2017-00214 - [ZENITH] Post-doctoral position/ Similarity Search in Large Scale Time Series

About Inria

Inria, the French National Institute for computer science and applied mathematics, promotes "scientific excellence for technology transfer and society". Graduates from the world's top universities, Inria's 2,700 employees rise to the challenges of digital sciences. With its open, agile model, Inria is able to explore original approaches with its partners in industry and academia and provide an efficient response to the multidisciplinary and application challenges of the digital transformation. Inria is the source of many innovations that add value and create jobs.

About the research centre or Inria department

The Inria Sophia Antipolis - Méditerranée center counts 37 research teams and 9 support departments. The center's staff (about 600 people including 400 Inria employees) is composed of scientists of different nationalities (250 foreigners of 50 nationalities), engineers, technicians and administrators. 1/3 of the staff are civil servants, the others are contractual. The majority of the research teams at the center are located in Sophia Antipolis and Nice in the Alpes-Maritimes. Six teams are based in Montpellier and a team is hosted by the computer science department of the University of Bologna in Italy. The Center is a member of the University and Institution Community (ComUE) "Université Côte d'Azur (UCA)".

Context

The Inria's Zenith team, directed by P. Valduriez, proposes a postdoctoral research position on massive data analytics. In the context of massive data distribution at very large scale, we must address major challenges to develop efficient solutions for analyzing the data. Actually, technological solutions exist to support developers in this task, e.g. Apache Spark or the MapReduce framework. However, there are still crucial problems to resolve in order to avoid dramatical response times. For example, in the case of pattern extraction, it is vital to design extraction schemes that take into account the context of distribution and characteristics of the infrastructure (typically a straightforward implementation of Apriori in MapReduce for frequent pattern discovery is easy, but will lead to very low performance).

The analytical techniques considered in this postdoctoral position are related to frequent patterns, frequent sequential patterns or informative patterns (based on entropy). According to your background, you will work on one or more of these topics, in a large scale distributed environment.

Assignment

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Main activities

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Skills
The candidate should have a strong background in large scale data management and be proficient in English. Send us a detailed CV, including a complete bibliography and recommendation letters.

Benefits package
- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- Flexible working hours
- Sports facilities

Remuneration
Gross Salary: 2650 brutto per month
Work location: Montpellier