Offer #2024-08270

Full Stack Developer Internship

Contract type : Internship agreement

Level of qualifications required : Master's or equivalent

Fonction : Internship Engineering

About the research centre or Inria department

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).

Context

Henddu is an innovative startup project currently in scientific development within Inria's Startup Studio. The project's objective is to provide digital solutions to combat air pollution in African countries. To achieve this, the Henddu team is working on the development of two key platforms: HOQA (air quality monitoring in African cities and communities) and HESP (Estimation of the ecological footprint of companies).

Assignment

As an intern, you will contribute to the development of the HOQA platform, including its API and user interfaces. You will be involved in the collection, processing, and visualization of air quality data, collaborating with the technical team.

Main activities

- Backend API Development: Design and develop RESTful APIs for the collection, processing, and management of environmental data (notably air quality data).
- Sensor Data Integration: Set up services to integrate real-time air quality sensor data, ensuring efficient and structured storage in appropriate databases (MySQL, PostgreSQL, MongoDB).
- Performance Optimization: Participate in optimizing real-time data processing, addressing scalability and performance challenges with large volumes of data.
- Testing and Deployment: Contribute to the implementation of unit and integration tests to ensure API robustness. Help deploy the platform continuously using tools like Docker and CI/CD pipelines.
- Collaboration: Work closely with frontend and data teams to ensure the APIs meet user needs and allow optimal data visualization.

Skills

- Backend Languages: Python, PHP
- Frontend Languages: ReactJS, React Native
- Experience with REST APIs and associated frameworks (FastAPI, Laravel, etc.)
- Experience with relational databases (MySQL, PostgreSQL) and non-relational databases (MongoDB)
- Knowledge of API security best practices
- Experience with Docker and containerized environments management

Benefits package

- 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

General Information

- **Town/city :** Lille
- **Inria Center :** Centre Inria de l'Université de Lille
- **Starting date :** 2025-01-01
- **Duration of contract :** 4 months
- **Deadline to apply :** 2024-11-21

Contacts

- **Inria Team :** STIP-LNE
- **Recruiter :**
  Ngagine Soulemane / soulemane.ngagine@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.

The keys to success

We are looking for a student enrolled in engineering school or a Master's degree in computer science, passionate about environmental issues. Autonomy, teamwork, and an interest in real-time data management are valuable assets.

What We Offer

- The opportunity to work on a project with significant environmental impact
- Guidance and training within a dynamic team
- Potential for post-internship career growth

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.