Offer #2024-07974

PhD Position F/M Multidisciplinary PhD: better understand and improve collaboration among peers

Contract type : Fixed-term contract

Level of qualifications required : Graduate degree or equivalent

Fonction : PhD Position

Level of experience : From 3 to 5 years

Context

Context: Collaboration among peers is a core part of education, in France as in other countries. However surprisingly little is known about how to optimize collaboration, how to choose which students should work together, how their work conversations should be managed, and how to design educational materials and and educational technologies in order to increase learning gains for all members of a collaboration group.

In this PhD the student will work with the research team to bring together a range of disciplinary approaches, including linguistics, psychology, education, AI, and neuroscience, in order to better understand peer collaboration, and to use the results to build models of optimal peer collaboration that can then be implemented in conversational agent systems.

For more information about the background of the work, candidates may see the PhD supervisor's papers, found here <www.justinecassell.com>, the research group's website, found here: <https://articulab.hcii.cs.cmu.edu/>, and a recent publication from the team working on this project, found here: <https://www.frontiersin.org/journals/neuroergonomics/articles/10.3389/fnrgo.2024.1290256/full>.

Assignment

Assignments :

The student chosen for this PhD is expected to take the initiative to become fully informed and conversant in all of the literature implicated in this research, and to share that knowledge with the supervisor and other team members.

On the basis of that literature, the student chosen for this PhD will -work with the team to:

- design and implement an experiment that brings together peers to work on education-oriented tasks.
- manage and analyze multimodal data collected during the experiment, including conversational data, educational performance, metrics of interpersonal bonds, and fNIRS data on interbrain synchrony among the collaborating students.
- build both social science and computational models of the results.
- write up and publish the results, in such a way as to lead to a PhD thesis.

Main activities

Main activities :

- Discover, read, and summarize the necessary background literature
- Help to design experiments to answer the core questions of the research
- Manage and analyze data collected during the experiments
- Build models of the results that can be used to implement peer conversational agents
- Write papers, present, and publish research

Additional activities :

- - Build and maintain solid relationships with educational organizations, improving the

experimental design with their feedback, providing feedback to them, and managing data collection in a way that benefits them as well as the research group.
- Collaborate with other project members to regularly produce documentation, slides and other materials about the research that can be used with a variety of audiences.
- Manage interns working on the project.

In order to apply for this PhD student position, please upload into JobIn the following:

1. *An up-to-date CV.*
2. *A letter of motivation describing your relevant experience and interests*
3. *The names amd contact information of 3 people who can write recommendations for you (please note that letters of recommendation will **not** be accepted - only names and contact information for recommenders that we will contact).*

Skills

The successful candidate should have:

- a strong grasp of French or English, and be willing to learn the second language.
- a background in psychology, education, and / or cognitive science

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** : Computational Neuroscience and Medicine
  Data production, processing, analysis (BAP D)
- **Town/city** : Paris
- **Inria Center** : Centre Inria de Paris
- **Starting date** : 2024-10-01
- **Duration of contract** : 3 years
- **Deadline to apply** : 2024-09-30

Contacts

- **Inria Team** : ALMANACH
- **PhD Supervisor** :
  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 work successfully with interdisciplinary and international research teams.
- 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 experimental obstacles.
- wish to learn and listen.

Experience in collecting and analyzing data using a variety of analytic methods is a real asset.

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.