Universität Bremen

Fachbereich 9 - Medienstudiengänge

Department 9 - Media Courses

Kommentar zur Lehrveranstaltung im SoSe 2024

Description of seminars

Veranstalter*in: *Lecturer:*	Prof. Dr. Cornelius Puschmann
Titel (dt.):	Tutorial 3: Computational Methods
Titel (engl.): (immer angeben)	Tutorial 3: Computational Methods

Beschreibung:
Description:

Computational methods are research approaches that rely on algorithmic techniques such as text mining, image recognition and network analysis to identify patterns in large-scale collections of digital data. Social media platforms such as Facebook, X (formerly Twitter), Telegram, TikTok and Instagram are one such data source, and at the same time play an important (and often controversial) role for public debate, being variously framed either as instruments of democratization and openness or as dangerous, polarizing and pervaded by misinformation and extremism. Meanwhile, sources beyond social media, from online news to digital behavior tracking are also subject to computational analysis.

This class focuses on how the types of questions that are relevant to communication science may be approached using digital data in combination with innovative computational methods for content analysis ("big data" research). The course will follow a hands-on approach, with short theoretical sessions followed by coding challenges for which the participants will need to acquire new skills, using a combination of Python and R. They will be introduced to techniques such as sentiment analysis, topic modeling and classification for both textual and visual content. As part of a group project, participants will apply a set of techniques that we have studied to a dataset of their choice.

Literatur:
Literature:

Van Atteveldt, W., Trilling, D., & Arcila Calderón, C. (2022). *Computational Analysis of Communication*. Wiley Blackwell.