Ref. No. SU FV-2693-16
Closing date: 30/11/2016

PhD student in Computer and Systems Sciences with a Focus on Human-Computer Interaction and Speech Technology

at the Department of Computer and Systems Sciences. Closing date: 30 November 2016.

The Department of Computer and Systems Sciences (DSV) is one of the oldest IT departments in Sweden and the largest department at Stockholm University with its 6 000 students. Our discipline of computer and systems sciences bridges the gap between technology and the humanities, social sciences, and behavioral sciences. The use and design of IT is put in context in relation to people, organizations, and society. The PhD position is a collaboration with Microsoft Research in Cambridge, England.

Project description

A PhD student position is available, suitable for candidates with a background in computer science, with programing and development skills, and an interest in human–computer interaction. The research is focused on taking recent developments in speech recognition (such as the use of deep neural networks) and combining them with findings from sociology and linguistics, such as conversation analysis. This suggested thesis project will combine sociological understandings of talk and action with new techniques and tools that allow us to capture constant near always-on streams of individuals' everyday activity. Recordings of everyday action and talk will be used to experiment with agent technologies that exploit the pragmatics of interaction to help systems potentially pre-empt user actions; assist conversation; prevent confusions; change environments and inform and adjust systems long term to users preferences. More broadly, the thesis will go on to explore how users can themselves change and adjust what they do in a long-term feedback loop with system actions – such as creating their own system understandable language, grammar, or gestures. The ultimate thesis goal will be to produce computationally practical understandings of ordinary action that can be used to enable new system activity, built from a broad multimedia corpus of recordings of action from multiple participants using non-obtrusive recording technology, and demonstrated in use with real world participants.

Qualification requirements

In order to meet *the general entry requirements*, the applicant must have completed a second-cycle degree, completed courses equivalent to at least 240 higher education credits, of which 60 credits must be in the second cycle, or have otherwise acquired equivalent knowledge in Sweden or elsewhere.

In order to meet *the specific entry requirements*, the applicant must have completed courses at second-cycle level in Computer and systems sciences with a minimum of 90 higher education credits, or equivalent, including a thesis with a minimum of 15 higher education credits. In addition, the applicant is required to have English language skills equivalent of Common European Framework of Reference for Languages Level B2. Both general and specific academic entry requirements must be met.

Only a person who will be or has already been admitted to a third-cycle programme may be appointed to a doctoral studentship. The primary assessment criteria in appointing a doctoral student should be the capacity to benefit from the training.

Selection

The selection among the eligible candidates will be based on their capacity to benefit from the training. The following criteria will be used to assess this capacity:

- understanding of methods of application development and design, with experience with mobile development on Android or iPhone
- basic understanding of concepts from machine learning, familiarity with common machine learning frameworks such as scikit-learn and TensorFlow, or a willingness to learn these techniques knowledge of the area of Human–Computer Interaction, and the key research challenges in that area
- experience working in a multi-disciplinary research environment
- independence in analyzing and structuring previous work
- ability to formulate, motivate and address research questions, and cogency in previous work

- ability to communicate and cooperate well with colleagues and researchers
- methodological and scientific maturity
- proven ability to adhere to prescribed timetables.

Admission Regulations for Doctoral Studies at Stockholm University are available at: www.regelboken.su.se.

Terms of employment

The term of the initial contract may not exceed one year. The employment may be extended for a maximum of two years at a time. However, the total period of employment may not exceed the equivalent of four years of full-time study.

Doctoral students should primarily devote themselves to their own education, but may engage in teaching, research, and administration corresponding to a maximum of 20 % of a full-time position.

Please note that admission decisions cannot be appealed.

Stockholm University strives to be a workplace free from discrimination and with equal opportunities for all.

Contact

For more information, please contact Professor Barry Brown, barry@mobilelifecentre.org, or the Director of PhD studies, Sirkku Männikkö-Barbutiu, sirkku@dsv.su.se.

Union representatives

Anqi Lindblom-Ahlm (Saco-S) and Lisbeth Häggberg (Fackförbundet ST), telephone: +46 8 16 20 00 (operator), seko@seko.su.se (SEKO), and PhD student representative: fredrik.c.l@sus.su.se.

Application

Apply for the position at Stockholm University's recruitment system by clicking the "Apply" button. It is the responsibility of the applicant to ensure that the application is complete in accordance with the instructions in the job advertisement, and that it is submitted before the deadline.

Please include the following information with your application

- Your contact details and personal data
- Your highest degree
- Your language skills
- Contact details for 2–3 references

and, in addition, please include the following documents

- Cover letter
- CV – degrees and other completed courses, work experience and a list of degree projects/theses
- Research proposal (no more than 3 pages) describing:
  – why you are interested in the field/project described in the advertisement
  – why and how you wish to complete the project
  – what makes you suitable for the project in question
- Degree certificates and grades confirming that you meet the general and specific entry requirements (no more than 6 files)
- Letters of recommendation (no more than 3 files)
- Degree projects/theses (no more than 3 files).

The instructions for applicants are available at: Instructions – Applicants.

You are welcome to apply!

Stockholm University – our education and research produce results.

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