2018-00232 - R&D engineer for Web-based visualization project (H/F)

Contract type: Public service fixed-term contract
Level of qualifications required: Graduate degree or equivalent
Fonction: Temporary scientific engineer
Level of experience: From 3 to 5 years

About Inria
Inria, the French National Institute for computer science and applied mathematics, promotes "scientific excellence for technology transfer and society". Graduates from the world's top universities, Inria's 2,700 employees rise to the challenges of digital sciences. With its open, agile model, Inria is able to explore original approaches with its partners in industry and academia and provide an efficient response to the multidisciplinary and application challenges of the digital transformation. Inria is the source of many innovations that add value and create jobs.

Context
Project-team ILDA, at Inria Saclay – Île-de-France near Paris, specializes in the design, development and evaluation of advanced interactive visualization systems to help domain experts understand and manipulate large amounts of data. The team currently collaborates with astrophysicists and engineers working at DESY (Deutsches Elektronen-Synchrotron), Germany, on the design and implementation of an advanced Web-based user interface for operations monitoring and control of the Cherenkov Telescope Array (CTA), a next-generation ground-based observatory for gamma-ray astronomy currently under construction on two sites in both hemispheres (La Palma, Spain for the northern hemisphere, and Paranal, Chile for the southern hemisphere).

The engineer will work at Inria Saclay Île-de-France in Gif-sur-Yvette, France. We anticipate some travel to DESY in Zeuthen near Berlin, in Germany over the two years of the project.

Assignment
The goal of this joint project with DESY is to contribute to the design and development of the advanced user interface components that will be used in the CTA control rooms for operations monitoring and control. Work on this project started 2 years ago, and the engineer will be joining a team of people who are already actively working on both the design and the implementation of these user interfaces (see references [1,2] below).


Main activities
The recruited engineer will be in charge of developing a set of interactive visualization components to be integrated in the framework already defined by the team. The main activities include:

- Iterative design of the visualization components (user interface).
- Prototyping and implementation of these components using Web-based technologies.
- Contribution to the development of the underlying framework (in Python).
- Writing the corresponding tests and documentation.

Skills
Candidates should have prior experience with Web-based technologies.

Required skills:

- Good knowledge of Python and Javascript.
- Software engineering skills (version control with svn or git, unit tests, documentation, etc.)
- The candidate should speak fluent English, as the work will be conducted in the context of an international project, in close collaboration with astrophysicists located in Germany but coming from different countries.
Optional skills:
- Prior experience with database management systems such as MongoDB, Casandra or Redis.
- Prior experience with Web frameworks such as, e.g., Pyramid, Flask, Spring MVC, Ruby on Rails.

Benefits package
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