

## **2 Doctoral students in Machine Learning and AI for Robotics at the Lund University, Faculty of Engineering, Department of Computer Science, Sweden**

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has 40 000 students and 7 400 staff based in Lund, Helsingborg and Malmö. We are united in our efforts to understand, explain and improve our world and the human condition.

LTH forms the Faculty of Engineering at Lund University, with approximately 9 000 students. The research carried out at LTH is of a high international standard and we are continuously developing our teaching methods and adapting our courses to current needs.

We are offering 1-2 fully funded 4-year Doctoral student positions to qualified applicants with interest in Robotics, at Lund University's Department of Computer Science [1], with funding provided by the Wallenberg AI, Autonomous Systems and Software Programme (WASP). We are looking for applicants with enthusiasm for working practically with Robots, who have good theoretical and mathematical foundations and who want to help lead the way towards the next generation of robots that have the ability to think and learn from observing humans. If the Doctoral student is assigned departmental duties the position may be extended to five years and would then cover 80% research and 20% teaching or other departmental duties.

What we expect:

- Strong analytical skills
- Good mathematical skills
- Good coding skills
- Knowledge of (preferred) or willingness to learn C++, Python and Linux
- Background in one or more of the following: software engineering, Machine Learning, AI, Robotics or computer vision
- Strong interest in working on the above-mentioned topics for four (five) years
- The ability to work both independently and in small teams

What we offer:

- A custom-tailored curriculum to prepare you for a career in robotics research for universities and companies
- A creative, diversified, and collaborative working environment in one of the world's most innovative and most livable areas [2]
- Integration into the WASP Graduate School [3], which offers regular opportunities (courses, workshops, international study trips) for learning more about AI, Machine Learning and autonomous systems and linking up with interdisciplinary teams
- Opportunities for participating in international research conferences and for connecting with scientists and practitioners around the world

[1] [cs.lth.se/english](http://cs.lth.se/english)

[2] [lunduniversity.lu.se/about/work-at-lund-university/why-work-at-lund-university](http://lunduniversity.lu.se/about/work-at-lund-university/why-work-at-lund-university)

[3] [wasp-sweden.org/graduate-school/activities](http://wasp-sweden.org/graduate-school/activities)

## **Research subject**

Computer Science

## **Work duties**

The main duties of doctoral students are to devote themselves to their research studies which includes participating in research projects and third cycle courses. The work duties may also include 20% teaching in case of a 5 year PhD position.

## **Admission requirements**

A person meets the general admission requirements for third-cycle courses and study programmes if he or she:

- has been awarded a second-cycle qualification, or
- has satisfied the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded in the second cycle, or
- has acquired substantially equivalent knowledge in some other way in Sweden or abroad.

A person meets the specific admission requirements for third cycle studies in Computer Science if he or she has either:

- 150 credits in mathematics, engineering, and science, including at least 60 advanced credits in computer science and an advanced project worth 30 credits, and of relevance to computer science, or
- An MSc in Engineering, or other advanced degree, including at least 60 credits in computer science related courses.

Additional requirements:

- Very good oral and written proficiency in English.

(In Sweden, 60 credits correspond to one year of full time studies.)

## **Assessment criteria**

Selection for third-cycle studies is based on the student's potential to profit from such studies. The assessment of potential is made primarily on the basis of academic results from the first and second cycle. Special attention is paid to the following:

1. Knowledge and skills relevant to the subject description above.

2. An assessment of the ability to work independently and to formulate and tackle research problems.
3. Written and oral communication skills
4. Other experience relevant to the third-cycle studies, e.g. professional experience.

Consideration will also be given to good collaborative skills, drive and independence, and how the applicant, through his or her experience and skills, is deemed to have the abilities necessary for successfully completing the third cycle programme.

### **Terms of employment**

Only those admitted to third cycle studies may be appointed to a doctoral studentship. Third cycle studies at LTH consist of full-time studies for 4 years. A doctoral studentship is a fixed-term employment of a maximum of 5 years (including 20% departmental duties). Doctoral studentships are regulated in the Higher Education Ordinance (1993:100), chapter 5, 1-7 §§.

### **Instructions on how to apply**

Applications shall be written in English and include a cover letter stating the reasons why you are interested in the position and in what way the research project corresponds to your interests and educational background. The cover letter should also describe your experience in coding, mathematics and your experience with robotics, AI, computer vision or machine learning. The application must also contain a CV, degree certificate or equivalent, and other documents you wish to be considered (grade transcripts, contact information for your references, letters of recommendation, etc.).

Lund University welcomes applicants with diverse backgrounds and experiences. We regard gender equality and diversity as a strength and an asset. We kindly decline all sales and marketing contacts.