FID3018 Advanced Course in Data Mining and Analytics 7.5 credits

Avancerad kurs i datautvinning och dataanalys

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

Establishment

Course syllabus for FID3018 valid from Autumn 2019

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Enrolled as a doctoral student.

Language of instruction

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

Intended learning outcomes

After the course the student will be able to discuss, analyze, present, and critically review the very latest research advancements in the areas of Big Data Mining and Analytics and make connections to knowledge in related fields. The student will also be able to assess and evaluate new emerging trends as well as to identify the need for further knowledge in the field.

Course contents

This course is a graduate reading course that will cover the research works of the last two years in the area of Big Data Mining and Analytics. A particular focus will be given to the algorithms and systems on large scale graph processing, stream processing, social network analytics and decentralized machine learning. Every participant should find their own relevant research literature, read and analyze its contributions, give a presentation on the material and actively contribute to the group discussions, as well as write a short report on the paper.

Disposition

The course is organized as a reading course. Each student chooses a set of papers and for each paper the student will do the following:
* carefully read and analyze the paper.
* orally present the paper's content including methodology and contributions to the other course participants and the course's examiner. The presentation including discussion should take around one hour.
* write a critical review of the paper that covers in particular: summary of contributions, methodology, significance, technical and experimental quality, and quality of presentation.
In addition to presenting four papers each, the students must read some of the papers assigned to the other course participants, attend their presentations, and actively contribute to the discussion of their papers.

Course literature

Latest papers in the area of Data Mining and Analytics from high-quality international venues.

Examination

- EXA1 - Examination, 7.5 credits, grading scale: P, F

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.

P/F

Other requirements for final grade

The course will be assessed with a Pass/Fail grade, based on a successful presentation, the delivery of a scientifically sound report, and the identification of appropriate papers for the reading list. In addition to this, students must attend at least 75% of all seminars.

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.