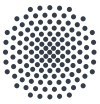

University of Stuttgart
Institute for
Natural Language Processing

Open Positions for one PhD student and one Postdoc in Multimodal Emotion Analysis in Social Media

About the University of Stuttgart

The University of Stuttgart represents outstanding, world-renowned research and first-class teaching in one of Europe's most dynamic industrial regions. As a reliable employer, the university supports and promotes the academic careers of its researchers. It is proud of its employees, who currently come from over 100 different countries. The university is a partner for knowledge and technology transfer and focuses on multidisciplinarity.

Application Deadline

- May 10, 2023
- Intended start of the project: August or September 1st, 2023

About Us

The Institute for Natural Language Processing, which is part of the Faculty of Computer Science and Electrical Engineering, is one of the largest academic research institutes for natural language processing in Germany, with three full professors, an assistant professor, three senior lecturers, and several junior research groups. Its activities range from computational corpus linguistics to semantic processing, deep learning, machine translation, psycholinguistics, and phonetics, and hosts several projects funded by the European Commission (EC), the German Research Foundation (DFG), the German Ministry for Research and Education (BMBF), and various foundations. The institute manages dedicated BSc and MSc programs in Computational Linguistics.

The group on Information Extraction and Interpretation which is part of the Chair for Theoretical Computational Linguistics, headed by Roman Klinger, performs research on emotion and sentiment analysis, social media mining, fact checking, information extraction, and conditional language generation. The project is administered jointly with the research group on Computational Linguistics and Vision, headed by Carina Silberer. Her research interests lie in multimodal semantics, where she focuses on the question of how machine learning models can learn to understand and use language such as to naturally communicate and interact with humans in the real world, and on learning semantic and procedural knowledge from multimodal data.

The city of Stuttgart is the capital of the state of Baden-Württemberg in southwest Germany. It is a lively and international city, known for its strong economy and rich culture. With Germany's high-speed train system, it is well-connected to many other interesting places, for instance, Munich and Cologne (~2 hours), Paris (~3 hours), Berlin (~5.5 hours), Strasbourg (<1.5 hours), and Lake of Constance (~2.5 hours).

Your Tasks

You will work in the project "User's Choice of Images and Text to Express Emotions in Twitter and Reddit" (ITEM) in which we study how users in social media communicate their emotions. Particularly interesting for us is to understand how people choose to express themselves via text or images, and what the relation between these modalities is. To do so, we will develop annotated multimodal data sets via crowdsourcing and then develop multi-modal emotion classifiers. One focus will be on the interpretation of described or depicted events and situations that cause emotions. Therefore, we will employ psychological appraisal theories in the computational modelling.

The main task of the 3-year PhD. student position is to develop statistically, particularly deep neural network models based on transfer learning, that recognize emotion and appraisal concepts in text, images, and both together.

The main task of the 1-year postdoctoral position in the project is to create the annotated data set via crowdsourcing.

Your Profile

The ideal candidate for the PhD position should have:

- Knowledge and previous experience in natural language processing, ideally in emotion analysis
- Experience in the analysis of social media mining, ideally with the use of pre-trained models for the analysis of images or text
- Theoretical and practical knowledge on machine/deep-learning based modeling

Further requirements are:

- Master's degree in computational linguistics or computer science, or related fields
- knowledge of natural language processing (NLP) / computational linguistics (CL) / Computer Vision
- strong programming skills
- excellent communication skills and interest in interdisciplinary work
- proficiency in English (knowledge of German is not required)

The ideal candidate for the Postdoc position (which can also be filled with a senior PhD student) should have:

- Experience with annotation tasks of psychological concepts.
- Experience with the use of crowdsourcing platforms, ideally Prolific.
- Knowledge how to develop an annotation environment to be used in crowdsourcing platforms (which requires some knowledge of HTML/CSS/JavaScript).

- Experience with data analysis and publication.
- Openness to thinking about ethical considerations.

Further requirements are:

- PhD (finished or soon to be finished) in computer science or related fields
- basic web programming skills
- programming skills for data processing, conversion and analysis
- excellent communication skills and interest in interdisciplinary work
- proficiency in English (knowledge of German is not required)

Our Benefits

We provide you with a friendly, but challenging interdisciplinary research environment and support your academic career towards accomplishing your Ph.D. in a prestigious research institute.

For the Postdoc position, we will support you to develop yourself towards an independent researcher.

The salary amounts to German TV-L E 13, which starts at approx. 50,000 Euro income per year (before taxation). The exact income depends on prior relevant job experiences.

Employment and compensation information

PhD Student Position:

- Maximal Funding Period or Duration of Employment: 3 years
- Type of Funding: Position as Employee at the University of Stuttgart
- Compensation: EG TV-L 13
- Percentage of weekly working hours (usually 39.5h = 100%): 100%
- Location: Stuttgart, Campus Vaihingen

Postdoctoral Position:

- Maximal Funding Period or Duration of Employment: 1 year
- Type of Funding: Position as Employee at the University of Stuttgart
- Compensation: EG TV-L 13
- Percentage of weekly working hours (usually 39.5h = 100%): 100%
- Location: Stuttgart, Campus Vaihingen

How to apply

Please send one PDF file which contains both a motivation letter and a CV by email. You can also apply via the Uni Stuttgart Careers website.

- Application by email: roman.klinger@ims.uni-stuttgart.de
- Careers website postdoc application
- Careers website phd student application

When applying via email, please clearly state for which of the two positions you apply (1-year postdoc or 3-year Phd student).

Contact Details

- Contact person: Roman Klinger
- Mail: roman.klinger@ims.uni-stuttgart.de
- Phone: +49 711 685 81406
- Website: https://www.ims.uni-stuttgart.de/

At the University of Stuttgart, we actively promote diversity among our employees. We have set ourselves the goal of recruiting more female scientists and employing more people with an international background, as well as people with disabilities. We are therefore particularly pleased to receive applications from such people. Regardless, we welcome any good application.

Women who apply will be given preferential consideration in areas in which they are underrepresented, provided they have the same aptitude, qualifications and professional performance. Severely disabled applicants with equal qualifications will be given priority.

As a certified family-friendly university, we support the compatibility of work and family, and of professional and private life in general, through various flexible modules. We have an employee health management system that has won several awards and offer our employees a wide range of continuing education programs. We are consistantly improving our accessibility. Our Welcome Center helps international scientists get started in Stuttgart. We support partners of new professors and managers with a dual-career program.

Information in accordance with Article 13 DS-GVO on the processing of applicant data can be found at https://careers.uni-stuttgart.de/content/privacy-policy/?locale=en_US.