

## The Aramis team at the Brain Institute is recruiting a researcher / post-doctoral fellow

### Deep learning for brain imaging

#### General information

Workplace: Brain Institute, ARAMIS Team, Pitié Salpêtrière Hospital, 47 Bd. de l'hôpital, 75013 Paris  
Name of the scientific supervisor: Olivier Colliot ([olivier.colliot@sorbonne-universite.fr](mailto:olivier.colliot@sorbonne-universite.fr))  
Type of contract: Researcher on a fixed-term contract  
Duration of the contract: 12 months (possibility of renewal for several years)  
Contract start date: as soon as possible  
Work quota: Full time  
Remuneration: Based on experience

#### Mission

Working within the ARAMIS team, the researcher's mission will be to develop research on the topic of deep learning for brain imaging. More specifically, the research project can tackle one of the following subjects or their combination:

- interpretable deep learning through joint training (e.g. joint segmentation, classification and grading)
- automatic classification for differential diagnosis
- training and validation from very large scale clinical routine datasets (N>100,000)
- integration of medical image analysis and natural language processing
- reproducibility of machine learning systems

He/she will be able to contribute to the training and co-supervision of students (Master, PhD).

#### Activities

- Develop research in the field of deep learning for brain imaging
- Write scientific articles for publication in international journals and conference proceedings
- Present results at international conferences
- Contribute to the implementation and dissemination of open source software
- Provide advice and expertise and ensure training for students and engineers

## Working context

You will work within the ARAMIS lab ([www.aramislab.fr](http://www.aramislab.fr)) at the Paris Brain Institute. The institute is ideally located at the heart of the Pitié-Salpêtrière hospital, downtown Paris.

The ARAMIS lab, which is also part of Inria (the French National Institute for Research in Computer Science and Applied Mathematics), is dedicated to the development of new computational approaches for the analysis of large neuroimaging and clinical data sets. With about 35 people, the lab has a multidisciplinary composition, bringing together researchers in machine learning and statistics and medical doctors (neurologists, neuroradiologists).

The research project will be carried out within the framework of the Olivier Colliot Chair at the Interdisciplinary Institute of Artificial Intelligence (3IA) PRAIRIE (<http://prairie-institute.fr/>), one of the four 3IA institutes created as part of the French plan for artificial intelligence.

We have access to a supercomputer with 1024 GPU.

## Constraints and risks

No specific constraint or risk

## Additional information

### Desired skills

- PhD in computer science, electrical engineering or a related field
- Research experience in Deep Learning
- Experience in the field of medical imaging would be a plus but is not mandatory
- Genuine interest for applications in medicine
- Good writing skills
- Good communication skills

### Documents to be provided

Applications should include a detailed CV with a list of publications; at least two references (who may be contacted); a one-page cover letter.

### Contact

Olivier Colliot - <http://www.aramislab.fr/perso/colliot/> - [olivier.colliot@sorbonne-universite.fr](mailto:olivier.colliot@sorbonne-universite.fr).