This internship is based in the SAP Labs France Research Lab, in Sophia-Antipolis, France. The Information Management research team investigates technologies that are relevant for Business Intelligence (BI) applications.

Current state-of-the-art BI tools, such as SAP BusinessObjects applications, require many complex data manipulation operations. This makes BI tools difficult to use for business users with no or little IT skills. In order to bridge this gap and to allow users to take better business decisions with BI tools, we are exploring techniques to automatically assist and guide BI users, and to give suggestions that take into account the usage context.

In a first phase, we have conducted two investigations in this domain. First, we have created a tool that builds a semantic network from a set of BI reports, the goal being to learn the business concepts and their relationships from the reports content rather than the technical layers. Secondly, we have instrumented our BI tools to capture user interaction traces, and have developed a theoretical framework for the processing of such traces.

In a second phase, we now aim to extend and unify these two previous works. We are hence looking for an ambitious student who will join our team for a 6 months internship. In this internship, the candidate will define a common model, allowing static and dynamic metadata in the same semantic network, and will hence exploit both sources of information to make relevant recommendations to users.

Throughout this internship, the student will work on the following tasks:
- Get acquainted with previous activities
- Propose a unifying model for the semantic networks
- Explore possibilities to use internal modeling tools
- Define a scenario (depending on the capabilities of the model)
- Design and develop a prototype to validate the proposed model

We expect that 40% of time will be dedicated to research activities, and 60% to development

Technologies involved:

Java, Relational Database, Tomcat, Natural Language Processing

Candidate Profile

- University Level: Last year of MSc or less if the student has a good profile
- Experience in Java (required)
- Knowledge of semantic technologies
- Knowledge of data mining
- Interest in research work
- Fluency in English (working language)
- Good oral and written communication skills

Internship Context

SAP & SAP Research

As the world's leading provider of business software, SAP delivers products and services that help accelerate business innovation for our customers. We believe that doing so will unleash growth and create significant new value – for our customers, SAP, and ultimately, entire industries and the economy at large. Today, more than 47,800 customers in more than 120 countries run SAP applications – from distinct solutions addressing the needs of small businesses and midsize companies to suite offerings for global organizations.

SAP Research –*Systematic Thought Leadership for Innovative Busines*– As the global technology research unit of SAP, SAP Research significantly contributes to SAP's product portfolio and extends SAP's leading position by identifying and shaping emerging IT trends through applied research and corporate venturing.

In contrast to SAP's product groups, which work on new functions and releases, SAP researchers explore opportunities that haven't yet been developed into products. We track technology trends, evaluate the potential impact on SAP solutions and customers, and generate breakthrough technologies. The business model of SAP Research is based on co-innovation through collaborative research. Working with leading universities, partners, customers, and SAP product groups, SAP Research oversees the development of promising ideas and prototypes into market-ready software for maximum customer value.

SAP Research Sophia Antipolis, SAP Research Center Sophia Antipolis is located in the setting of one of the most important scientific parks worldwide. A high concentration of IT and telecommunication industries within walking distance, proximity to partners and customers, as well as the educational establishments in the region provide SRC Sophia Antipolis with an ideal working environment. Based at SAP Labs France, SRC Sophia Antipolis focuses on the topics of security and trust (main focus) and information management (in development).

Standard Internship Package

- Salary: depending on the length of the internship and your diploma
- Lunch: SAP Labs France has a local cafeteria; interns contribute 2,18 Euro/lunch, like other SAP employees.
- Holidays: based on French holidays
  - 2011: January 1st; April 25th, May 1st, May 8th, June 2nd ; July 14th; August 15th , Nov 1st and 11th; December 25th, are French bank holidays.
- Travel: no personal travel (your trip to and from Nice) will be paid by SAP.
- Accommodation: we can propose to you an accommodation for the duration of your internship. If you accept SAP will take care of the rent but 275 Euros will be deducted from your monthly salary. Otherwise you are on your own.

Contacts and Procedure

Please send your CV and any relevant documents to the following persons stating the title of the Internship in the Subject [Internship Application] Creating and exploiting semantic networks for business intelligence reports

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