and elegant

5. Summary of the paper and justification for your rating
In this demonstration, the authors demonstrate their beam search algorithm for discovering exceptional facts over Knowledge Graphs. The use cases are based on two datasets, a Freebase restriction to movie and actors and a dataset constructed from the FIFA Worldcup website.

On the research point of view, the addressed is of practical interest and the solutions seems elegant and efficient. However, these points relate to the full paper accepted in the research track.

From the demonstration point of view, I tried to evaluate the online system multiple times, without much success. I was able to obtain a subset of Figure 2 when looking for Denzel Washington, with the natural generated sentences missing. Without these sentences, the outputted context and subspaces are very cryptic and of no use for the end users.

Way more problematic, I was not able to obtain any result for any actor/movie and I got absolutely no result on the FIFA dataset. I obtained the following result when searching for any actor/movie:
Task worker: Assignment pending
Task status: PENDING
Last update: 2018-02-02 08:26:58
Pending tasks: 76
Active workers: 19

Even when submitting more tasks, pending tasks always remained at 76 ...

In the current state of the demonstration, which seemed very promising and addressed an interesting problem, I unfortunately have no other choice

than to recommend rejection.