POSTDOCTORAL RESEARCH FELLOWSHIP IN COMPUTATIONAL LINGUISTICS

Job description

A Postdoctoral Research Fellowship (SKO 1352) is available at the Department of Linguistics and Scandinavian Studies, University of Oslo.

The position is associated with Humit - Centre for Digital development at the Faculty of Humanities in Oslo and the section for linguistics at the Department of Linguistics and Scandinavian Studies.

The postdoc will work in close collaboration with Prof. Dag Haug on topics on the interface between lexical semantics and large language models (LLMs). Vector space models of lexical meaning, i.e. (static or contextual) word embeddings, naturally give rise to a similarity metric, but while the notion of lexical semantic similarity has an intuitive appeal, the concept plays no role in traditional lexical semantics. This field instead relies on relations like homonymy, polysemy, synonymy, antonymy, hyponymy and meronymy, which have no clear counterparts in vector spaces. This gap gives rise to numerous questions: Is it possible to construct a theoretical notion of similarity which connects with similarity metrics on vector spaces? Are the traditional relations of lexical semantics recoverable from word embeddings? Moreover, the shift from static to contextualized word embeddings gives rise to additional questions: Do contextualized embeddings represent word meaning in its context or word meaning and its context, and how does this differ across model layers? The postdoc will explore these questions together with the PI. We will also explore possibilities for collaboration with other LLM-related initiative at the Faculty of Humanities such as the Strategic Research Priorities project 'Communication with Large Language Models'. The overall goal is to reach a better understanding of how LLMs represent words, which in turn will help improve the application of LLMs to other domains, such as protein data, in collaboration with the convergence environment ImmunoLingo, which part-funds this position. Prospective applicants are welcome to contact Dag Haug to discuss possible concrete research projects within this overall frame.

The position is available for a period of 2 years and 1 month. There is a 10 % component of the position which is devoted to teaching and administrative duties. The postdoc is expected to spend most of this time holding theoretical and practical courses on large language models for the staff at the Faculty of Humanities.

The successful candidate is expected to become part of the research environment of the department and contribute to its development. The main purpose of postdoctoral research fellowships is to qualify researchers for work in higher academic positions within their disciplines.

Requirements

- PhD or equivalent academic qualifications with a specialization in linguistics or computational linguistics

- The candidate's research project must be closely connected to the main project
- Fluent oral and written communication skills in English
- Personal suitability and motivation for the position

Applicants must be in the final stages of their PhD work by the closing date. Appointment is dependent on the public defence of the doctoral thesis being approved.

In the evaluation of the applications, emphasis will be placed on:

- The research project's scientific merit, research-related relevance and innovation
- The applicant's estimated academic and personal ability to carry out the project within the allotted time frame and contribute to the overall project
- Good co-operative skills, and the ability to successfully join in academic collaboration within and across disciplines

We offer

- Salary NOK XXX – XXX per annum depending on qualifications (lønnstrinn 59-67 LO/YS/UNIO)
- A professionally stimulating working environment
- Membership in the Norwegian Public Service Pension Fund
- Attractive welfare benefits

How to apply

The application must include

- Application letter describing the applicant's qualifications and motivation for the position
- Curriculum Vitae with grades listed (with a list of education, positions, teaching experience, administrative experience and other qualifying activities)
- List of publications
- Research statement (approx 2.-3 pages) describing how the candidate's research interests align with the project and outlining concrete research topics that the candidate would like to work on
- 1 academic work (e.g. article or dissertation chapter) that the applicant wishes to be considered

Please note that all documents must be in English or a Scandinavian language.

The application with attachments must be delivered in our electronic recruiting system, jobbnorge.no. Applicants with education from a foreign university must attach an explanation of their university's grading system.

The short-listed candidates will be invited for an interview.

Formal regulations

See also Regulations concerning Post-Doctoral Research Fellowships.

Following the Freedom of Information Act (Offentleglova) § 25, Chapter 2, information about the applicant may be used in the public list of applicants even if the applicant opts out from the entry in the public application list.

No one can be appointed for more than one Postdoctoral Fellow period at the University of Oslo.

The University of Oslo has an [Acquisition of Rights Agreement](#) for the purpose of securing rights to intellectual property created by its employees, including research results.

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

Deadline:

Contact persons: