Master’s programme in Machine Learning

**Admission requirements**
A Bachelor’s degree (or equivalent) of at least 180 ECTS. Specific requirements as specified by each Master’s programme on www.kth.se/int.

**Degree awarded**
Master of Science (120 credits). The degree gives access to third cycle qualifications (doctorate).

**Location**
KTH Campus, Stockholm

**Language of instruction**
English

**PROGRAMME START**
Late August

**Application**
The complete range of Master’s programmes offered by KTH will be published on www.universityadmissions.se by 1 December at the latest. However, a number of programmes may be available for application earlier. The application deadline is 15 January 2016.

**Fees and funding**
www.kth.se/en/studies/master/kth/fees-funding-1.65872

Machine Learning is a scientific discipline focused on the development of algorithms that spot patterns or make predictions from empirical data.

Already such algorithms have allowed computers to answer these questions: “Where are the faces in this photo?” and “Can you recommend a movie for me to watch?” In layman’s terms, the relationship between data and predictions/patterns is learnt by examining a large quantity of relevant example information. This idea has become central to the design of search engines, robots and sensor systems which process large data set.

**Programme outline**
In this programme you will learn the mathematical and statistical foundations and methods for Machine Learning and become comfortable manipulating them to solve questions. You will also gain practical experience of how to match, apply and implement relevant techniques from the field to real world problems. Therefore, the programme provides the students with both the theoretical tools and practical know-how of machine learning, and this is an excellent basis for either a career within industry or further advanced studies.

The first semester is devoted to compulsory courses and provides an introduction and solid foundation to the field. Afterwords students can choose from a wide range of courses which describe how machine learning is used to solve problems in particular application domains such as computer vision, information retrieval, computational biology and robotics. Students are also given the chance to take course more basic theoretical courses in computer science, statistics and machine learning.

The final semester is dedicated to a degree project

**Degree project**
The second year of study culminates in a degree project. The purpose of this project is for the student to demonstrate the ability to perform independent project work, using the skills obtained from the courses in the programme.

**Career prospects**
The demand for engineers and scientists with knowledge in Machine Learning is growing as the amount of data in the world grows. Machine Learning is widely used in applications where sensor data is processed – automatic speech processing, computer vision or radar signal processing – and in areas where information is retrieved from large amounts of data. Internet search is the most obvious of this latter application. But large datasets occur in many domains, such as economics, medicine, meteorology, geoscience, and astronomy. The fields of computer vision, speech technology and information retrieval also exploit ideas from Machine Learning.

This Master’s programme is a suitable basis for work in a research and development department in industry, as well as for a continued research career in any of these areas

**Specific admission requirements**
There are general as well as specific admission requirements. The general requirements are the same for all applicants while the specific requirements may differ between programmes. A Bachelor’s degree in Science or Engineering is required for most programmes at KTH. Please also see the relevant programme description(s) on www.kth.se/en/studies/master/kth

They will be updated by 1 December at the latest.

**Contact**

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