INFORMATION RETRIEVAL AND DATA MINING

Number of ECTS: 2
Synchronous workload: 30
Asynchronous workload: 30
Dates: 15.-30.09.2022.
Language: English
Number of participants: 25

Goal of JCC:

The aim of the program is to introduce the discipline of data mining and information retrieval, and to enable students to apply methods of i data mining with an emphasis on textual data. The course is project-oriented and it is planned to solve different tasks on the same data sets for teams from the universities involved.

Learning outcomes:

• identify appropriate visualization methods and apply them to a given data set
• explain the principles of clustering and data classification algorithms and apply them to given data sets using appropriate software
• explain the principles of optimization of hyperparameters and selection of attributes for a given problem of grouping or classification of data and apply them in solving the problem of data analysis using the selected software
• explain the principles of inverted indexes and compression for the problem of information retrieval
• explain the principles of textual data representation using the bag of words model.
• apply pre-processing methods on a given set of text data and represent them in a form that will enable the application of basic tasks of text mining (visualization, grouping, classification)

Learning outcomes assessment:

Checking theoretical knowledge through quizzes, evaluating solutions to problem tasks of data mining for given data sets.

Teachers:

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Prerequisites for the JCC:

Participants should have passed exams of mathematical courses including area of mathematical analysis and linear algebra and introductory course of probability and statistics

Number and type of assesment:

2 assessments of practical work (10 points), 3 quizzes (30 points), 2 project tasks (2*90 min joint students work, 60 points)

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