Offer #2019-01635

Post-Doctoral Research Visit F/M Recommendation of Medical Training Questions Adapted to Students' Profile

Contract type : Fixed-term contract

Level of qualifications required : PhD or equivalent

Other valued qualifications : PhD

Fonction : Temporary scientific engineer

Level of experience : From 3 to 5 years

About the research centre or Inria department

The Inria Sophia Antipolis - Méditerranée center counts 37 research teams and 9 support departments. The center's staff (about 600 people including 400 Inria employees) is composed of scientists of different nationalities (250 foreigners of 50 nationalities), engineers, technicians and administrators. 1/3 of the staff are civil servants, the others are contractual. The majority of the research teams at the center are located in Sophia Antipolis and Nice in the Alpes-Maritimes. Six teams are based in Montpellier and a team is hosted by the computer science department of the University of Bologna in Italy. The Center is a member of the University and Institution Community (ComUE) "Université Côte d'Azur (UCA)".

Context

We are looking for a Postdoctoral researcher with a background in Semantic Web, Knowledge Representation and Reasoning, Recommender Systems to join the Inria Wimmics team to work within the **SIDES 3.0 national French project funded by ANR**

Since 2013, the medical schools in France have been using a shared national platform that allows their teachers to create and apply local evaluation tests (on computers or tablets), which are shared among universities to form a national database with training tests. This custom-made Web platform is called SIDES (Système Informatique Distribué d'Evaluation en Santé).

The SIDES 3.0 project aims the **development of a new version of the SIDES platform** (Système Intelligent d'Enseignement en Santé 3.0) offering user-centered intelligent services such as: individual follow-ups, enriched dashboards, personalized recommendations, augmented corrections for self-assessment, standardized digital knowledge sharing environment or in situ experimentation tool for research. To achieve this goal, the development of the SIDES 3.0 platform relies on semantic Web models and technologies.

The platform offers the user a large number of training questions related to different subjects and specialties of medicine and annotated in RDF according to the SIDES ontology. In this context, the main goal of Wimmics in this project is to answer the research problem of **recommending the available medical training questions to the students of medicine** in order to develop new functionalities in the platform improving the students learning experience, according to their learning objectives, profile and learning progress.

Assignment

The recruited person will be in charge of managing and monitoring the SIDES 3.0 project for the partner Inria and researching and developing innovative methods and algorithms for recommending educational resources on the SIDES 3.0 platform.

Main activities

The first task of the recruited person will be the management and follow-up of the SIDES 3.0 project for the partner Inria.

About the R&D task, the recruited person will incrementally improve the recommender service of the SIDES 3.0 platform while seeking to answer the following research questions:

- How to classify the available questions present in the SIDES 3.0 platform by their common characteristics such as learning objectives?
- How to detect the initial level of the students and monitor their progress during their learning path?
- Which questions should be selected to be recommended to a student, in order to maximize his

learning experience?
- How does the exploitation of Semantic Web models enable to improve the resource recommendation process?

Experiments will be carried out in collaboration with the project partners in order to evaluate the proposed recommendation algorithms by comparing them with state-of-the-art solutions.

Skills

Important skills are:

- Project management, self-organization, professionnalism
- Knowledge of Semantic Web models and techniques, and Knowledge Representation and Reasoning
- Knowledge of Machine Learning (Knowledge Graph Learning), Recommender systems, and adaptive e-Learning systems
- Interest for the medical domain and Education
- Self-motivated and willing to work in an international team
- Fluent English and/or French

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 (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

Gross salary : 2632€ monthly

General Information

- **Theme/Domain :** Data and Knowledge Representation and Processing
  Information system (BAP E)
- **Town/city :** Sophia Antipolis
- **Inria Center :** Centre Inria d'Université Côte d'Azur
- **Starting date :** 2019-06-01
- **Duration of contract :** 1 year, 6 months
- **Deadline to apply :** 2020-01-06

Contacts

- **Inria Team :** WIMMICS
- **Recruiter :**
  Faron Catherine / Catherine.Faron@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

Strong knowledge of Semantic eb models and technics and Recommender systems

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.