University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2025

8,009: RPV: Social Media Mining with NoSQL-Databases

ECTS credits: 4

Overview examination/s

(binding regulations see below)
decentral - Written work, Digital, Individual work individual grade (100%)
Examination time: Term time

Attached courses

Timetable -- Language -- Lecturer
8,009,1.00 RPV: Social Media Mining with NoSQL-Databases -- English -- Wulf Jochen Andreas

Course information

Course prerequisites

This course is assigned to the profile «Technology Solution Architect » but can also be taken without selecting a specialisation.

None. In particular, NO prior knowledge of programming and analytics is required.

Learning objectives

Students can carry out independent analyses with social media data.

Students know the essential steps of data science projects (business understanding, data understanding, data preparation, modeling, evaluation) and are able to implement them.

Students can formulate their own queries to the document-oriented database MongoDB.

Students know the basic design properties of NOSQL databases (especially the document-oriented database MongoDB).

Students can describe the core challenges and potentials of big data in companies (especially social media analysis).

Course content

Big data, i.e. the generation and business exploitation of high data volumes and heterogeneous data at high speed, is leading to profound changes in companies in a wide range of industries through data-driven decision-making. In the machine industry, for example, new services in the field of predictive maintenance are being designed based on usage and sensor data. In e-commerce, shopping behavior is evaluated in real time in order to create tailor-made and individualized offers. In the banking sector, transaction data is evaluated in real time to identify cases of fraud.

Big data requires new skills in data preparation and processing at the employee level, which are often summarized under the keyword data science. During this course, a core technology in the field of big data, so-called NOSQL databases, will be presented in more detail. In an application project with data on the social media marketing of companies on YouTube, students will then acquire their own application knowledge. The document-oriented database MongoDB is used.

As part of this RPV, students will prepare a written individual project paper (max. 10 pages). Here, own, business-relevant questions are to be developed for given the data on a self-chosen company and worked on in one's own small projects using the analytical instruments taught in the course.

This RPV is aimed at students who are interested in data-driven decision-making processes and analytics. Previous knowledge of programming and analytics is NOT required. The course is explicitly designed in such a way that the necessary knowledge is imparted independently of previous technological and analytical experience and then applied independently in the project.

Course structure and indications of the learning and teaching design

In the first few weeks, students will have the opportunity to familiarize themselves with the technology basics (especially the MongoDB query language) with the help of materials provided (online videos and tutorials). In the first block day, the technology basics are deepened and an introduction to the technical question (social media marketing with Youtube) is presented. On this basis, the individual project work begins.

In two block days, the project statuses are discussed and in interactive sessions and coaching sessions, the students are supported in the completion of their analytical projects.

Course literature

Will be provided during the course.

Additional course information

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Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination modalities

Examination type	Written work
Responsible for organisation	decentral
Examination form	Written work
Examination mode	Digital
Time of examination	Term time
Examination execution	Asynchronous
Examination location	Off Campus
Grading type	Individual work individual grade
Weighting	100%
Duration	--

Examination languages

Question language: English
Answer language: English

Remark

Written Report (10 pages)

Examination-aid rule

Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids
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Examination content

Written report, individual work (max. 10 pages) summarizing the project.

Grading will focus on the following aspects:

- Relevance
  - Scientific embedding and citation of relevant prior work
  - Level of practical implications
  - Level of innovation
- Analysis
  - Level of qualitative analysis
  - Level of quantiative analysis
- SQL Application
  - Coverage of SQL syntax of the course
  - Complexity and own initiative in applying advanced SQL syntax

Examination relevant literature

None

Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.
Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW21) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 13 (Monday, 25 March 2025) are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 04 (Thursday, 23 January 2025);
- Examination information (supplementary aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 17 March 2025);
- Examination information (supplementary aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 14 (Monday, 31 March 2025);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before ending with de-registration period in CW 15 (Monday, 07 April 2025).