2 Postdoctoral Positions in Machine Learning and Neurodegenerative Disease Modelling

Applications are invited for 2 postdoc positions in machine learning available at the Brain-C Lab in the Institute of Biology Paris-Seine (see http://www.ibps.upmc.fr/en/research/biological-adaptation-and-ageing/brainc).

The positions are supported for 2 years <u>starting October-November 2019</u> with possible renewal for a third year.
- Postdoc position 1 is focused on probability and statistics.
- Postdoc position 2 is focused on bioinformatics and programming.
Interested candidates should apply immediately. The successful applicants will work on modeling the molecular and cellular pathogenesis of Huntington's disease (HD) on a system and dynamic level via the analysis of highly dimensional genomic data in collaboration with mathematicians and bioinformaticians inside and outside the team. We use several type of machine learning methods to address key questions about the rules that govern the progression of HD over time, the mechanisms specifically associated with distinct HD stages and the therapeutic implications of such knowledge.

The candidates are expected to be highly qualified, independent and highly motivated with a strong interest for research. Postdoc candidates should hold a Ph.D. in Probability and Statistics (<u>Position 1</u>) or a Ph.D. in Informatics (<u>Position 2</u>) *OR* a diploma from high profile Engineer Schools (*e.g.* Ecole Polytechnique, Supélec, Centrale, INSA, EPFL, ETZ). Candidates should have <u>no more</u> than 1-2 year postdoctoral experience if already working in France, and <u>no more</u> than 3-4 years of such an experience if working abroad.

Essential qualifications:
Postdoc position 1:
- Demonstrated experience and autonomy in probability and statistics for the analysis of complex molecular datasets, *e.g.* obtained in experimental models of disease or in human cohorts (probabilistic models, R).
- Good autonomy in machine programming (in at least one the following languages: python, C/C++, java)
- Skills in database management are desirable but not mandatory.

Postdoc position 2:
- Demonstrated experience and autonomy in programming (in at least one the following languages: python, C/C++, java) and database languages (MySQL)
- Good autonomy in statistical modeling (probabilistic models, R)
- Skills in web technologies (javascript, php) are desirable but not mandatory.

The Brain-C Lab covers computer science, cell biology and clinical research, which provides an excellent opportunity for highly motivated fellows in the field of aging and data analytics and an excellent path towards career plans in academia or industry.

For informal inquiry please contact Dr Christian Neri: Christian.neri@inserm.fr
Application Instructions: Provide a full CV, a letter of motivation and a minimum of 2 names for professional reference to Christian.neri@inserm.fr