



FDD3342 Knowledge Discovery and Data Mining 6.0 credits

Databrytning

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for FDD3342 valid from Spring 2009

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing this course, you will:

- know the fundamental approaches to knowledge discovery and data mining, the main theoretical foundations, as well as its code of practice,

- know about several tools in the area and be able to use at least one,
- be able to follow research and development in the area,
- be able to assess the applicability of the technology for a particular scientific problem area, and develop the scientific methods used.

Course contents

KDD philosophy
 Bayes rule and its interpretation as inference tool
 Learnability, VC-dimension
 Statistical Techniques: MV analysis, SVD technique, etc.
 Classification and clustering
 Bayesian networks and graphical models
 Prediction and sequence mining
 Markov Chain Monte Carlo methods
 Support vector and kernel methods

Course literature

Course compendium and research articles.

Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Examination is individual, and can consist of presentations of texts, presentation in class, homeworks and/or a small project.

A list of papers you read for the course, preferably with comments, and proposals for course improvement should be turned in.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.