Position: Neuroimaging data scientist in Caen (France)

Project: The 4-year project PRESAGE (*PREdementia motoric cognitive risk Syndrome in AGEing*) is funded through the European Regional Development Fund, the Normandie Region, and resources from public and private actors of the French pension and health care systems. It is implemented jointly by research centres hosted by the University of Caen Normandie (GIP Cyceron - biomedical imaging platform; COMETE / UMR-S 1075 - methodologies and biotechnologies for health; NIMH / UMR-S 1077 - imaging of human memory) and is also conducted in collaboration with the University of Grenoble (TIMC / UMR 5525 - computer sciences and applied mathematics for health). Its aim is to identify markers that predict transition to Alzheimer's disease or related dementia. To this end, we collect lifestyle, behavioral and brain indicators in community-dwelling older adults with motoric cognitive risk syndrome, a predementia state characterized by the presence of cognitive complaints and slow gait, and use machine learning to identify indicators that best predict cognitive evolution over time.

Missions: The data scientist will be responsible to set-up both: 1/ processing pipelines to analyse neuroimaging scans (anatomical, diffusion and resting-state functional MRI), and 2/ machine learning pipelines to resolve pattern classification and regression tasks. The data scientist will also organize the raw and processed data in a standardized fashion to make it accessible to all the consortium and to the scientific community at large. These missions fall into our commitment to ensuring reproducible science through open code and data.

Profile: The candidate should hold a PhD degree in computer science or neuroimaging or other relevant disciplines. (S)he should have strong background in computer programming (python, matlab) and have significant knowledge and/or experience in signal/image processing and machine learning. Knowledge and/or experience in deep learning would be appreciated. Publication activity in the aforementioned disciplines is mandatory. (S)he should demonstrate a high motivation and interest for developing computational analyses that relate brain observations and behaviour to health status. Other selection criteria are to be able to work both in a research team as well as carry out personal research projects and to have good written and oral English language skills.

Working environment: The position is based on the campus of the University of Caen Normandie at the GIP Cyceron, which is a top-ranked French preclinical and clinical neuroimaging centre that gathers cross-departmental researchers examining brain structure and function. There will be also interaction with collaborators from the University of Grenoble who work in the field of neuroimaging and machine learning. The city of Caen is located on the Atlantic shore and offers great possibilities to enjoy both nature and the French art of Living. Caen is also a vibrant city moulded by its rich culture and several centuries of history, and is also only 2h away from Paris, the city of lights.

Salary: Net annual salary is between 24 and 30 k€, according to French standards and depending on experience. The initial appointment is for 12 months, with a possible renewal for 2 more years.

Application: The application must include: 1/ an application letter describing your motivation, relevant experience, skills and qualifications, 2/ a CV including information about education background and work experience, 3/ contact information for two references. eDocuments must be sent to nicolas.delcroix@cnrs.fr, fabien.cignetti@univ-grenoble-alpes.fr, leslie.decker@unicaen.fr

Application deadline: end-December 2020
Starting date: as early as January 2021