Offer #2025-08595

Python software engineer for tslearn

Contract type : Fixed-term contract

Renewable contract : Yes

Level of qualifications required : Graduate degree or equivalent

Fonction : Support functions

Corps d'accueil : Ingénieur d'Etudes / Ingénieur de Recherche (IE/IR)

Level of experience : From 3 to 5 years

Context

Since 2018, Inria has played a crucial role as a support for the State's action in the field of artificial intelligence, in close collaboration with the National Strategy for AI. To steer this mission, Inria has created the AI Program, which is part of the Program Agency set-up entrusted by the State to Inria, and which coordinates innovative cross-functional AI initiatives: research, transfer and support for public policies.

As part of the AI acceleration strategy, and in particular in the area of “developing cutting-edge digital infrastructures, stimulating public-private partnerships and increasing the impact of AI research”, Inria has proposed the implementation of an acceleration project to support the implementation and development of an open and interoperable sovereign platform of AI software libraries for French companies, and its scaling to the European level.

This initiative is one of Inria's priorities as part of the development of its AI acceleration strategy, and with the aim of contributing to French technological sovereignty and the economic impact on French industry.

The expected impact of these measures on French industry is to enable all French companies, as well as public and institutional players, to accelerate their digital transformation using AI, without being in a captive relationship with the dominant players, thanks to the availability of a generic technological base and a set of associated transfer mechanisms.

This project, named P16, has two main components:

- A private-sector component aimed at industrializing the software in relation to the industrial and economic ecosystem, disseminating it in this world and ensuring, through the development of products and services, the economic sustainability of the project after the initial funded phase.
- A component aimed at the academic AI community, to facilitate and accelerate the industrialization of research results for industry, and to widely disseminate P16's achievements to the academic world.

As part of this ambition, the implementation of the measure is based on the development and dissemination of a coherent suite of software platforms for AI and data based on three actions:

- Action 1 focuses on data interoperability, proposing an architecture based on Web standards (Corese).
- Action 2, “Data Wrangling,” addresses data preparation, aiming to reduce the manual time required in data science projects (skrub).
- Action 3 focuses on model learning and execution.

As part of the academic component, the AI Program is recruiting for Project P16 a time series software engineer for tslearn, with a target start date of March 1, 2025

Main activities

Development of tslearn:

- Design, develop and maintain tslearn library features using robust software development practices.
- Participate in the experimentation of state-of-the-art statistical learning algorithms on time series data.
- Optimize code performance and quality by exploring different implementations.
- Document library code and APIs.
- Build continuous integration pipelines.
- Manage releases.

Development planning and phasing:

- Participate in task planning, organization of sprints, etc.

Collaborate with cross-functional teams:

- Collaborate with other technical teams within the P16 project to ensure seamless integration of tslearn with other software components.
- Participate in coordination and planning meetings with related teams to align development goals and efforts.

Participation in group activities:

- Participate in training courses and seminars.
- Participate in thematic networks to promote best practices in software engineering and experimentation.

Skills

Required skills:

- Solid experience in Python, with excellent knowledge of libraries such as scikit-learn, pandas, numpy, matplotlib and scipy.
- Advanced skills in data manipulation and statistical analysis, with a thorough understanding of learning methods.
- Demonstrated ability to work collaboratively on research and software development projects as part of a multi-location team.
- Ability to implement algorithms from academic publications.
- Experience in processing time series data.
- Strong knowledge of software engineering practices, including version control, testing, continuous integration and Agile methodologies.
- Excellent communication skills, enabling effective collaboration with internal and external teams.

Education and experience:

- Engineering degree in computer science, applied mathematics, numerical methods, statistical learning or related field.
- Relevant experience in similar projects, preferably in the context of artificial intelligence and data research.

Benefits package

- Subsidized meals
- Public transport partially reimbursed
- Vacations: 7 weeks' annual leave + 10 days' RTT (full-time basis) + possibility of exceptional leave (e.g. sick children, moving house)
- Possibility of teleworking and flexible working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)

Remuneration

- Restauration subventionnée
- Transports publics remboursés partiellement
- Congés : 7 semaines de congés annuels + 10 jours de RTT (base temps plein) + possibilité d'autorisations d'absence exceptionnelle (ex : enfants malades, déménagement)
- Possibilité de télétravail et aménagement du temps de travail

General Information

- **Town/city :** Rennes
- **Inria Center :** Siège
- **Starting date :** 2025-04-01
- **Duration of contract :** 12 months
- **Deadline to apply :** 2025-04-30

Contacts

- **Inria Team :** MISSION IA (DIRECTION)
- **Recruiter :**
  Kraidache Khallihanna / khallihanna.kraidache@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

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.