

Fachbereich 9 - Medienstudiengänge

Department 9 - Media Courses

Kommentar zur Lehrveranstaltung im SoSe 2026

Description of seminars

Veranstalter*in: Prof. Dr. Cornelius Puschmann

Lecturer:

Titel (dt.): D.1-3 Practical Seminar 3: Automated Content Analysis with Python

Titel (engl.): D.1-3 Practical Seminar 3: Automated Content Analysis with Python
(immer
angeben)

Beschreibung:

Description:

In the contemporary media landscape, the sheer volume of digital text, images, and video generated daily presents both a challenge and an unprecedented opportunity for communication researchers. This hands-on, methods-focused seminar equips MA students with the computational tools necessary to systematically analyze large-scale media data. Designed for students with a foundational understanding of quantitative methods but minimal programming experience, the course bridges the gap between traditional social science research and modern data science techniques.

The seminar focuses on practical applications relevant to media and communication studies, utilizing data from news outlets, social media platforms, and other digital public spheres. Throughout the semester, students will learn to leverage Python to automate the extraction, processing, and analysis of media content. We will begin by solidifying basic Python programming concepts before moving rapidly into applied automated content analysis.

Key techniques covered in the course include dictionary-based approaches, sentiment analysis, supervised machine learning for text classification, and unsupervised methods such as topic modeling. While the primary focus of the seminar is on the analysis of textual data—the most prevalent form of digital communication—we will also experiment with emerging computational methods for analyzing visual media, including images and video.

By the end of the course, students will be able to design and execute their own automated content analysis pipelines. They will gain the practical skills needed to collect digital trace data, preprocess text for analysis, apply appropriate computational models, and critically interpret the results within the context of communication theory. The seminar emphasizes a "learning by doing" approach, with regular coding exercises and a final research project where students will apply these methods to a dataset of their choosing. This course provides a critical foundation for students pursuing advanced research or careers in data-driven media analysis.

The course assumes basic familiarity with quantitative research methods and statistics; very basic prior knowledge of Python is a plus.

Literatur:

Literature:

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