Offer #2021-03532

Post-Doctoral Research Visit F/M [Campagne post-doctorants] - Deep learning for brain imaging

Renewable contract : Yes

Level of qualifications required : PhD or equivalent

Fonction : Post-Doctoral Research Visit

Context

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

The ARAMIS lab 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.

Assignment

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).

Main 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

Skills

- Good writing skills

- Good communication skills

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 (after 6 months of employment) and flexible organization of working

hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training

General Information

- **Theme/Domain :** Computational Neuroscience and Medicine
- **Town/city :** Paris
- **Inria Center :** Centre Inria de Paris
- **Starting date :** 2021-11-01
- **Duration of contract :** 1 year, 4 months
- **Deadline to apply :** 2021-05-24

Contacts

- **Inria Team :** ARAMIS
- **Recruiter :**
  Colliot Olivier / Olivier.Colliot@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

- 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

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 not guaranteed.

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.