

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 multidisciplinary databases obtained from thousand of participants.

Main activities The engineer will implement new methods to analyze these « 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, pronostic, or treatment monitoring, in syndromes such as depression, drug addiction, or autism. He will supervise students and advise the researchers, in order to develop a team. He will contribute to draft and bring 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 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. 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 specificities 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 radiopaediatrics department expert in scanning children or adolescent patients; -3/ within Cochin Hospital, Paris. Unit 1000 members acquire MRI and multidisciplinary data in the Institute of Brain and Spine (ICM - Salpêtrière hospital) and in Necker hospital, Paris, and accesses positron emission tomography-MRI in Orsay.

Address INSERM U1000 - Service Hospitalier Frédéric Joliot - CEA, 4 place du Général Leclerc, 91401 Orsay

Administration DR Paris 11

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Type CDD (IR)

Duration 3 years - up to 5 years - evolving to permanent Research Engineer (INSERM examination)

Salary INSERM - according to CV

Social security 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