



**Offer #2025-08719**

## **Developer for medical imaging cloud infrastructure**

**Contract type :** Fixed-term contract

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

**Fonction :** Temporary scientific engineer

**Level of experience :** Up to 3 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**

**As part of a RHU (5-year university hospital research) program with the Nantes University Hospital: [RHU eCAN](#)**

Coordinated by the Nantes University Hospital, the eCAN University Hospital Research project (RHU eCAN) aims to reduce the overall impact of intracranial aneurysms by creating health tools dedicated to radiologists, patients, experts in charge of these patients, and regulatory authorities. The ambition of the eCAN project is to change the trajectory of patients with intracranial aneurysms and improve its medico-economic impact in the various health systems.

**The objective is to operate and develop on a dedicated cloud infrastructure**

## **(Shanoir+VIP) for the storage and processing of medical images.**

[Shanoir](#) (SHARing iN vivO Imaging Resources) is a web platform that allows the sharing of in-vivo medical images, with their metadata, for clinical and preclinical research. The origin of the software is neuroimaging, but the platform is now perfectly usable for all types of organs and pathologies. Shanoir allows the import of "raw" data from different acquisition methods: DICOM (MR, CT, PT, NM), Bruker (preclinical), EEG (EDF + BrainVision) and "processed" data: NIfTI. Shanoir-NG is a "cloud native" web application developed with Angular, Spring Boot 3 and Docker.

[VIP](#) is a web platform for image processing. In collaboration with the VIP team (Creatis, CNRS, Lyon), Shanoir and VIP are used to store and process images in pairs.

## **Assignment**

**Missions:** With the help of the team of Shanoir developers, the recruited person will be required to carry out mass processing and develop in Shanoir.

## **Main activities**

Main software development activities:

- Gain an understanding of Shanoir, its code structure and data model
- Perform various bulk processing on data in Shanoir within VIP
  - Run bulk execution scripts in Python and monitor/debug them, based on Shanoir REST interface and existing scripts
  - Help integrate Docker images into VIP
  - Develop integration of various inputs and outputs of processing pipelines
  - Aggregate processing results according to scientific needs
- Work on interoperability with cleanWeb, eCRF
- Implementation, testing and deployment in production
  - Our production server is available at <https://shanoir.irisa.fr>
  - The goal is to deploy in production the developed extensions, to share data beyond FLI-IAM (see in "broader context")

Additional activities:

- Test, modify until validating new features
- Write documentation on GitHub
- Participate in Shanoir's roadmap
- Based on experience
  - Project management
  - Interaction with RHU partners

## Skills

### Scientific diplomas and technical qualifications:

- High level education in computer science (university or grande-école), specialized on software development
- 1-2 years of software development experience
- Good knowledge of Java/Jakarta Enterprise and Python for Web Programming
- Solid knowledge on Docker
- Good capability in technical and scientific English and oral practice
- Bonus
  - ? Knowledge in the field of medical imaging and image processing

## Benefits package

- Prise en charge partielle des frais de transport en commun sur le trajet domicile-travail ou FMD.
- Restauration subventionnée
- Prise en charge partielle des frais de mutuelle
- Possibilité de télétravail (à hauteur de 90 jours annuels) et d'aménagement du temps de travail

## Remuneration

Rémunération mensuelle brute à partir de 2695 euros selon diplôme et expérience

## General Information

- **Town/city** : Rennes
- **Inria Center** : [Centre Inria de l'Université de Rennes](#)
- **Starting date** : 2025-04-01
- **Duration of contract** : 12 months
- **Deadline to apply** : 2025-05-11

## Contacts

- **Inria Team** : SED-RBA
- **Recruiter** :  
Kain Michael / [michael.kain@inria.fr](mailto:michael.kain@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 must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.

## Instruction to apply

Merci de déposer en ligne CV, lettre de motivation et éventuelles recommandations

### **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.