JOB OFFER
Data Manager and Image Analyst

Modeling progression of Alzheimer's disease from brain imaging data

Keywords: database management, image analysis, big data, medical imaging, clinical data, brain diseases

The topic: computer-aided diagnosis tools using learning from patients databases

The ARAMIS lab develops automatic tools to assist clinicians in the diagnosis and prognosis of neurological diseases. The team has set up front-end data analysis methods to learn typical scenarios of disease progression from large multimodal collections of neuroimaging and clinical data. These scenarios combine several types of data including blood tests, cognitive assessments and brain images of various modalities like anatomical, diffusion and functional Magnetic Resonance Images (MRI). This research activity has led to software prototypes and proofs of concepts, which have shown the potential of such virtual models of disease progression for the early diagnosis, prognosis and monitoring of disease progression in Alzheimer's disease.

Your mission:

You will be in charge of managing and analysing a large database of patients with complex multimodal data (medical imaging data including MRI and PET, cognitive scores, blood tests…). To that purpose, you will maintain and enrich the database of patients and enhance the database management system. You will develop software tools to connect image processing pipelines to the database management system and to deploy them on our parallel computing infrastructure. You will be in charge of the analysis of brain imaging data that will be used as input of the computer-aided diagnosis system.

A vibrant scientific, technological and clinical environment:

You will work within the ARAMIS lab (www.aramislab.fr) at the Brain and Spine Institute (http://www.icm-institute.org), one of the world top research institutes for neurosciences. The institute is ideally located at the heart of the Pitié-Salpêtrière hospital, downtown Paris.

The ARAMIS lab, which is also part of INRIA (the national French research institution for computer science), is dedicated to the development of new paradigms for the statistical exploitation of large neuroimaging and clinical data sets.

You will be strongly involved in scientific aspects of the work, such as discussion of methodological issues and interpretation of results. You will interact locally with the PhD students, postdoctoral fellows and engineers of the ARAMIS lab, as well as our medical

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collaborators at the Salpêtrière hospital. You will take part in the communications and publications resulting from the use of the software.

Your profile:

- Engineer in computer science or electrical engineering
- Knowledge of database systems
- Good programming skills, preferably in Python
- Basic knowledge of digital image processing
- Training and/or experience in medical imaging would be a plus
- Good relational and communication skills to interact with professionals from various backgrounds.

Ready to take up the challenge?

send your CV to Stanley.Durrleman@inria.fr and Olivier.Colliot@upmc.fr

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