



Offer #2024-07977

Post-Doctoral Research Visit F/M conversational agents with interpersonal skills

Contract type : Fixed-term contract

Renewable contract : Yes

Level of qualifications required : PhD or equivalent

Fonction : Post-Doctoral Research Visit

Level of experience : From 3 to 5 years

Context

Framework: Within the framework of a partnership with a large AI project in Asia, this postdoctoral research opportunity will concentrate on better understanding interpersonal skills in people, and building such skills into contemporary embodied conversational agents.

Context: Some prior work has addressed making conversational agents more polite, more "playful" and even more flirtatious. But for the most part these attempts have relied on repetitive fixed behaviors that do not adapt to the listener's behavior. Similarly, other prior work has attempted to give conversational agents a personality, but in many cases - including ChatGPT personas - these attempts seem to rely on old-fashioned or folk theories of personality and, once again, have not developed personality traits that adapt to the interlocutor.

There is therefore a need for models of *interpersonality* that can be implemented into embodied conversational agents in order to allow them to optimize their collaboration with their human users by recognizing the user's conversational style, personality, and behaviors and adapting over the course of one or several conversations.

Assignment

Assignments :

In collaboration with other members of the research team in Paris and in Asia, the recruited person will guide an effort to:

- collect data on human-human conversations, seeking to better understand the different ways that language, prosody and nonverbal behaviors play a role in conveying personality traits, and how these multimodal devices change as a function of the context (including the language spoken by the participants, the topic under discussion, how well the people know one another, the personality traits of each member of the conversation, etc.).
- analyze the data to understand how the different modalities function in conjunction with one another to display and recognize personality traits, and how these behaviors adapt as a function of the context.
- build models of the behavior, using both feature selection tools and end-to-end models, in such a way as to allow a better understanding of human behavior, and an implementation of an embodied conversational agent.
- work with other members on the team to implement a relevant conversational agent that involves both modular and LLM components.
- evaluate the performance of the conversational agent in interaction with people in different contexts.
- write and publish articles on the results of each stage.

As a part of this research initiative, the successful candidate will be responsible for managing younger scholars, such as masters students.

For a better understanding of the proposed research, candidates can look at the SARA (Socially-Aware Robot Assistant) and other projects carried out in the Articulab, here:

<<http://articulab.hcii.cs.cmu.edu/projects/>> and read some of the publications associated with the projects above, found here: <<http://articulab.hcii.cs.cmu.edu/publications/>>.

Main activities

Main activities :

- Spearhead data collection and data management.
- Take the initiative to discover and develop novel pertinent analysis methods.
- Play a key role in collaboration with research partners.
- Regularly write documentation and reports for local team and research partners.
- Write and publish on the research.

Additional activities :

- Take the initiative to maintain contact and understand requirements of research partners
- manage and support younger scholars.
- Prepare slides and demos for conferences, partners and visitors.

Skills

In order to apply, please send:

(1) a cover letter (*lettre de motivation*) describing your relevant experience,

(2) a CV,

(3) the names and contact information of 3 people who can write letters of reference for you.

PLEASE NOTE: we will not accept any letters of recommendation sent by the candidate. You must send only contact information for your referees.

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
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage

General Information

- **Theme/Domain** : Language, Speech and Audio
- **Town/city** : Paris
- **Inria Center** : [Centre Inria de Paris](#)
- **Starting date** : 2024-10-01
- **Duration of contract** : 2 years
- **Deadline to apply** : 2024-09-30

Contacts

- **Inria Team** : [ALMANACH](#)
- **Recruiter** :
Cassell Justine / justine.cassell@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

The successful candidate will:

- be able to collaborate successfully with interdisciplinary and international research teams, who are both co-present and at a distance.
- be able and ready to manage younger scholars and team members, such as masters and L2 students.
- be capable of working both independently and in tight collaboration with others.
- Posses a positive outlook and resilience in the face of inevitable research obstacles.
- wish to learn and listen.

Experience in collecting and analyzing data using a variety of analytic methods is a real asset, as is a multidisciplinary background, involving both cognitive science and AI methods.

The successful candidate should have a strong grasp of English and/or French, and be willing to work on learning the second language if not already mastered.

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.