Research Engineer Contract

DATA ANALYST in computational neuroscience

Profile	
job-type	Research Engineer – expert in Big Data analysis
BAP	E
Mission	The research engineer will analyze new data tackling the development of mental disorders in cohorts of children, adolescents, and adults followed up for years. The laboratory hosts international and regional mutidisciplinary databases including thousands of participants.
Main activities	The engineer will implement new methods to analyze « big data ». The core of the engineer task will be to adapt and test computational statistics methods to analyze the developmental variations in adolescence, and determine risk and protective factors useful for prevention, prognosis, or treatment monitoring, in syndromes such as depression, drug addiction, or autism. He/she will supervise students and advise the researchers, in order to develop a team. He/she will contribute to drafting and bringing manuscripts to publication in leading journals.
Other activities	The engineer will implement quality-control procedures for clinical, neuroimaging, and genetic measures (e.g., questionnaires and behaviour measures, structural and functional magnetic resonance imaging, GWAS). He/she will establish collaborations with laboratories harnessing the data in Europe and US
Requirements	Experience in Big Data tackling with multivariate analysis methods (ICA, PCA), AI predictive analytics (e.g. machine learning, classification), or network analysis. The Engineer will explore how deep learning can be used to deal with multiscale multidimensional biomedical data. Familiarity with Unix or Linux. Solid background in programming, especially in Matlab, R, Python… English : B2, C1, or C2
	Previous experience in predictive epidemiology applied to healthcare, or in computational neuroscience, or in brain imaging, would be a plus.
Other specificitities	Location on two sites: Orsay and Paris
Degrees	PhD Degree in computational statistics, engineering, or equivalent.

Laboratory	
Code INSERM lab	U1000
Lab Name	Neuroimaging & Psychiatry
Head	Jean – Luc Martinot

Lab description	https://www.inserm-u1000.u-psud.fr
	The INSERM U.1000 laboratory provides a stimulating scientific work environment as it involves a team of physicians and researchers trained to investigate juvenile or adult healthy subjects and patients with mental disorders. It also includes engineers experienced in data storage, processing and analysis of multicenter studies. The INSERM Unit 1000 research activities are: -1/ at the Institute Joliot of the CEA, Orsay (http://i2bm.cea.fr/drf/i2bm/Pages/SHFJ/U-1000.aspx) a brain imaging center on the Paris-Saclay campus hosting researchers, engineers, or technicians, where the U1000 team manages secure IT facilities devoted to the storage and analysis of sensitive "big data" samples from juvenile and adult participants, -2/ in the Necker pediatric hospital, Paris (Assistance Publique - Hôpitaux de Paris), in a radiopaediatry department expert in scanning children or adolescent patients; -3/ within Cochin Hospital, Paris. Unit 1000 members acquire MRI and multidisciplinary data in the Intitute of Brain and Spine (ICM - Salpêtrière hospital) and in Necker hospital, Paris, and accesses positron emission tomography-MRI in Orsay.
Adress	INSERM U1000 - Service Hospitalier Frédéric Joliot - CEA, 4 place du Général Leclerc, 91401 Orsay
Administration	DR Paris 11

Contrat	
Type	CDD (IR)
Duration	**3 years - up to 5 years** - evolving to permanent Research Engineer (INSERM examination)
Salary	INSERM - according to CV Social welfare INSERM
Starting Date	between july and end of september 2017

Candidates should send a **CV, a statement of research interests, and two potential references** to:
jean-luc.martinot@inserm.fr