SaL-Web

A tool to support Search as Learning processes

Search engines are the most utilized tools to access information on the Web and they are widely used to support learning activities. Usually though, they are optimized for acquiring factual knowledge and work well for certain basic kinds of search, but they do not support searching as learning tasks (Anderson and Krathwohl, 2001; Marchionini, 2006). Search engines do not attempt to promote and facilitate learning tasks such as understanding, application or synthesis, since they do not offer mechanisms to support iteration, reflection and analysis of results by the searcher. A different approach which supports a scientific investigation of search results, for example by exposing students to multiple cultural and social visions on the same topic, would help them develop flexible thinking skills and encourage creative learning (Rieh et al., 2016).

The system

Inspired by the (largely manual) work of search engine comparison by the Digital Methods Initiative (Rogers, 2013), SaL-Web is a search tool that allows the visualization of search results with a semantic added value in order to facilitate comparisons and further analysis (Taibi et al., 2016). More details about the current release of the system are provided in Fulantelli et al. (2016).

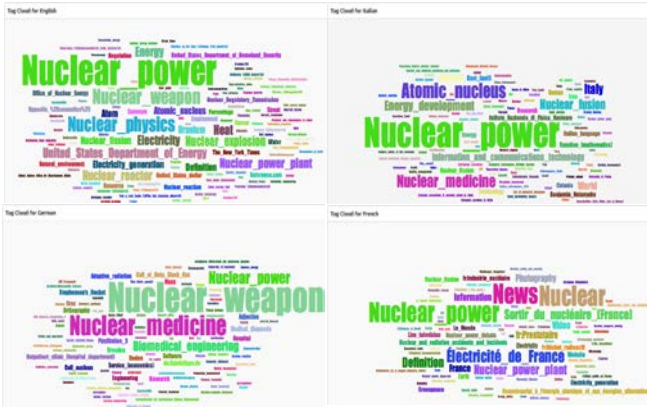

Fig 1: Concept Clouds for "Power", clockwise from upper left ” in English, Italian, French and German

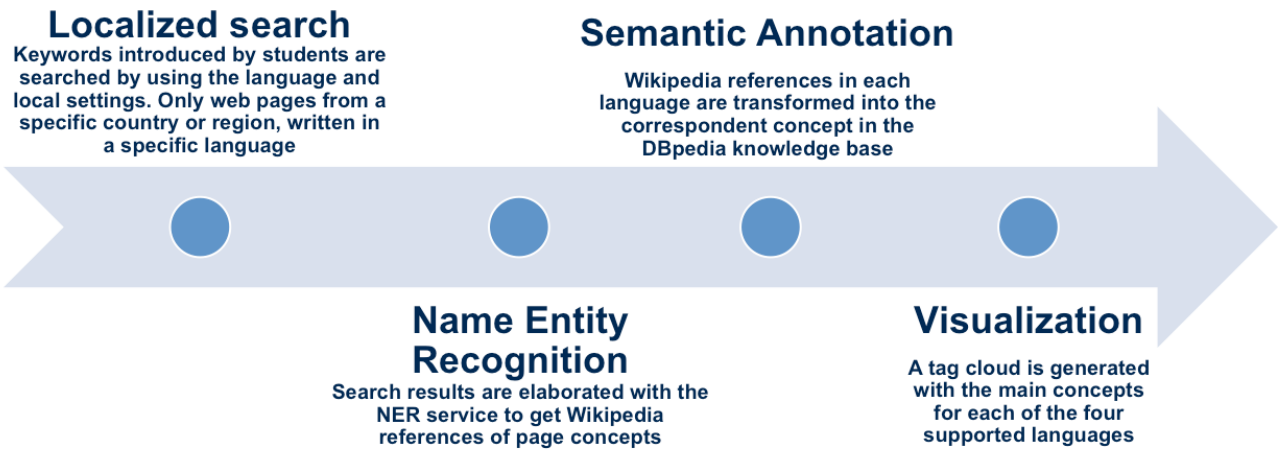

Fig 2: SaL-Web approach

M.Sc./Diploma thesis project

The aim of the project is to design and develop new functionalities in collaboration with the researchers of the SaL-Web team. As well as unrestricted access to the source code and support within L3S, the candidate will have the following external supports: interaction (in English) with the team based in Italy who developed the SaL-Web system (e.g. via skype, email); publications in English that describe the goals and characteristics of SaL-Web and to which the candidate may refer when discussing and describing the updates required and/or implemented e.g. in the Master's thesis. Our collaboration partner in Italy is Davide Taibi, from the CNR, Palermo.

Are you interested in working with semantic web and search technologies? Want to be part of an international research team working with a new exciting research topic? The research tasks would entail the following:

- Research state of the art in Search as Learning
- Indexing data by using Semantic Web annotation and Name Entity Recognition
- Investigating new visualization approaches for search results

You should be:

- An interested and motivated worker with a keen will to learn
- Experience with programming languages (Java)
- Basic knowledge of Data Mining and Machine Learning
- Familiar with Search engine technologies and tools (ideally ElasticSearch)
- Essential exploratory techniques and tools for data analysis

Contacts

Any candidate interested should contact Ivana Marenzi (marenzi@L3S.de)

References

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