

# 6.849,32 New Scientific Journal Articles Everyday: Visualize or Perish! - IVisSEM

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## 1 Summary of the project

### 1.1 Objectives

Over 2.5 million scientific articles are published annually, totaling 6,849.32 per day in 2015; in 2018 this value was increased to over 3 million articles, totaling 8.219,18 per day [1]. Thus, finding the most relevant Research Outputs (ROs), such as articles, theses, patents, among others, is increasingly difficult due, in part, to the existing interfaces returning massive lists of results.

The project aims to develop and test a platform that incorporates social data for capturing various usage metrics to define a new metric that we call Social Scholarly Experience Metrics (SSEM) and a new visualization technique that, jointly, will support the fast access to find relevant ROs.

### 1.2 Expected tangible results

IVisSEM has four main tangible results, which are described in the following points:

1. SSEM - this is an algorithm based on weights and ponderation factors of citation-based metrics and altmetrics to be collected from web platforms. SSEM also takes into account the researchers' profiles, which includes a measure of their influence in the community [2];
2. Low-Fidelity Prototype – the main goal is to test the layout, information architecture, navigation model and visualization [3];
3. Big Open Linked Data Architecture (BOLDA) – this architecture allows the implementation of the SSEM algorithm and store all the data needed and produced in a triplestore (RDF);
4. Fully developed prototype - the main goal is the integration of the previous results to demonstrate the effectiveness of the SSEM and visualization techniques used to solve the problem.

## 2 Summary of current project results

According to the defined objectives, the current project results are describe in the following points:

— BOLDA architecture, see figure 1;

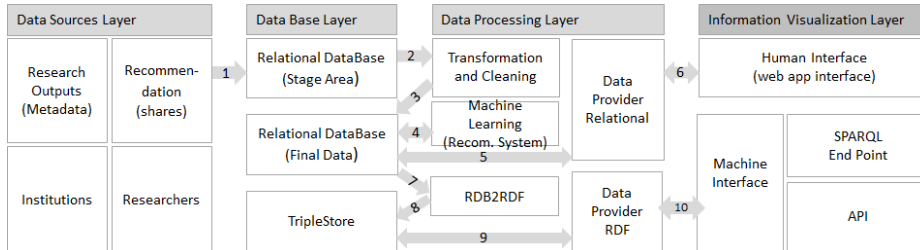


Figure 1 – IViSSEM architecture

— a low-fidelity prototype implementation to experiment some advanced information visualization algorithms, see figure 2.

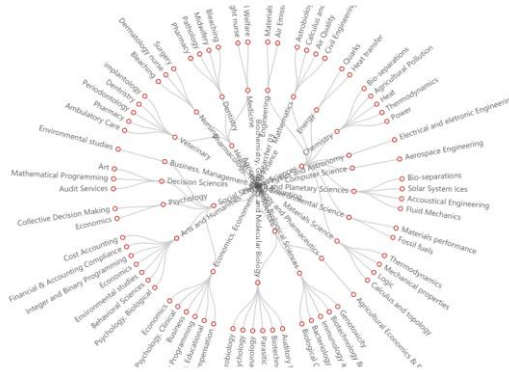


Figure 2 – Screenshot of the low-fidelity IViSSEM prototype.

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### References

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2. Ribeiro, A. C., Azevedo, B., Oliveira e Sá, J., & Baptista, A. A. (2020). How to measure influence in social networks?. 14th International Conference on Research Challenges in Information Science. Paper submitted and accepted.
3. Azevedo, B., Baptista, A. A., Oliveira e Sá, J., Branco, P., & Tortosa, R. (2019). Interfaces for Science: Conceptualizing an Interactive Graphical Interface. 7th EAI International Conference, ArtsIT, (pp. 17–27). [https://doi.org/10.1007/978-3-030-06134-0\\_3](https://doi.org/10.1007/978-3-030-06134-0_3)