The ideal candidate will have the following skills:

**library and may be supported by engineers in the team.**

If the research features a prototype, it will contribute to the project's open source

collaboration in the FLUTE project among others by researching machine learning algorithms and multi-party

model from data while the data is not revealed. Notions such as (local) differential

privacy and its generalizations allow to bound the amount of information revealed.

The goal of the multi-disciplinary FLUTE project is to advance and scale up data-driven

healthcare by developing novel methods for privacy-preserving cross-border utilization

of data hubs. Advanced research will be performed to push the performance envelope of

secure multi-party computation in Federated Learning, including the associated AI

models and secure execution environments.

The INRIA MAGNET team (and hence the recruited collaborators) will contribute to this

project among others by researching machine learning algorithms and multi-party

protocols with improved scalability in the context of medical data, e.g., by exploiting

data sparsity. This research will involve both theoretical and more applied

components. As coordinator INRIA will also contribute to the integration of the

software developed in the FLUTE project (and the complementary TRUMPET project).

The recruited PhD student will collaborate with colleagues in the MAGNET team and the

FLUTE project consortium in general. Part of the work may involve travel to other

partners.

Possible domains of research include (but are not limited to):

- Cryptography-based strategies to improve the security of privacy-preserving AI systems.
- Inference methods for privacy assessment
- Design and development of the FLUTE platform and its supporting algorithms

**Contribute to the research of the FLUTE project**

**Collaborate with other MAGNET and FLUTE team members**

**Disseminate research results**

The ideal candidate will have the following skills:
Good mastery of English
A strong background in computer science and mathematics. Subject matters which will be needed during the research include (but are not limited to) machine learning, statistics, cryptography, distributed systems, constraint programming.
Good programming skills (e.g., C/C++ or python) and supporting tools.
Relational skills, e.g., working in a team, effective reporting and communication with all involved stakeholders.

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
1st and 2nd year: 2051€ gross monthly salary (before taxes)
3rd year: 2158€ gross monthly salary (before taxes)

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
CV + application letter + recommendation letters + List of publications
Academic transcripts, thesis, project report
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.