Syllabus

Course Title:
Customer Analytics

Responsible:
Prof. Dr. Lucas Stich

Programme:	Term:	ECTS:
Bachelor	Winter	5

Contents & Objectives:

Contents:
Customer analytics involves collecting, managing, and analyzing customer data to gain insights and improve business decisions. Thanks to the explosive growth of media, channels, digital devices, and software applications, a wealth of customer data is now readily available and economically viable to collect. Customer analytics uses customer data along with economic theory, statistics, and econometric modeling to understand customer needs, preferences, and behavior. The goal of customer analytics is to provide companies with valuable information about their customers so they can make better decisions. This information can help them tailor their products, optimize marketing efforts, improve customer satisfaction, and ultimately increase revenue and profitability.

This course provides a comprehensive understanding of fundamental principles, methods, and tools used in customer analytics. The first part of the course focuses on the importance of customer value and its impact on business success. Emphasis is placed on the key methods and analytical tools for assessing and effectively managing customer heterogeneity in data-driven marketing. The remainder of the course focuses on modeling the impact of marketing efforts on customer response, perceptions, and preferences, as well as the use of marketing attribution techniques. To provide a practical and engaging learning experience, the course includes hands-on applications of the material covered using real-world data and relevant software tools.

Prerequisites:
Basic knowledge of marketing, information systems, microeconomics, and statistics

Learning objectives:

- Understand the importance of customer value and its impact on business success
- Learn key methods and analytical tools to effectively address customer heterogeneity in marketing strategies
- Develop practical data analysis skills for data-driven marketing decisions

Literature:

This course does not have a set textbook. Instead, it draws on various sources, some of which are listed below. You are not required to purchase or read any of these books to complete the course. However, I strongly encourage you to refer to these excellent sources as needed. In fact, many of them can be accessed online for free. Specific literature will be provided in the lecture notes.

- Principles of Marketing Engineering and Analytics (Gary L. Lilien, Arvind Rangaswamy, and Arnaud De Bruyn)
- Marketing Models: Multivariate Statistics and Marketing Analytics (Dawn Iacobucci)
- Marketing Research: An Applied Orientation (Naresh K. Malhotra)
- Marketing Management (Dawn Iacobucci)

- R for Marketing Research and Analytics (Chris Chapman and Elea McDonnell Feit)
- An Introduction to Statistical Learning: with Applications in R (Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani)
- The Effect: An Introduction to Research Design and Causality (Nick Huntington-Klein)
- Causal Inference: The Mixtape (Scott Cunningham)

Grading:
Final exam (60 minutes)

Contact:
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