38_CASE_DDP_RRE

Job Reference

38_CASE_DDP_RRE

Position

Backend Developer (R/RE)

Data de tancament

Dilluns, 30 Juliol, 2018

About BSC

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It houses MareNostrum, one of the most powerful supercomputers in Europe, and is a hosting member of the PRACE European distributed supercomputing infrastructure. The mission of BSC is to research, develop and manage information technologies in order to facilitate scientific progress. BSC combines HPC service provision and R&D into both computer and computational science (life, earth and engineering sciences) under one roof, and currently has over 500 staff from 44 countries.

Look at the BSC experience:

BSC-CNS YouTube Channel  BSC-CNS Corporate Video  Let's stay connected with BSC Folks!

Context and Mission

The Computational Applications in Science and Engineering department (CASE) works with industry and academia developing software and applications that leverage the power of High Performance Computing to solve real problems. In particular, a large line of research and development is focused on the energy industries. Inside the CASE department works the Data Analytics and Visualization group, whose role is to develop and apply advanced statistical and determinist models to extract valuable information from large data sets, and convert them into visual and useful tools and representations. 

We are starting a pilot project with a large multinational company for applying machine learning and artificial intelligence algorithms for decision making in the energy markets, and specially the impact of alternative energies (mainly sun and wind). We aim at predicting the behavior of the energy markets using a variety of public and simulation data, and extracting useful actionable information from these predictions. If the pilot is successful, it will enter production mode and the team will be expected to continue research on
more advanced models and predictions.

The role of this position will be to design and implement communication and computation infrastructure for the pilot. In particular, we will need to communicate a backend service with cloud data and other applications, automate data collection from multiple sources, serve web GUI clients, and organize internal data storage. The proposed infrastructure can be based on a microservices architecture.

### Key Duties

1. Design a suitable backend architecture based on the needs of storage, computation, and communication.
2. Write code to collect, store, and organize data obtained from public sources and from private collaborators.
3. Safeguard data and system security.
4. Learn and transfer knowledge and technology to other projects in the group.
5. The candidate will work closely with the project team and the rest of the analytics and visualization group.

### Requirements

- **Education**
  - Degree in Informatics, Computer Science, or Engineering.
  - We will value equivalent hands-on experience on backend development and system administration.
- **Essential Knowledge and Professional Experience**
  - Server side programming languages: Python, Java, Node, or Scala.
  - Experience with relational and non-relational databases (e.g. SQL, MongoDB, Cassandra).
  - We will value specially knowledge and experience with cloud computing storage services and technologies (virtual machines, dockers), and in particular the Microsoft Azure platform.
  - Experience with online security best practices.
- **Additional Knowledge and Professional Experience**
  - Experience with distributed computing and storage infrastructures (e.g. Spark, Hadoop) is a plus. We will also value experience with data streaming processing technologies (e.g. Flink, Kafka).
  - We will value experience with applied big data and distributed computing projects and experience setting up data-processing projects in production.
- **Competences**
  - Strong initiative to work on a challenging multidisciplinary innovation project involving talking to people on many different fields.
  - Good communication skills, specially for producing internal documentation (manuals, white papers).
  - Fluency in spoken and written English and Spanish.

### Conditions

- The position will be located at BSC within the CASE Department.
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures.
Salary: we offer a competitive salary commensurate with the qualifications and experience of the candidate and according to the cost of living in Barcelona
Starting date: ASAP

Applications Procedure

All applications must include:

- A motivation letter with a statement of interest, including two contacts for further references - COMPULSORY - Applications without this document will not be considered
- A full CV including contact details

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.

Diversity and Equal Opportunity Employment

BSC-CNS is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.
Barcelona Supercomputing Center - Centro Nacional de Supercomputación