



Offre n°2024-07977

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

*Le descriptif de l'offre ci-dessous est en Anglais*

Type de contrat : CDD

Contrat renouvelable : Oui

Niveau de diplôme exigé : Thèse ou équivalent

Fonction : Post-Doctorant

Niveau d'expérience souhaité : De 3 à 5 ans

### Contexte et atouts du poste

**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.

### Mission confiée

**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/>.

### Principales activités

## 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.

## Compétences

*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.

## Avantages

- 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

## Informations générales

- **Thème/Domaine** : Langue, parole et audio
- **Ville** : Paris
- **Centre Inria** : [Centre Inria de Paris](#)
- **Date de prise de fonction souhaitée** : 2024-10-01
- **Durée de contrat** : 2 ans
- **Date limite pour postuler** : 2024-09-30

## Contacts

- **Équipe Inria** : [ALMANACH](#)
- **Recruteur** :  
Cassell Justine / [justine.cassell@inria.fr](mailto:justine.cassell@inria.fr)

## A propos d'Inria

Inria est l'institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l'interface d'autres disciplines. L'institut fait appel à de nombreux talents dans plus d'une quarantaine de métiers différents. 900 personnels d'appui à la recherche et à l'innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 200 start-up. L'institut s'efforce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

## L'essentiel pour réussir

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.

**Attention:** Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

## Consignes pour postuler

### Sécurité défense :

Ce poste est susceptible d'être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L'autorisation d'accès à une zone est délivrée par le chef d'établissement, après avis ministériel favorable, tel que défini dans l'arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l'annulation du recrutement.

### Politique de recrutement :

Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.