



Offre n°2024-07153

Temporary scientific engineer / A platform for synthetic data generation and privacy evaluation / PhD or equivalent

Type de contrat : Fixed-term contract

Niveau de diplôme exigé : Graduate degree or equivalent

Fonction : Temporary scientific engineer

A propos du centre ou de la direction fonctionnelle

The Inria University of Lille centre, created in 2008, employs 360 people including 305 scientists in 15 research teams. Recognised for its strong involvement in the socio-economic development of the Hauts-De-France region, the Inria University of Lille centre pursues a close relationship with large companies and SMEs. By promoting synergies between researchers and industrialists, Inria participates in the transfer of skills and expertise in digital technologies and provides access to the best European and international research for the benefit of innovation and companies, particularly in the region. For more than 10 years, the Inria University of Lille centre has been located at the heart of Lille's university and scientific ecosystem, as well as at the heart of Frenchtech, with a technology showroom based on Avenue de Bretagne in Lille, on the EuraTechnologies site of economic excellence dedicated to information and communication technologies (ICT).

Contexte et atouts du poste

This engineer position will be supported by the CAPS'UL project. The position will be based in the MAGNET team in Lille, in very close collaboration with the Lille Hospital.

The CAPS'UL project objective is to promote digital health culture for current and future healthcare professionals. Part of the project concerns the design of a high-performance tool for practical situations, enabling concrete and effective collaboration between the various training, socio-economic and medico-social players in the implementation of training courses. It will provide a credible immersive environment (real software and simulated healthcare data) and teaching scenarios for the entire teaching community.

The INRIA MAGNET team (and hence the recruited collaborators) will contribute to this project by researching machine learning algorithms for synthetic data generation with privacy constraints and dedicated to training.

Mission confiée

The recruited engineer will collaborate with colleagues in the MAGNET team and the CAPS'UL project consortium. In particular, the work will contribute to build a platform for synthetic (longitudinal) data generation together with a toolbox for privacy auditing. The main originality lies in the definition of data utility as it should reflect the variety of situations that can help professionals in a training context.

All developed software will be open-source.

Principales activités

The principal activities will be in two steps.

- First period
 - Select and gather state of the art implementations of machine learning methods for synthetic data generation
 - Extract and prepare health data for training machine models
 - Generate synthetic data and evaluate privacy with state of the art attacks
 - Test algorithms and run experiments
- Second period
 - Design and prototyping of key algorithms
 - Create appropriate tests and documentation
 - Integrate such implementations in the CAPS'UL platform
 - Test algorithms and run experiments

Compétences

- Strong background in Computer Science
- Strong programming skills in Python
- Background in privacy and machine learning
- Prior experience in the health domain will be an asset

Avantages

- 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
- Access to vocational training
- Social security coverage

Rémunération

According to profile

Informations générales

- **Thème/Domaine** : Data and Knowledge Representation and Processing
Software engineering (BAP E)
- **Ville** : Villeneuve d'Ascq
- **Centre Inria** : [Centre Inria de l'Université de Lille](#)
- **Date de prise de fonction souhaitée** : 2024-10-01
- **Durée de contrat** : 2 years
- **Date limite pour postuler** : 2024-09-30

Contacts

- **Équipe Inria** : [MAGNET](#)
- **Recruteur** :
Tommasi Marc / Marc.Tommasi@inria.fr

A propos d'Inria

Inria est l'institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l'interface d'autres disciplines. L'institut fait appel à de nombreux talents dans plus d'une quarantaine de métiers différents. 900 personnels d'appui à la recherche et à l'innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 200 start-up. L'institut s'efforce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

Attention: Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

Consignes pour postuler

Sécurité défense :

Ce poste est susceptible d'être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L'autorisation d'accès à une zone est délivrée par le chef d'établissement, après avis ministériel favorable, tel que défini dans l'arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l'annulation du recrutement.

Politique de recrutement :

Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.