University of St.Gallen

Course and Examination Fact Sheet: Autumn Semester 2020

7,048: Value Creation with (Big) Data - Enterprise Solutions and Technologies for Text Analytics

ECTS credits: 3

Overview examination/s

(binding regulations see below)
Decentral - Group examination paper (all given the same grades) (50%)
Examination time: term time
Decentral - Written examination (50%, 60 mins.)
Examination time: term time

Attached courses

Timetable -- Language -- Lecturer
7,048,1.00 Value Creation with (Big) Data - Enterprise Solutions and Technologies for Text Analytics -- Englisch -- Back Andrea

Course information

Course prerequisites

This course is a business course, not a course in computer science or data technology. Therefore, no special (IT) skills are required.

Learning objectives

At the end of this course, students are able to ...

- understand the most important technical terms relating to artificial intelligence and big data.
- identify, understand, and classify text analytics applications - from problem definition over data collection, data cleaning, and analysis up to the visualization.
- analyze and evaluate current text analytics applications using specific tools (e.g., AI canvas).
- apply and build text analytics applications (e.g., a chatbot).
- identify leading companies in the field of text analytics solutions.

At the end of this course, students are not able to ...

- apply text analytics techniques such as Natural language Processing (NLP) with Python.

Course content

Our modern world is witnessing a growth of data in a variety of forms-structured, semi-structured and unstructured-including e.g., web documents, blogs, social networks, digital libraries or medical records. Much of this data contains valuable information for businesses, such as emerging opinions in social networks, search trends from search engines, or consumer purchase behavior. Consequently, companies more and more use analytics techniques to draw value from a variety of diverse data sources.

This course will introduce you to the basics of "text analytics". Thereby, we focus on the business value of text analytics solutions. You will learn about specific use cases that rely on innovative technical concepts and tools, especially when text data comes into play: Business and stock market news, customer reports, corporate websites, patents, analyst reports, social media or documents of a political nature. Companies and especially start-ups use this data to optimize processes or offer completely new services. As an outlook, further analytical techniques such as voice and image recognition will be introduced in this course.

Course structure

Unit 1: Lecture-Kick-off and Introduction

Unit 2: Lecture-Overview Use Cases and Technical Basics/Solutions

Unit 3: Use Case I

Unit 4: Use Case II

Unit 5: Excursion to Google Zurich

Unit 6: Use Case III + (IV)

Unit 7: Written Exam

The course consists of three different teaching formats: (1) Lecture given by Prof. Back. (2) Use cases from corporate practice given by co-teachers. (3) A highlight is an excursion to the Google offices in Zurich. During the lecture, hands-on exercises are solved with the help of technical tools. A detailed list of confirmed and pending co-teachers will be continuously updated and can be found at https://aback.iwi.unisg.ch/lehre/text- analytics-infos/

Course literature

Selected chapters of the book: Vollenweider, Marc: mind+machine.

Selected course literature-Information provided in the Kick-off lecture.

Additional course information

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in AS2020, the course information listed above will be changed as follows:

- The course is conducted online via the platform Zoom (Video Communications);
- The recordings of the course will not be saved;
- The lecturer informs via Canvas on the changed implementation modalities of the course;
- Course content such as excursion and guest lecture will be hold online or may be cancelled.

The examination information listed below would be changed as follows:

- The group examination paper will be submitted online(as usual);
- The written examination is conducted online and is being recorded.

Examination information

Examination sub part/s

1. Examination sub part (1/2)

Examination time and form
Decentral - Group examination paper (all given the same grades) (50%)
Examination time: term time

Remark
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Examination-aid rule
Term papers

Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship which is a published template in StudentWeb.

The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the chosen citation standard such as APA or MLA.

For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende, newest edition respectively, or according to the recommendations of the Law School).

The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into texts in accordance with the precepts of the applicable quotation standard, while informative and bibliographical notes must be added as footnotes (recommendations and standards can be found, for example, in METZGER, C., Lern- und Arbeitsstrategien, newest edition respectively.

For any work written at the HSG, the indication of the page numbers is mandatory independent of the chosen citation standard. Where there are no page numbers in sources, precise references must be provided in a different way: titles of chapters or sections, section numbers, acts, scenes, verses, etc.

Supplementary aids
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Examination languages
Question language: English
Answer language: English

2. Examination sub part (2/2)

Examination time and form
Decentral - Written examination (50%, 60 mins.)
Examination time: term time

Remark
60 mins.

Examination-aid rule
Open Book
Students are free to choose aids but will have to comply with the following restrictions:

- All the pocket calculators that are not of the Texas Instruments TI-30 series are explicitly inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as electronic dictionaries, notebooks, tablets, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

Supplementary aids
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Examination languages
Question language: English
Answer language: English

Examination content

Group work: A topic co-defined to provide value to the co-teaching companies or to the Institute for Information Management (IWI-HSG).

Exam: Subject specific knowledge provided through the course content.

Examination relevant literature

Selected chapters of the book: Vollenweider, Marc: mind+machine.

Selected course literature-Information provided in the Kick-off lecture.

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Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are is 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 (CW51) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 42 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 34 (Thursday, 20 August 2020);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 12 October 2020);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 12 October 2020);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 44 (Thursday, 29 October 2020).

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