Offer #2024-07433

Post-Doctoral Research Visit F/M EICACS

Contract type : Fixed-term contract

Level of qualifications required : PhD or equivalent

Fonction : Post-Doctoral Research Visit

Context

This position contributes to a European project which involves partners from both industry and academia of various European countries.

The goal of the project include:

1. The promotion or development of design rules and interoperability standards,

- to ensure the interoperability of collaborative heterogeneous assets
- to support secure sharing of resources and exchange of data and information between those systems and platforms for the benefit of the mission execution and performance in systems of systems contexts

- to offer mission system software scalability to speed up integration of new capabilities
- to contribute to the interoperability of mission system execution platforms

2. To define functional interfaces of sensors the assessment of questions brought by the implementation of AI technologies, including :

- Using trustable AI-based functions
- European autonomy over AI engineering tools, algorithm libraries and methods enabling the use of AI in military assets

- Compatibility of tools and processes for the development, the validation, the qualification and the certification of AI-driven operational services

The position generally requires working on a state-of-the-art analysis of Artificial Intelligence and related technologies in order to identify appropriate tools and libraries for autonomy.

Assignment

The required research includes in-depth analysis of selected software libraries. Specific metadata information associated to each software under investigation needs to be identified and registered, including cybersecurity risks related to the usage of each software library.

Based on relevant state- of- the- art, preliminary ideas how to support the mitigation of cognitive biases - included in a speech and data processing environment that is used intelligence analysis.

Some other directions that the research can contribute concerning speech processing are :

- Speaker verification using machine learning model
- Knowledge reasoning for semantic audio segmentation

Additionally, testing of Artificial Intelligence functions and libraries may be required. An investigation of frameworks and models will be conducted to identify the accurate framework that can ensure the future model of the system. The challenges of the autonomous environment will be analyzed to provide an accurate solution concerning the needs defined in the project. This will involve editing and modifying the software libraries so that to assure the needs of the project.

Main activities

- Desktop research of software tools and libraries in AI
- Creating state-of-the-art analysis and benchmarking analysis
- Performing data and functional analysis
- Software testing
- Working with sensitive data
- Writing scientific reports

- Presentation of the work done

Skills

We are looking for a highly motivated, creative, and independent researcher with a PhD and strong research background in scientific machine learning.

The following skills are required :

- Knowledge in Artificial Intelligence in particular machine learning and deep learning approaches
- Scientific expertise and an ambitious, independent, and problem-solving attitude are highly valued
- Excellent communication skills in both spoken and written English are a must, as is the ability to interact and work in a translational team of multi-disciplinary technical colleagues on an international level.
- Programming skills – Python, Scikit- learn library
- Emphasis will also be placed on personal competence creating presentations
- Phd with proficiency in English

Remuneration

Post doc = 2788 € bruts / gross per month.

General Information

- **Town/city :** To be defined during the recruitement process
- **Inria Center :** Siège
- **Starting date :** 2024-09-01
- **Duration of contract :** 12 months
- **Deadline to apply :** 2024-09-01

Contacts

- **Inria Team :** MIS-DEFENSE
- **Recruiter :**
  Maillet Florence / florence.maillet@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

To apply, please send your CV and motivation letter.

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.