HR EXCELLENCE IN RESEARCH

2021-04096 - Virtual Reality Engineer

Contract type : Fixed-term contract
Renewable contract : Oui
Level of qualifications required : Graduate degree or equivalent
Fonction : Temporary scientific engineer
Corps d'accueil : Ingénieur d'Etudes / Ingénieur de Recherche (IE/IR)

About the research centre or Inria department

The Inria Rennes - Bretagne Atlantique Centre is one of Inria's eight centres and has more than thirty research teams. The Inria Center is a major and recognized player in the field of digital sciences. It is at the heart of a rich R&D and innovation ecosystem: highly innovative PMEs, large industrial groups, competitiveness clusters, research and higher education players, laboratories of excellence, technological research institute, etc.

Context

This position is framed under the NAVISCOPE Inria Challenge, an Inria project aiming to bring together different research teams at Inria with complementary expertise around the acquisition, capture, analysis and visualization of biological imaging data. Precisely, it aims at creating an operational system allowing biologists to better explore and analyses massive biological data. This project regroups different research teams located at Rennes (SERPICO, HYBRID), Lyon (MOSAIC), Sophia Antipolis (MORPHEME) and Montpellier. Three main software systems are developed in the context of the project:

- Gnomon: A computational platform to analyze and simulate the development of living forms in 3D. https://gnomon.gitlabpages.inria.fr/gnomon/
- BioImage-IT: Aims at providing recipes and tools for imaging facilities to deploy interoperable image processing and data analysis solutions. https://project.inria.fr/bioimageit
- MorphoNet: An interactive anatomical browser for 3D, 3D+t segmented datasets. https://morphonet.org

In this project, you will integrate experimentation and development team (SED) from Inria Rennes, and the teams SERPICO and HYBRID also in Rennes. In the context of this project will have to interact with other partners in Lyon and Sophia Antipolis.

Assignment

The main mission in this project will be the development of a virtual reality visualization tool based on Morphonet. Morphonet is composed of two main components, a server component which handles data management and a client component which is mainly composed of a Unity web-based visualized. Over the last two years, an initial effort has been conducted to create a proof-of-concept system for a virtual reality visualization for Morphonet. Our objective is to push the boundaries of the current system enabling a full interoperability of the Morphonet system allowing the visualization and the annotation of biological datasets in virtual reality and to seamlesslty share and get data from Gnomon.

In order to do that, the candidate will be part of an agile team using the SCRUM framework. He/She will mainly focus on designing and building a native version of the Morphonet VR system while being supportive on other parts of the project.

Main activities

- Propose and implement immersive visualization solutions.
- Ensure a full interoperability with Morphonet.
- Write documentation and tutorials for end users.
- Regularly present the advancements of the project to other partners
- Assist to the regular meetings of the SED, SERPICO and HYBRID teams

Skills

- programmation in C, C#
- skills in VR technologies such as Unity, Steam VR, OpenGL Shaders, ..
- skills in software engineering (design patterns, git, continuous integration, coonda)
- appetite for Agile methodologies and team work
- Strong analytical and creative capabilities

Benefits package

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT
- Possibility of teleworking (after 6 months of employment) 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

Remuneration

General Information

- **Theme/Domain :** Computational Biology Software Experimental platforms (BAP E)
- **Town/city :** Rennes
- **Inria Center :** CRI Rennes - Bretagne Atlantique
- **Starting date :** 2021-11-01
- **Duration of contract :** 1 year, 2 months
- **Deadline to apply :** 2021-10-31

Contacts

- **Inria Team :** SERPICO
- **Recruiter :**
  Cabel Tristan / tristan.cabel@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

With a scientific background, you have an appetite for scientific fields and digital sciences, with experience in the fields of VR. Motivation, curiosity and the desire to learn is the main expected quality. Your ability to work in a team, to be proactive and to motivate a team will also be very important.

Instruction to apply

Please submit online : your resume, cover letter and letters of recommendation eventually

For more information, please contact tristan.cabel@inria.fr

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.

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.

Monthly gross salary from 2562 euros according to diploma and experience.