UNIVERSITY OF BORÅS

Information Retrieval 2

Information retrieval 2

7.5 credits
7.5 högskolepoäng

Ladok Code: C3LIR2
Version: 4.0
Established by: Committee for Education in Librarianship, Information, and IT 2019-03-12
Valid from: Autumn 2019

Education Cycle: Second cycle
Main Field of Study (Progressive Specialisation): Informatics (A1F)
Disciplinary Domain: Natural sciences
Prerequisites: A passing grade, at least E, on Information retrieval 1 (C3LIR1)
Subject Area: Informatics/Computer and Systems Sciences
Grading Scale: Seven-degree grading scale (A-F)

Content

The course aims to present the development of research on information retrieval with relevance to digital libraries, with a special focus on the relationship between automatic indexing, automatic classification, information retrieval and information visualization in scalable document collections. Although these four components are different aspects of advanced access to such document collections, the content of the course is confined to only focus on the handling of text documents. However, the course also deals with the conditions for and a general theory of automatic classification, supervised and unsupervised machine learning, the role of feature selection, and the importance of evaluation in text mining and visual access to document content.

Learning Outcomes

After passing the course the student should be able to, concerning,

Knowledge and understanding
1.1 Explain the relationship between the components for advanced access to digital document collections.
1.2 Explain the basic principles of the use of text mining in a digital library collection.
1.3 Analyze the connection between text mining and information retrieval with regard to content representation and content categorization.
1.4 Reason about and argue for feature selection for text mining.

Competence and skills
2.1 Show practical skills in text mining and information visualization.
2.2 Evaluate experimental results in text mining using standardized evaluation measures.

Forms of Teaching

The teaching on the course consists of:

- lectures
- practical instructions
- exercises
- project work
- self-study tasks
- group work

The language of instruction is English.

Forms of Examination

The course is examined through:

- Written assignment: Text mining
Learning outcomes: 2.1-2.2
Credits: 3,5
Grading scale: A-F

- Take-home examination
Learning outcomes: 1.1-1.4
Credits: 4,0
Grading scale: A-F

For the grade E on the entire course, at least the grade E is required on all course components. A higher grade on the entire course is then issued based on the rounded average of the grades on the course components, converted to a numerical scale.

When the syllabus is changed, students who wish to finish the course must do so according to the new plan's content and assignment requirements. If the course no longer is offered on a regular basis, students who wish to complete the course must take all or part of another, equivalent course. Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

If the student has received a decision/recommendation regarding special pedagogical support from the University of Borås due to disability or special needs, the examiner has the right to make accommodations when it comes to examination. The examiner must, based on the objectives of the course syllabus, determine whether the examination can be adapted in accordance with the decision/recommendation.

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the University of Borås.

Literature and Other Teaching Materials

The course literature is in English.

Baeza-Yates, R. & Ribeiro-Neto, B. (2011). Modern information retrieval: The concepts and technology behind search. Harlow: Addison-Wesley. (Chap. 2, pp. 21–56; Chap. 8, pp. 281–336)

Mikolov, T., Sutskever, I., Chen, K., Corrado, G.S. & Dean, J. (2013). Distributed representations of words and phrases and their compositionality. In Advances in Neural Information Processing Systems, 26 (pp. 3111–3119).

Sebastiani, S. (2005). Text categorization. In A. Zanasi (Ed.), Text mining and its applications. Southampton: WIT Press (pp. 109–129).

Stavrianou, A., Andritsos, P. & Nicoloyannis, N. (2007). Overview and semantic issues of text mining. SIGMOD Record, 36(3), 23–33.

Student Influence and Evaluation

The course is evaluated in accordance with current guidelines for course evaluations at the University of Borås in which students' views are to be gathered. The course evaluation report is published and returned to participating and prospective students in accordance with the above-mentioned guidelines, and will be taken into consideration in the future development of courses and education programmes. Course coordinators are responsible for ensuring that the evaluations are conducted as described above.

Miscellaneous

The course is part of Masterprogramme: Library and Information Science, Digital Library and Information Services.