Offer #2023-07073

Research engineer in brain image analysis

**Contract type:** Fixed-term contract

**Renewable contract:** Yes

**Level of qualifications required:** Graduate degree or equivalent

**Other valued qualifications:** Master or PhD

**Fonction:** Temporary scientific engineer

**Context**

You will work within the ARAMIS lab ([www.aramislab.fr](http://www.aramislab.fr)) at the Paris Brain Institute ([https://institutducerveau-icm.org](https://institutducerveau-icm.org)), one of the world top research institutes for neurosciences. The institute is ideally located at the heart of the Pitie-Salpetriere hospital, downtown Paris.

The ARAMIS lab, which is also part of Inria (the French National Institute for Research in Digital Science and Technology), is dedicated to the development of new computational approaches for the analysis of large neuroimaging and clinical data sets.

You will be strongly involved in scientific aspects of the work, such as discussion of methodological issues and interpretation of results. You will interact locally with the PhD students, postdoctoral fellows and engineers of the ARAMIS lab, as well as our medical collaborators. You will take part in the communications and publications resulting from the use of the software.

**Assignment**

The ARAMIS lab develops the open-source software Clinica [1] ([www.clinica.run](http://www.clinica.run), [https://github.com/aramis-lab/clinica](https://github.com/aramis-lab/clinica)), an end-to-end solution for brain image analysis. Clinica allows users to easily analyze large-scale clinical studies with advanced computational tools. To that purpose, it integrates tools for data management, image preprocessing for different modalities (anatomical MRI, diffusion MRI, PET), feature extraction, machine learning and statistics. Clinica is distributed freely to the scientific community and has 400+ users worldwide. It has been used to produce high impact medical publications that have advanced the understanding of neurodegenerative diseases such as Alzheimer’s disease, fronto-temporal dementia and amyotrophic lateral sclerosis [2,3,4]. It is also widely used by researchers who apply machine learning to the diagnosis of brain diseases [5,6,7].


**Main activities**

You will be in charge of the:

- development of new features (manual and automatic quality control of processed images, image processing pipelines, data converters, visualization),
- software maintenance,
- user support and animation of the community.

In addition, you will be presenting the software at international scientific conferences and other events (organized for instance by Inria, ICM, CNRS...). Finally, you will contribute to ambitious medical studies, by deploying Clinica on large databases of patients, contributing to the interpretation of results and providing assistance to medical users (internal to the lab and external collaborators).

**Skills**

- PhD degree or master + experience in the field of medical imaging
- Strong programming skills in Python
- Knowledge of digital image processing and medical imaging is mandatory
- Experience with neuroimaging data (and with neuroimage analysis tools, e.g. Nipype, Pydra, SPM, FreeSurfer) would be a strong plus
- Experience working with Git/GitHub on open-source projects would be a plus
- Excellent relational and communication skills to interact with users and lab members
- Good writing skills (documentation, website, scientific articles)

**Benefits package**

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities

**General Information**

- **Theme/Domain**: Computational Neuroscience and Medicine
- **Software engineering** (BAP E)
- **Town/city**: Paris
- **Inria Center**: Centre Inria de Paris
- **Starting date**: 2024-03-01
- **Duration of contract**: 1 year, 6 months
- **Deadline to apply**: 2024-01-31

**Contacts**

- **Inria Team**: ARAMIS
- **Recruiter**: Burgos Ninon / ninon.burgos@inria.fr

**About Inria**

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

**The keys to success**

There you can provide a “broad outline” of the collaborator you are looking for what you consider to be necessary and sufficient, and which may combine:

- tastes and appetencies,
- area of excellence,
- personality or character traits,
- cross-disciplinary knowledge and expertise...

This section enables the more formal list of skills to be completed and 'lightened' (reduced):

- "Essential qualities in order to fulfil this assignment are feeling at ease in an environment of scientific dynamics and wanting to learn and listen."
- "Passionate about innovation, with expertise in Ruby on Rails development and strong influencing skills. A thesis in the field of **** is a real asset."

**Warning**: you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is
Instruction to apply

Defence Security:
This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST). Authorisation to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

Recruitment Policy:
As part of its diversity policy, all Inria positions are accessible to people with disabilities.