Posudek diplomové práce

Matematicko-fyzikální fakulta Univerzity Karlovy

Autor práce	Mahran Emeiri
Název práce	A tool for configuring knowledge graph visual browser
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Autor posudku	Doc. Mgr. Martin Nečaský, Ph.D. **Role** Vedoucí
Pracoviště	KSI

Text posudku:

The thesis presents the work of the student on designing and implementing a web user interface on top of an existing solution for visualizing knowledge graphs developed at our department. The provided visualizations are highly configurable, yet configurations need to be specified manually as RDF resource. This is not very user friendly for authors of the configurations. The aim of the thesis was to help the authors by providing them with a web user interface which would enable them to create visualization configurations in a user-friendly way including easy reuse of existing configurations.

The thesis presents student's own contribution to the problem in a form of a working web user interface. It enables the user to create own configuration via a form which is structured in the same way as the configuration itself. It automates several activities which needed to be done manually:

- Reusing existing configurations in a configuration
- Creating new parts of a configuration
- Checking consistency, i.e. that a part of a configuration does not refer to another non-existing parts.
- Creating visual styles by presenting a visual sample to the user.

The thesis has all necessary parts. It introduces readers to the problem and puts it into the context of existing solutions. It then analyses requirements on the tool for creating configurations, designs its architecture, describes implementation and some basic unit and system testing. It concludes with possible future work. A working demo is available as well as the source codes in a Github repository.

My original goals, as a supervisor were a little more ambitious. For example, I tried to explain to the student that requiring a user to fill in IRIs of configuration components manually is not very user-friendly and that the UI needs to be abstracted from this technical detail. For the explanation, a configuration and its parts are represented as RDF resources which need to have their unique IRIs. But the solution could generate the IRIs on the base of some pattern. This requirement was not reflected in the final solution by the author.

Despite this drawback, I consider the goals of the thesis as fulfilled. The presented thesis shows that the student is able to work as a full-fledged software engineer. He was able to built a software application from the scratch based on the requirements of the supervisor.

Therefore, I recommend the thesis for the defence.

Práci doporučuji k obhajobě.

Práci nenavrhuji na zvláštní ocenění.

Pokud práci navrhujete na zvláštní ocenění (cena děkana apod.), prosím uveďte zde stručné zdůvodnění (vzniklé publikace, významnost tématu, inovativnost práce apod.).

Datum 18. června 2021 **Podpis**