Post-doctoral researcher in Natural Language Processing / Machine Learning, Lorraine Université D'Excellence, France.

Description

Formal and statistical modeling of dialogue application to pathological data

One postdoc position (1 year) in Natural Language Processing / Machine Learning is open in the Semagramme and SyNaLP team at LORIA and at ATILF. This position will be funded by the impact projet OLKI (Open Language and Knowledge for Citizens) from Université de Lorraine.

Informations

- Salary: around 2,000 euros per month net income
- Informal inquiries can be sent by email to Maxime Amblard (maxime.amblard@loria.fr) and Chloé Braud (chloe.braud@loria.fr).
- Application: CV, motivation letter, PhD evaluation, master TOR and support letter(s)

Keywords

NLP, Discourse and Dialogue, machine learning, logic, corpora, natural language, pathology

Scientific project

Modeling interaction is a crucial step for Natural Language Processing (NLP), which requires the development of automatic tools able to simulate these exchanges. A typical example is chatbots and all the services based on them. But Dialogue Models face two types of difficulties.

(I) The first issue concerns the availability of resources and models that can analyze and process dialogues. Modelling dialogues is very hard, in particular because conversations high- light particular uses such as the relationship between questions and answers. Recent models show that this issue is beyond semantics understanding, and even more so beyond discourse. Another perspective is to use Machine Learning approaches in order to identify dialogical relations and dialogical interactions. Generally speaking discursive analysis aims at building a structure representing the semantic links between sentences.

(II) The second is that dialogue models must be coordinated with pragmatic inferences at a higher level. In this case, we can refer to linguistic models of dialogue, or to models that capture conceptual links. In particular, we propose to apply these approaches to the SLAM project corpus. The SLAM project links thought and language disorders. This corpus consists of transcriptions of interviews with schizophrenic patients. Exchanges with these patients contain interactions that are difficult to interpret semantically and interactively.

Additional Information

Selection process

Informal inquiries can be sent by email to Maxime Amblard (maxime.amblard@loria.fr) and Chloé Braud (chloe.braud@loria.fr).

CV, motivation letter, PhD evaluation, master TOR and support letter(s)

Additional comments

Maxime Amblard, MCF HDR, is a specialist in computational linguistics. He is interested in the use of logical and formal tools to model the semantics and pragmatics of natural language. His recent research focuses on a corpus of pathological uses of the language and dialogue's representation.

Supervisors members.loria.fr/mamblard

Chloé Braud, CR CNRS, is a computer linguist specializing in discourse parsing. The strategies she implements are based on machine learning for domain adaptation tasks in a multilingual, cross-domain context. chloebt.github.io

Michel Musiol, PR is a psycholinguist. He is interested in the analysis of the manifestation of thought disorders through language. He studied the particularities of interviews with shizophrenic patients. michel.musiol.free.fr

The skills of the different supervisors are complementary for the subject, both on the formal, digital and psycholinguistic aspects.

Web site for additional job details

loria.fr/fr/emplois/post-doc-2019-formal-and-statistical-modeling-...

Offer Requirements

Required Education Level

- Computer science: PhD or equivalent
- Language sciences: PhD or equivalent

Required Languages

- English: Excellent

Skills/Qualifications

The post-doctoral fellow must have a PhD in Computational Linguistics/NLP, Computer Science or related fields, with a good programming skills. He/She must be fluent in English and have demonstrated its ability to publish at the highest international level. Note that Knowledge of French is NOT a requirement.

Supervision of students is possible, if wanted.

Job Details

Title Post-doctoral researcher in Natural Language Processing / Machine Learning

Employer Lorraine Université d'Excellence (LUE)

Job location 615, rue du Jardin Botanique, 54600 Villers-lès-Nancy

Fields Informatics, Logic, Psychiatry & Psychology, Pathology, Computational Linguistics, Discourse Analysis, Pragmatics, Psycholinguistics, Semantics and 1 more.