Paris Brain Institute (ICM) is recruiting a:

Junior engineer biological image analysis (M/F)

Per direct

18 months (renewable)

A Paris 13ème

The Paris Brain Institute (ICM) is a private foundation recognized as being of public utility, whose purpose is fundamental and clinical research on the nervous system. On the same site, 700 researchers, engineers and doctors cover all the disciplines of neurology, with the aim of accelerating discoveries on the functioning of the brain and the development of treatments for diseases such as: Alzheimer's, Parkinson's, multiple sclerosis, epilepsy, depression, paraplegia, tetraplegia, etc.

POSITION

Context

The Paris Brain Institute is investing in cutting-edge technologies and expertise as part of its transversal approach to the discovery of new treatments for neurological diseases. The Data Analysis Core facility (DAC) mission within this ambitious program is to develop new tools and analyses, coordinate FAIR data governance across the institute, and accompany researchers in exploiting the full potential of the institute's technology and data ecosystem. The DAC consists of an enthusiastic interdisciplinary team of experts in biostatistics, bioinformatics, computational neuroscience, and data management. We accompany researchers throughout the research cycle, from idea to publication. We perform analyses, develop databases, and offer training in data analysis and good practices in data management. We are currently recruiting new team members to strengthen our expertise in bioinformatics (spatial transcriptomics), image analysis using deep learning (microscopy, histology, and neuroimaging), and research data governance. If you are interested in the brain and want to apply your skills in a stimulating research environment, the DAC could be the place for you.

Job description (mission)

- Scripting of image analysis algorithms from light and electron microscopy images
- Understand and translate research questions regarding image analysis: preprocessing, segmentation and extracting (statistical) features
- Benchmark and assist researchers in the use of pre-existing software for image analysis such as Qpath, ImageJ, CellPose or equivalent applications
- Document and teach image analysis

PROFILE

Know-how (savoir-faire)

- Fluency in manipulation, visualization and conversion of images, including high-res (pyramidal) formats
- Knowledge of tools, libraries and deep learning / machine learning / AI procedures in (biological) image analysis
- Experience in applying machine learning in image analysis, training, testing and optimizing models and algorithms in image segmentation and classification
- Experience using deep learning / machine learning / AI for analyzing microscopy images is highly desired but not required
- Experience using applications analysis such as Qpath, ImageJ, CellPose or equivalent is highly desired but not required

Knowledge (savoir)

- Bac+5 (master or engineer) computer science/biostatistics/bio-informatics with a focus on machine learning in (biological/medical) image analysis, or equivalent level through professional experience in a similar field
- Image analysis in Python (required) and R/MATLAB/C/C++ (desired)
- Project management using Gitlab

Soft skills (savoir-être)

- Autonomy to quickly learn new methods adapted to the wide variety of data
- Ability to integrate into a multi-disciplinary team with team spirit, and a collaborative working style
- Ability to communicate with researchers and staff from different scientific/clinical backgrounds
- Good command of academic English
- Conversational French desired but not required

Conditions

The position will be closely coordinated (shared) with the QUANT microscopy platform, allowing integration with researchers working on related topics. QUANT is equipped with state-of-the-art confocal, multiphoton, widefield, and light-sheet photonic microscopy, as well as transmission electron microscopy. The team includes permanent engineers dedicated to supporting the acquisition of images.

Please send your CV and letter of motivation (in English), indicating name and contact details of two references (incomplete dossiers will not be considered) to recrutement@icm-institute.org *and* stephen.whitmarsh@icm-institute.org with the subject: "Junior engineer biological image analysis".