JUNIOR PROFESSUR FOR MARKETING & MARKETING ANALYTICS

SEMINAR MARKETING

Socially (IR)Responsible Algorithms: How the internet can betray our privacy.

WINTER SEMESTER 2020/2021

Syllabus

(Please note that this document may be subject to change according to the instructor's preferences)

Introduction

Thanks to the rapid development of internet 2.0 technologies as well as AI-powered devices we enjoy a comfortable digital life that allows us to connect in seconds with friends and peers all over the world. Social media allows us to access and share information from and with friends, family, brands, and other entities.

Even though we may enjoy a comfortable digital lifestyle and have technology easing our life at tremendous pace, we rarely reflect on the other side of the coin. Through interacting with social media platforms we leave substantial digital footprints in a more and more inter-connected world.

While leaving few traces in different online places may generally not be harmful, things may rapidly change once entities become able to combine data to paint a clearer picture of consumers. Kosinski et al. (2013) show that by combining data from various online sources with algorithms and sufficient computational power one may be able to understand personal traits of consumers such as marital status, sexual orientation, drug consumption, health, or political orientation.

Meanwhile, digitalization allows companies to offer more and more customized products on a micro-target level. Companies can decide for each consumer checking into a website how to price goods and services (e.g. flight tickets), what kind of advertisement to show to a consumer, or what kind of service to offer or reject (e.g. insurance companies).

Thus – and without consumers yet fully realizing – the costs of digitalization, social media, and online consumption have substantially increased for consumers.

In addition, algorithms still make many bad predictions due to wrong specifications, bad training data and other biases (O'Neil 2016), again increasing costs for unaware consumers who are finally – without knowing and having a chance to react – paying the extra bill.

Seminar Content

In this seminar, we want to explore together how combining online single source information of consumers may enable companies to predict personal consumer traits and co-variates.

We aim at replicating the approach by Kosinski et al. (2013) by running together a large-scale web survey to create a sufficiently large training data set that we can then use to predict personal traits with the help of social media behavior.

We will then use this data set to explore in groups which types of machine learning algorithms put consumers at higher risks by being more or less prone to miss-classifications.

Beside the technical component, a strong emphasis will be put on the ethical discussion of algorithmic marketing and digital privacy.

The course will require students to apply code in R. R knowledge is not mandatory or required as we will provide students with sufficient interactive learning material that will allow them to get familiar with R, R-Studio and the relevant packages. In addition, we will provide R-tutorials and a high level of supervision.

Mandatory Readings

Kosinski, Michal, David Stillwell, and Thore Graepel. (2013). Private traits and attributes are predictable from digital records of human behavior, *Proceedings of the National Academy of Sciences* 110 (15), 5802-5805.

O'Neil, Cathy (2016). Bomb parts: What is a model?, in: O'Neil, Cathy: *Weapons of Math Destruction*, Crown, New York, 15-31.

O'Neil, Cathy (2016). Civilian casualties: Justice in the age of big data, in: O'Neil, Cathy: *Weapons of Math Destruction*, Crown, New York, 84-104.

O'Neil, Cathy (2016). The targeted citizen: Civic life, O'Neil, Cathy: *Weapons of Math Destruction*, Crown, New York, 179-198.

Learning Objectives

Main objective of this seminar is to improve your *empirical skills*. Moreover, you train your *communication* and *presentation* skills.

After participating in this seminar, you are able to develop your own research project and to address the following aspects:

- How to define key variables and to choose suitable data gathering methods?

- How to select the best-fitting analytical method to gain actionable insights for all the stakeholders involved?

Seminar Examination

The seminar consists of two mandatory parts which need to be completed in groups of 3:

- Written part: Written research report (60 % of the final grade, 24 pages, either evaluated as overall group performance or individual partial performances)

- Oral part: Presentation of research project (30 minutes) and discussion (15 minutes) as well as active participation in discussions (40 % of the final grade)

Schedule

What	When	Where
Kick-Off Meeting	4.11.2020	tba
Selection of Topics (until)	6.11.2020	via LearnWeb
Appointment 1 with instructor (60 minutes)	On request	MCM or Zoom
Appointment 2 with instructor (60 minutes)	On request	MCM or Zoom
Submission of final research report	19.02.2021	via email to supervisor
Appointment 3 with instructor	26.02.2021	MCM or Zoom
Submission of final project presentations	11.03.2021	via email to supervisor
Presentations of research projects	12.03.-14.03.2021	tba

Please note this schedule may be subject to change!

Seminar Location

We plan to host the final seminar on a weekend (Friday to Sunday) in a hostel outside of Münster (approx. 30km away, reachable by public transportation) to have enough time and opportunity to discuss all aspects of digital responsible marketing, digital ethics, algorithmic bias and online privacy in detail. The seminar will further consist of different social events as well as of a practice talk.

These plans are still subject to change according to the development of the COVID-19 regulations. In case of a worsening of the situation, the seminar may be moved to Münster or may be moved fully online (i.e. Zoom).