



SPRING SCHOOL IN QUANTITATIVE METHODS 2019

University of Hohenheim, June 12th to June 14th

The Spring School in Quantitative Methods at University of Hohenheim is hosted by the Faculty of Business, Economics and Social Sciences of the University of Hohenheim. It provides the opportunity to explore quantitative methods and their applications in the fields of Social Sciences, Economics, Finance and Business Administration. The school addresses the needs of doctoral students and post-docs who intend to strengthen their methodical skills, discuss current research projects with other participants and discover new ways to investigate their problems at hand.

Topic: Text Mining using R

Instructor: Dr. Gregor Wiedemann

(Department of Computer Science, Hamburg University)

Content:

The course teaches an overview of text mining in connection with data acquisition, preprocessing and methodological integration using the statistical programming language R. In sessions alternating between lectures and tutorials, we teach theoretical and methodological foundations, introduce exemplary studies and get hands on programming to realize different analyses. We will cover a range of text mining methods from basic lexicometric measures such as word frequencies, key term extraction and co-occurrence analysis, to more complex machine learning approaches such as topic models.

Objectives:

Participants will learn about opportunities and limits of text mining methods to analyze qualitative and quantitative aspects of large text collections. With example scripts provided in the programming language R, participants will learn how to realize single steps of such an analysis on a specific corpus. The course will cover simple lexicometric measures such as word frequencies, key term extraction and co-occurrence analysis as well as more complex approaches such as topic modeling.

Literature:

- Grimmer, Justin; Stewart, Brandon (2013): Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts. In: Political Analysis, S. 1-31.
- Wiedemann, Gregor. 2016. Text Mining for Qualitative Data Analysis in the Social Sciences: A Study on Democratic Discourse in Germany. Wiesbaden: Springer VS, Url: <https://link.springer.com/book/10.1007%2F978-3-658-07224-7>

Course outline:

Wednesday, June 12 th	
	Lecture: • Introduction - Computer-assisted analysis of textual data Practical session: • Processing textual data in R
Thursday, June 13 th	
	Lectures: • Data acquisition - Webcrawling, Webscraping • Lexicometrics - Frequency analysis, co-occurrence analysis, key term extraction Practical Sessions: • Webcrawling/-scraping, Text document import • Frequency analysis
Friday, June 14 th	
	Lectures: • Machine Learning - Clustering, Topic Models Practical Sessions: • Key term extraction • Co-occurrence analysis • Topic Modeling

R-Tutorial:

The practical examples during the Spring School will be discussed using the statistical software package R, therefore basic knowledge in R is necessary. Participants with little or no knowledge in R are invited to register for a free of charge introductory course in R at **June 11th** prior to the Spring School.

Application, fees, dates and credits:

Eligible for admission are doctoral students and post-docs in the fields of social sciences, economics, finance, business administration and related subjects.

For the practical sessions, we rely on scripts in the programming language R. Thus, some basic knowledge of R programming is necessary to take part in the tutorial sessions of the course successfully.

The Spring School will take place at the University of Hohenheim.

Members of the University of Hohenheim can participate in the Spring School free of charge.

The registration fee for the all other participants is **250 Euros**. It covers the tuition, coffee breaks and drinks throughout the Spring School.

Interested candidates should apply by [mail](#) before **April 30th, 2019**. After this deadline, your place may not be guaranteed. The application requires personal details, information on current or previous university study and current employment information. Moreover information on the level of knowledge proficiency in R should be provided. Applications will be evaluated and candidates will be informed of the decision by **May 3rd, 2019**. For successful applicants a document will be attached to our response with detailed payment information.

At the conclusion of the Spring School, participants will receive a certificate for the number of hours attended. 6 ECTS credits can be earned by completing a written assignment.

Contact:

For further information please contact

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