

Seminar in Business Analytics: Advanced Data Science Winter Term 2024 / 2025

Course Description:

Business analytics is a powerful tool that empowers organizations to make informed decisions, drive strategic initiatives, and gain a competitive edge in the market. By harnessing the power of data, businesses can uncover hidden patterns, forecast trends, and optimize operations to enhance efficiency and productivity. Analytics enables companies to move beyond intuition-based decisions to evidence-based strategies, leading to improved accuracy and outcomes. In an increasingly data-driven world, mastering business analytics is essential for staying relevant, adapting to market changes, and capitalizing on new opportunities. Embracing analytics not only enhances decision-making processes but also fosters innovation and continuous improvement across all areas of a business.

The seminar includes three types of assignments:

- 1) Collection, creation and analysis of a dataset. Students have to collect and create a dataset using existing databases and/or web crawlers. The created dataset then has to be analyzed using methods from business analytics.
- 2) Analysis of a given dataset. Students are provided an existing dataset from our research or a dataset that is publicly available. The analysis is more elaborated than in the assignment type 1).
- 3) Literature review about business analytics methods. Students are provided a particular topic from business analytics. The task is to perform a systematic literature review and provide an overview of existing studies on this topic

Target Group:

This Seminar specifically addresses students from all IMP disciplines, as well as in the M.Sc. Economics and M.Sc. VWL programs. There are no formal prerequisites; however, the assignments involve programming tasks (languages Python or R) so that programming skills and/or the willingness to acquire them are a must.

Registration:

Deadline: October 11 (end of day), 2024

Application via email to bernhard.lutz@is.uni-freiburg.de. **Make sure that the following information is provided:**

- First name, last name
- Matriculation number (Matrikelnummer)

- Transcript of records
- Attended lectures and seminars at our chair and grade obtained
- Study program, semester
- Short description of experience level in Python or R

Response whether application was successful will be sent out shortly after the registration deadline

Organization:

First meeting: **October 23, 2024 at 12 noon ct, 02-012, Rempartstr. 16**
Presentations: **January 23, 2025 at 2pm ct, PC-Pool 6, Werthmannstraße 4**
Written submission: **March 1, 2025 (end of day)**

Weekly Consultation Hours:

Wednesdays 2pm ct, room to be determined

First date: October 30, 2024

Communication:

Communication is done via email. All materials are provided on Ilias.

Topics:

Exact topics along with hints on literature will be announced at a later point.

Grading:

Written paper (67%) and presentation (33%). In addition, you have to hand in your programming code and datasets (if applicable). The seminar paper should be written in English and consist of 10-15 pages.

ECTS: 6

Credit points are applicable to:

M.Sc. BWL PNPM: Allgemeine BWL, Wirtschaftsinformatik
M.Sc. VWL (2011): BWL, Wirtschaftsinformatik
M.Sc. VWL (2014): Business Analytics
M.Sc. Economics: Elective in Information Systems and Network Economics profile
M.Sc. Computer Science: Wahlmodule BWL und VWL

Chair:

Prof. Dr. Dirk Neumann
Department of Information Systems
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