

Policy aware search engine

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Background and motivation

Semantic Web expose thousands of datasets in a way that help data sharing and data analysis. Privacy policies are often attached to these datasets. These policies are described in RDF using specific vocabularies[?] and describe how to use data, what is permitted, obliged or prohibited.

On the one hand, data publisher are able to publish datasets with policies explicetely described in a machine readable format. On the other hand, data consumers (i.e human or machine) are not able to express their profile (i.e what they will do with the data) and thus, cant discover only dataset matching their usage.

Objectives

Given a group of dataset in RDF format, the objectif of this supervised work will be to:

- Express datasets policies with an ontology.
- Find a way to describe data consumer's profile.
- Implement a policy aware search engine that help data consumers to find dataset corresponding to their profile.
- Evaluate your approach with differents metrics (e.g completeness, execution time, etc.)

Remarks

You will have to find an elegant way to implement the search engine in order to minimize total search execution time and memory usage.

You can find exemple³ of RDF search engine dataset on the web.

³ <http://data.europa.eu/euodp/en/linked-data>

References

1. Soto-Mendoza, V., Serrano-Alvarado, P., Desmontils, E., Garcia-Macias, J.A.: Policies composition based on data usage context. In: Sixth International Workshop on Consuming Linked Data (COLD2015) at ISWC (2015)