Title: Translating data in the Semantic Web format

Supervisor: Pierre Maret, Antoine Zimmerman and José Gimenez-Garcia

Duration: 3 months

Project Context:
International project WDAqua. http://wdaqua.eu/

You will stay in Saint Etienne, a mid-size city of France. You will belong to the team Connected Intelligence of the Laboratory Hubert Curien. You will work in a very international atmosphere but also discover the French way of living. The working language will be mostly English (French is not required but can be used). You will be helped to settle down in excellent conditions.

Project Objectives:
Key words: Linked Open Data, Meta-Data, Semantic Web, RDF, Java, Reification

The Semantic Web technologies allow to publish, query, and reason with heterogeneous data on the Web. The RDF data model is used to represent the statements as triples in the form <subject, predicate, object>, which express a relation between two entities. However, it is often necessary to annotate one or more of those statements in one or more contexts (such as provenance, trustworthiness, or temporal validity). There are some approaches [1] to circumvent this limitation by reifying the statement as a new entity, which is then used in new triples as a regular subject or object. These approaches have different characteristics that make them more suitable for different tasks. However, to be able to choose the most appropriate approach, it is needed a tool that allows to convert the statement from one to another. Hence, the goal is to create a tool that allows to transform one reification model into another. The tool will take a dataset that uses one model and will give as an output the same dataset using a different reification model, with minimal interaction with the user.
Other subjects also related to this topic are: data compression, scalability, performance.

What we search? A student that:
- is open to learn new technologies;
- can work independently and collaboratively;
- is an efficient programmer.

What we expect? To complete the research project the following skills will be needed:
- Good knowledge of RDF and ideally other Semantic Web technologies;
- Fully proficient in Java programming (or other programming language applied to Semantic Web technologies);
- Use GitHub as a versioning tool.

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Location:
Saint Etienne, France

Institute:
Connected Intelligence Group

Lab:
Lab Hubert Curien

Selected publications from the team


Comments
We had already Shanzay AMJAD (COOP Student, Ottawa) for 2 internships of 3 months. You can contact her for information<samja088@uottawa.ca>
Stages d’été en recherche à l’international pour étudiants du premier cycle (SÉRI)
Summer Undergraduate International Research Internships (SIRI)

1 to 3 students. Topics can be adapted/extended.

Application requires
-CV or Personal Resume (including the passport number, date/place of birth, and no missing year in the curriculum); and copy of passport.
-a list of your grades;
-half a page indicating what are your skills and what is the motivation behind your application.

Note that your admission to the internship is subject to the evaluation of your files by the French government.