



Job offer

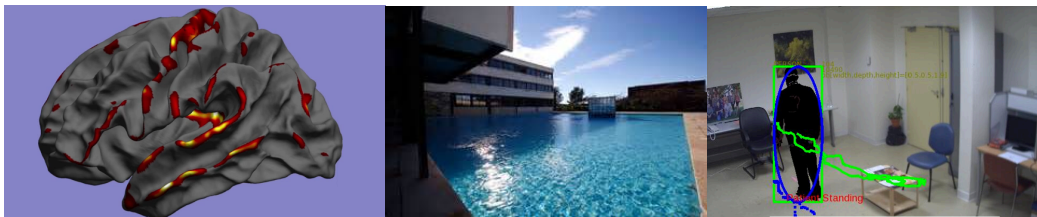
Biomedical Data Engineer

Project Description:

We are looking for a Data Engineer for the management of large-scale and heterogeneous biomedical data (medical images, biological and genomic data, video, audio and motion sensors). We are focused on candidates passionate about data, problem solving, and with a strong drive in working within the field of healthcare.

The candidate will be in charge of the development, maintenance and testing of a high-level data management system leveraging on the local high performance computing infrastructure. The project is within a dynamic research environment and will require the interaction with medical personnel.

The position is within the context of an excellence project on digital healthcare for neurological and psychiatric disorders (**mNC³**), founded by the [IDEX^{JEDI} University of Côte d'Azur](#) (UCA). This interdisciplinary project aims at jointly analyzing neuroimaging, behavior/cognition and biology/genomic data for more effective diagnosis and management of patients. The candidate will be also part of the [MSI](#), the IDEX^{JEDI} center of modeling, simulation & interaction.



Working environment:

The engineer will be hosted by [Asclepios](#) project team and by [MSI](#), both located at [Inria](#) in the tech Park of Sophia Antipolis. The work will also involve interactions with the [CoBTek](#) team, located at the Institut Claude Pompidou, in Nice, French Riviera.

- **Asclepios** is a world leading research group in the field of biomedical image analysis. The team is working on the development of novel computational methods for the analysis of biomedical images for improving healthcare and diagnosis.
- **MSI** is a IDEX^{JEDI} center with a focus on all the aspects of modeling and scientific computation, including mathematical and numerical analysis, intensive computation as well as interaction with simulation processes.
- **CoBTeK** is a collaborative team between the Nice University Hospital and Inria. The group aims at better diagnosis and treatment in patients through the design and analysis of body sensors data to assess cognition, and activity of daily living functioning.

Main activities:

- Creation and maintenance of a database infrastructure from collections of large-scale biomedical datasets;
- Implementing ETL processes for consolidation and analysis of large databases;
- Creating, implementing, documenting and automatizing analysis pipelines using distributed platforms;
- Designing, building and launching efficient data pipelines to move data on network infrastructures;
- Designing tools enabling researchers to easily access the data, and to deploy software and pipelines;
- Interacting with research and clinical personnel, and with the IT engineers in charge of the local computing infrastructure.

Required competences:

- Working experience with large-scale databases (multi TB);
- Experience with database management systems (MongoDB, Spark, ...);
- Expertise in data processing and quality control;
- Working knowledge in different programming or scripting languages like Linux Shell, Python and/or R;
- Ability to work with high volume heterogeneous data, preferably with distributed systems (e.g. Hadoop);
- Ability to write well-abstracted and reusable code components;
- Master's or PhD degree in computer science or software engineering;
- Bonus:
 - Experience in database management systems with focus on biomedical applications (e.g. XNAT);
 - Knowledge about data modeling, medical image analysis & computer science.

Contract and Salary:

4 years engineer position, competitive salary depending on experience.

Contact:

Nicholas.Ayache@inria.fr; Stephane.Descombes@unice.fr;
Marco.Lorenzi@inria.fr; Robert.P@chu-nice.fr