Paris Brain Institute (ICM) is recruiting a:

Senior engineer biological image analysis (M/F)

As soon as possible

Permanent (CDI)

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)

- Development of advanced image analysis algorithms for the analysis of (histological) images from electron and photon microscopes
- Translation of research questions regarding image analysis, including preprocessing, segmentation, classification and reporting of (statistical) features
- Integrating and automatizing image analysis as part of our NGS bioinformatics pipelines
- Supporting researchers in the application (and development) of image analysis tools and scripts
- Coordination and participation in transversal projects together with the histology platform (Histomics), the sequencing platform (iGenSeq), the neuroimaging facility (CENIR) and research teams throughout the institute
- Coordination and collaboration on image analyses across the institute
- Investigate and respond to the needs of the institute regarding image analyses, providing scientific and strategic advice of the highest scientific ambition
- Document and teach image analysis

PROFILE

Know-how (savoir-faire)

- Fluency in manipulation, visualization and conversion of images, including high-res (pyramidal) formats
- Deep understanding of deep learning / machine learning / AI procedures in biological image analysis, including cell segmentation and differentiation (2D and 3D), detection of co-localization, morphological studies, temporal tracking of objects over time, and visualization and interaction with high-res (pyramidal) images
- Experience in using biological image analysis applications such as QuPath, ImageJ, Visiopharm, or CellPose is desired but not required
- Experience with spatial transcriptomics technology, such as Visium (10X Genomics), GeoMX DSP (Nanostring) or Merscope (Vizgen) is desired but not required

Knowledge (savoir)

- PhD in computer science/biostatistics/bio-informatics with a focus on machine learning in (biological/medical) image analysis
- Image analysis in Python (required) and R/MATLAB/C/C++ (highly 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
- Strong organizational, project management and communication skills
- Excellent interpersonal skills
- Excellent command of academic English
- Conversational French desired but not required

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: “Senior engineer biological image analysis”.