RDFtex: Import and Export Examples

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1 Examples for the Import of Contributions

The content within the following sections is generated via RDFtex's import functionality.

1.1 Dataset Import

Dataset 1. SciERC [2]
Available at: `https://paperswithcode.com/dataset/scierc`
Domain: Artificial Intelligence
Description: "Our dataset (called SciERC) includes annotations for scientific entities, their relations, and coreference clusters for 500 scientific abstracts." [2]
Dataset 1 shows an imported dataset.

1.2 Definition Import

Definition 1. *A knowledge graph acquires and integrates information into an ontology and applies a reasoner to derive new knowledge.* [1]

Definition 1 shows an imported definition.

1.3 Experimental Result Import

Experimental Result 1. Description: "An assessment of the tool's performance was also conducted. For this, the time it takes for the backend to perform the SHACL and the OWL approach was measured on a standard desktop PC. As repositories, the top twenty trending GitHub repositories15 were used, which are well maintained and rather large." [3]
Sample size: 20
Result: "Figure 4 shows that the SHACL approach is faster in both scenarios even though Pellet stops the validation as soon as a violation is encountered. Hence, the SHACL approach provides a complete picture of the violations and is also faster. Furthermore, the figure shows that the project type does not significantly affect the runtime. "
Experimental Result 1 shows an imported experimental result.

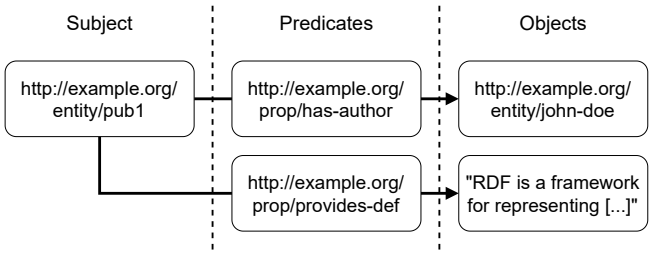

Fig. 1. A simple exemplary knowledge graph consisting of two RDF triples. The upper triple provides contextual information, the lower triple contentual information of the publication *pub1*. All non-literal triple members are identified using IRIs. (Figure and caption adopted from [4].)

1.4 Figure Import

Figure 1 shows an imported figure.

1.5 Software Import

Software 1. Protégé-2000 [5]
Available at: `https://protege.stanford.edu`
Description: "Protégé-2000 is an open-source tool that assists users in the construction of large electronic knowledge bases. It has an intuitive user interface that enables developers to create and edit domain ontologies." [5] Software 1 shows an imported software.

2 Examples for the Export of Contributions

The following sections contain content (about an imaginary topic) based on which an RDF document is constructed by RDFtex's preprocessor. The document is serialized and stored at `./exports.ttl`.

2.1 Definition Export

Here, we introduce the term *noipper*. A noipper is the main technical component of a noipping machine. Its purpose is to nullify the interference that is caused by exceedingly high neipping values in the system.

2.2 Dataset Export

Of course, there is a multitude of available noippers from different brands. We compiled an exhaustive dataset that lists all available noippers and their features to allow for a fair comparison. The dataset is called noipperbase and is available at https://example.org/datasets/noipperbase.

2.3 Experimental Result Export

To ensure safe operation, the noipper has to nullify the interference as fast as possible. We tested a readily available noipper in a typical neipping system and monitored the time it takes to nullify the interference when exceedingly high neipping values are encountered. On average, the process took 0.123 seconds based on 100000000 runs.

2.4 Figure Export

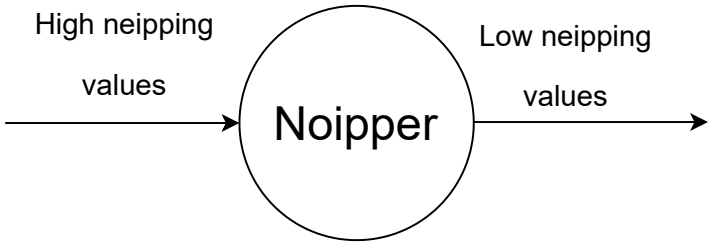

Fig. 2. A diagram showing the function of a noipper.

To illustrate the definition from above, Figure 2 shows the function of a noipper.

2.5 Software Export

We also provide neippingviz, a tool for visualizing the neipping values of a system at `https://example.org/software/neippingviz-repo`. Upon startup, the neippingviz tool continuously monitors and displays fluctuations of neipping values in the system using appropriate diagrams. Wheneveer critical values are observed, warning messages are displayed.

References

1. Lisa Ehrlinger and Wolfram Wöß. Towards a definition of knowledge graphs. In *Joint Proceedings of the Posters and Demos Track of the 12th International Conference on Semantic Systems - SEMANTiCS2016 and the 1st International Workshop on Semantic Change & Evolving Semantics (SuCCESS'16) co-located with the 12th International Conference on Semantic Systems (SEMANTiCS 2016), Leipzig, Germany, September 12-15, 2016*, volume 1695 of *CEUR Workshop Proceedings*. CEUR-WS.org, 2016.

2. Yi Luan, Luheng He, Mari Ostendorf, and Hannaneh Hajishirzi. Multi-task identification of entities, relations, and coreference for scientific knowledge graph construction. In *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing, Brussels, Belgium, October 31 - November 4, 2018*, pages 3219–3232. Association for Computational Linguistics, 2018.
3. Leon Martin and Andreas Henrich. Specification and validation of quality criteria for git repositories using rdf and shacl. 2022.
4. Leon Martin, Robin Jegan, and Andreas Henrich. On the form of research publications for use in scientific knowledge graphs. In *Wissensorganisation 2021: 16. Tagung der Deutschen Sektion der Internationalen Gesellschaft für Wissensorganisation (ISKO) (WissOrg'21)*, (accepted for publication) 2021.
5. Natalya Fridman Noy, Monica Crubézy, Ray W. Fergerson, Holger Knublauch, Samson W. Tu, Jennifer Vendetti, and Mark A. Musen. Protégé-2000: An open-source ontology-development and knowledge-acquisition environment: AMIA 2003 open source expo. In *AMIA 2003, American Medical Informatics Association Annual Symposium, Washington, DC, USA, November 8-12, 2003*. AMIA, 2003.