2018-01049 - Software Development Engineer: Design and Development of phone and Teleconferencing front-end interfaces

Contract type: Public service fixed-term contract
Renewable contract: Oui
Level of qualifications required: Graduate degree or equivalent
Other valued qualifications: Master degree or a PhD degree in computer science
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 (ComU2) “Université Côte d’Azur (UCA).”

Context:

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Assignment

The main objective of this assignment is to develop phone and Teleconferencing front-end interfaces, which will allow the remote screening of a population with potential cognitive disorders at early stage. A second stage multi-modal component integration (audio-video) for better detection of affective states of patients will be performed.

Main activities

More precisely, the engineer will work on the development of two front-end interfaces:

- Automatic phone interface with dialogue system enabling smooth speech-driven assessment. The solution’s usability will be designed for people with different cognitive status and technology experience, in case the teleconferencing is impossible or difficult to a participant.
- Semi-automatic interface with the teleconferencing technology allowing an extended set of tests performed with the assistance of a trained formal or informal caregiver. An evaluation of emotional video analysis will be performed in order to enrich the speech markers and support differential screening (e.g., cognitive symptoms can be due to depression or other affective psychiatric states not to be confounded with actual neurocognitive causes).

Skills

Candidates should hold a Master degree or a PhD degree in computer science with very good programming skills and basic knowledge in video and signal processing. We are looking for a candidate with:

- experience in the development of computer and/or web applications and good with software engineering methodologies;
- excitement about user interface design - telecommunication interface development, integration and set up of platform, multi-modal component integration
- Programming languages skills (not all required): C/C++, Java, Web (HTML, CSS, JS), Swift, python
- OS skills: Windows and iOS.

General Information

- Theme/Domain: Vision, perception and multimedia interpretation
- Instrumentation et expérimentation (BAP C)
- Town/City: Sophia Antipolis
- Inria Center: CRI Sophia Antipolis - Méditerranée
- Starting date: 2019-01-01
- Duration of contract: 12 months
- Deadline to apply: 2018-11-01

Contacts

- Inria Team: STARS
- Recruiter: Konig Alexandra / alexandra.konig@inria.fr

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 2700 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.

The keys to success

- comfortable with creatively chaotic international teamwork
- (crazy about natural language processing)

Conditions for application

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.
Benefits package

- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- Flexible working hours
- Sports facilities