Offer #2024-07788

Post-Doctoral Research Visit F/M Automatic analysis of alignment between speakers in conversations

Contract type : Fixed-term contract

Renewable contract : Yes

Level of qualifications required : PhD or equivalent

Fonction : Post-Doctoral Research Visit

Context

This postdoc position is offered in the context of the ANR PRME SINNet project (Socio-Inspired Neural Networks for Conversational Systems), aiming to develop socially-aware neural conversational models which are able to adapt their language and behavior to the agent-user social relationship.

One of the key human behaviors that is desirable for automatic systems to imitate is alignment, also called entrainment, which consists in mirrorring the interlocutor's behavior and language use. This postdoc position will specifically be devoted to the characterization and modeling of alignment at the level of word meaning.

Assignment

The postdoc will focus on cases of miscommunication due to a lack of lexico-semantic alignment between speakers in a conversation.

The goals will be to:

- Investigate, analyze and characterize this phenomenon in human interaction: how humans produce, signal, and solve misunderstandings or disagreements due to specific lexical elements in dialog;
- Produce a semi-automatically annotated corpus with instances of this phenomenon;
- Propose models that can identify word usages that are potential triggers or causes of miscommunication, as well as pinning down the reason why they may be problematic and for whom;
- Build or adapt systems that are able to both (1) avoid producing potential triggers, adapting to the speaker and the conversational situation; (2) mirror human behavior and repair strategies when faced with such triggers, e.g. asking for disambiguation.
- Provide ways of evaluating the proposed methodology.

Main activities

The successful postdoc candidate will be part of INRIA's ALMAnaCH team, specialized in NLP. Besides the research tasks mentioned under Assignments, they will be expected to participate and collaborate in the team's activities, including seminars and reading groups.

Skills

- PhD in Natural Language Processing, Computational Linguistics, Computer Science with a specialization in Machine Learning, or related fields;
- Knowledge of deep learning as well as more traditional machine learning techniques;
- Desired prior experience on conversational AI, word meaning representations and corpus annotation;
- Strong programming skills (Python);
- Fluency in English.

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
- Flexible organization of working hours (after 12 months of employment)
- 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
  Statistics (Big data) (BAP E)
- **Town/city :** Paris
- **Inria Center :** Centre Inria de Paris
- **Starting date :** 2024-10-01
- **Duration of contract :** 12 months
- **Deadline to apply :** 2024-07-04

Contacts

- **Inria Team :** ALMANACH
- **Recruiter :**
  Clavel Chloe / chloe.clavel@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

There you can provide a "broad outline" of the collaborator you are looking for what you consider to be necessary and sufficient, and which may combine :

- tastes and appetencies,
- area of excellence,
- personality or character traits,
- cross-disciplinary knowledge and expertise...

This section enables the more formal list of skills to be completed and 'lightened' (reduced) :

- "Essential qualities in order to fulfil this assignment are feeling at ease in an environment of scientific dynamics and wanting to learn and listen."
- " Passionate about innovation, with expertise in Ruby on Rails development and strong influencing skills. A thesis in the field of **** is a real asset."

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.