Job vacancy #2023-06808

Streamlining open medical data sharing and reuse in Europe

Contract type: Fixed-term contract
Level of qualifications required: Graduate degree or equivalent
Function: Temporary scientific engineer
Level of experience: From 3 to 5 years

About the research centre or Inria department

The Inria Centre at Rennes University is one of Inria's eight centres and has more than thirty research teams. The Inria Centre is a major and recognized player in the field of digital sciences. It is at the heart of a rich R&D and innovation ecosystem: highly innovative PMEs, large industrial groups, competitiveness clusters, research and higher education players, laboratories of excellence, technological research institute, etc.

Context

Applications are invited for a research engineer position with Dr. Camille Maumet in the Empenn team at INRIA. This position is part of FLI-IAM, i.e. the "Information Analysis and Management" (IAM) node of the national infrastructure “France Life Imaging (FLI)".

Open science practices are being increasingly supported by a variety of stakeholders in scientific research. UNESCO defines open science around 3 key features including: "Encourage collaboration and information-sharing to benefit science and society". In particular, opening up scientific data is very central to open science as it makes it possible to reuse dataset within scientific communities effectively leading to larger sample sizes and the possibility to build more generalizable discoveries. In the European landscape, a number of initiatives have emerged to streamline sharing of medical image datasets. The focus of this work will be to interoperate the FLI-IAM infrastructure -- and specifically the Shanoir imaging data management system -- to other European open science efforts towards building integrated easy-to-use databases and tools for open data sharing and reuse.

Assignment

The successful applicant will work with European initiatives to interconnect infrastructure and tools for open medical imaging data in order to streamline the process of accessing, analysing and publishing results on public medical imaging datasets. To get started, the goal will be to work closely with datalad (distributed data management - https://www.datalad.org/) and Openneuro-PET (EU-GDPR compliant PET data sharing https://openneuropet.github.io/) and connect those to the Shanoir imaging data management system (https://shanoir.irisa.fr/shanoir-ng/welcome). The research engineer will work closely with Michael Kain who is the technical lead of the FLI-IAM infrastructure.

We are looking for an excellent software engineer with a strong interest in working in medical imaging research, and ideally with prior experience in a research setting. The successful candidate must have a background in computer science or a related field. Previous experience in open source and/or working with open communities will be highly valued.

The fellow will join the Empenn team at INRIA Rennes, a group of circa 30 people working on neuroimaging applications and methods with a diverse set of expertise ranging from computer science and maths to medicine. The Empenn team is part of INRIA Rennes, a research centre of about 800 members focusing on all aspects of computer science research.

Main activities

The goal of the research engineer will be to develop new tools to interconnect existing European infrastructure. To achieve this aim, the engineer will:

- Learn about European medical data sharing tools and infrastructure such as Shanoir, datalad and Openneuro-PET
- Learn about existing standards to share and exchange medical imaging data
- Develop tools to interconnect platforms in order to make sharing and reusing datasets more efficient
- Contribute to the Shanoir codebase to share those tools
- Exchange with users to learn about their needs in terms of data reuse
- Participate in the publicization of the project, e.g. by participating in Brainhack hackathons.

**Skills**

**Essential requirements**

- Master/Engineering degree in computer science, data science or a related field.
- Proficient in software development.
- In-depth experience of software project management including version control (git + GitHub/gitlab), continuous integration, roadmapping, managing issues, etc.
- Well-organised.
- Strong written communication skills in English.
- Ability to work well in a team and exchange and share ideas with other members.
- Strong enthusiasm to “work open”, i.e. adopt an agile approach in which the code is made available publicly from its inception and gradually improved. This approach also means working in collaboration with the community to take into account their feedback and intergate contributions.
- Ability to work well with people from different fields (computer science, medical imaging experts, etc.) and levels of seniority.

Different levels of experience can be considered for this position. Salary will be commensurate with experience as per the INRIA salary grids. Ideally, we are looking for experienced applicants (>5 years) but will consider applicants with less experience if they are an excellent fit for the position.

**Desirable**

- Prior participation in research projects.
- Prior experience with processing of neuroimaging or medical data.
- Active in the open source community or with open communities

**For more information**

Informal inquiries can be sent to Dr. Camille Maumet (camille.maumet@inria.fr).

General information on INRIA and on the Empenn team are available on the respective websites: https://www.inria.fr/fr https://team.inria.fr/empenn/

**Benefits package**

- Subsidized meals
- Partial reimbursement of public transport costs
- Possibility of teleworking (90 days per year) and flexible organization of working hours
- Partial payment of insurance costs

**Remuneration**

Monthly gross salary from 2 695 euros according to diploma and experience

**General Information**

- **Theme/Domain**: Computational Neuroscience and Medicine
  Software engineering (BAP E)
- **Town/city**: Rennes
- **Inria Center**: Centre Inria de l'Université de Rennes
- **Starting date**: 2023-12-01
- **Duration of contract**: 1 year
- **Deadline to apply**: 2023-11-12

**Contacts**

- **Inria Team**: EMPENN
- **Recruiter**: Maumet Camille / camille.maumet@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.

**Warning**: you must enter your e-mail address in order to save your application to Inria. Applications
Instruction to apply

Please submit online: your resume, cover letter and letters of recommendation eventually

**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.