INSTITUT DES SYSTEMES INTELLIGENTS ET DE ROBOTIQUE
OFFRE D'EMPLOI

Fiche de poste

Intitulé du poste : Learning Multimodal Behavior Representations for Personalized Human-Machine Interaction

Type de poste : ☒ Post–Doc ☐ Ingénieur·e ☐ Autre : …

Date de début de contrat : à partir de Juillet 2023

Durée du contrat : 18 mois

Quotité de travail : ☒ 100% ☐ autre précisez (50 % minimum) :

Expérience souhaitée :
☐ Débutant
☒ 1 - 4
☒ 4 - 10
☐ + de 10

Niveau d'études souhaité : PhD thesis

Montant rémunération : standard

Laboratoire d'accueil : ISIR (*Institut des Systèmes Intelligents et de Robotique*), Campus Pierre et Marie Curie, 4 place Jussieu, 75005 Paris.

Personne à contacter

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Candidature :
☐ En ligne. Lien vers le portail emploi :
☒ Par mail. Envoyer votre candidature par mail, avec [*nom de l'offre*] en objet, un CV et une lettre de motivation.

Date limite de dépôt de la candidature : May 15, 2023

Description du poste (en anglais)

The PIRoS (Perception, Interaction and Robotique Sociales) team of the Institute for Intelligent Systems and Robotics (ISIR) at Sorbonne University (Paris) is looking for a for a highly motivated and ambitious postdoctoral researcher to conduct research on human-machine interaction & machine learning.

Description
Personalized Human-Machine Interaction systems provide experiences that are tailored to the human partner's individual needs and preferences. For this purpose, they require user models that are usually inferred from a user profile and/or from the observation of human's actions. The ability to adapt to changing contexts or individuals is important and poses numerous challenges

concerning multimodal data collection and interpretation, privacy, and transparency. There is a need to develop new human behavior representations able to reflect heterogeneity between users, while preserving privacy.

This post-doc will be focused on the development of human-centered machine learning techniques for personalized adaptation. These techniques will result in the computation of human behavior representations from multimodal data using pragmatic reasoning in order to improve interpretation of context-dependent components of human-behaviors. Pragmatic reasoning will equip human-machine interaction systems (robots, serious games) with a greater degree of human partner awareness enabling them to account for latent intent or state.
Following a Human-Centered approach, the post-doc position will also consider ethical issues in both modeling (e.g. biases, privacy) and experimental (e.g. with vulnerable participants) parts of the research work.
To evaluate the effect of computational models on the personalization of human-interaction systems, experiments will be conducted with robots/serious games with different profiles (children, adults, seniors). The candidate will have the opportunity to take advantage of experimental settings of the team, including a Neuro-Development Living & Learning Lab s (LiLLab).

This position is for 18 months contract, but there is a possibility to be extended depending on the performance and circumstances.

Requirements
The ideal candidate must have a PhD degree and a strong background in machine learning, human-machine interaction or cognitive science/neuroscience.

The successful candidate should have:
- Experience in human-machine interaction
- Good knowledge of Machine Learning Techniques
- Good knowledge of experimental design and statistics
- Excellent publication record
- Strong skills in Python
- Willing to work in multi-disciplinary and international teams
- Good communication skills

Application
Interested candidates should submit the following by email in a single PDF file to: mohamed.chetouani[@]sorbonne-universite.fr with the subject: Application Post-Doc Multimodal Representation
1. Curriculum vitae with 2 references (recommendation letters are also welcome)
2. One-page summary of research background and interests
3. At least three papers (either published, accepted for publication, or pre-prints) demonstrating expertise in one or more of the areas mentioned above
4. Doctoral dissertation abstract and the expected date of graduation (for those who are currently pursuing a Ph.D)

Application's deadline: **May 15, 2023.**