Amsterdam Business Research Institute

Analyzing Digital Data in Business and Management Research

Course Manual

Academic year 2024 - 2025

Course title	**Analyzing Digital Data in Business and Management Research**
Coordinator(s)	dr. Joey van Angeren (main contact); dr. Hakan Ozalp
Lecturer(s)	dr. Joey van Angeren; dr. Hakan Ozalp
Study period	April 2025
ECTs	5 ECTS
Tuition	€1250 20% discount on early bird registration: €1000
Target groups	The Analyzing Digital Data in Business and Management Research course is open to research master students, PhD candidates, postdocs, and junior faculty engaging in research in business and management, broadly defined. This course is an advanced methods course that assumes prior knowledge of business and management or organization studies as well as a basic understanding of quantitative and/or quantitative research methods. Familiarity with programming in Python or R is also required, although full proficiency in those programming languages is not necessary though.
Course content	Many phenomena that are of interest to management and organization scholars are captured in the form of rich digital (trace) data. Detailed work and navigation processes are captured in information systems and activity logs, product characteristics are described in textual product descriptions, gig platforms capture a wealth of data about workers, and CEOs manage the impression of their firms in video-recorded press conferences. The availability of such rich digital data provides novel opportunities for theorization and analysis. To this purpose, scholars of management and organization have in recent years increasingly turned to methods originally developed in computer science, most notably forms of machine learning, to collect and work with digital data. A distinct feature of those methods is that they are applied in both quantitative and qualitative research, for purposes that range from data exploration, to theory development, and onto hypothesis testing. The course Analyzing Digital Data in Business and Management Research provides an introduction to a variety of methods that can be used to analyze digital data in management and organization research, be it for the purpose of quantitative or qualitative analyses. The focus of the course is on the end-to-end research process. The course introduces website scraping and application programming interfaces (APIs) as ways to collect digital data. It surveys and develops hands-on experience with the main research methods to analyze large-scale numerical, text, and audiovisual data, and explores how others have applied those methods in both quantitative and qualitatve research. The publication process of papers based on those methods is also covered in the course.
Course goals	After the successful completion of this course, participants will be able to:

- Understand the main methods for analyzing large-scale, text, and audiovisual data as well as how those methods can be applied in quantitative and/or qualitative research
- Reflect on the application of methods for the analysis of digital data in research in business and management or related disciplines
- Collect digital data using website scraping or application programming interfaces (APIs)
- Apply methods to analyze digital data in in the context of a quantitative and/or qualitative research study
- Navigate the publication process for empirical papers that are based on digital data

Course design   This course is centered around a three-day module on the VU campus in Amsterdam, with smaller online sessions before and after. Each course component is dedicated to a specific aspect of conducting research using digital data (e.g., data collection, data analysis, publication process). The three-day module that is taught on campus provides theoretical, reflective, and hands-on experience with specific methods for data analysis. All sessions consist of a mixture of interactive lectures, paper discussions, and hands-on coding sessions. Hence, it is expected that students come well prepared.

Workload   The estimated time participants spend on study activities is:

Actively participating in interactive sessions	24 hours
Reading literature and class preparation	50 hours
Working on the individual research assignment	66 hours
Total	**140 hours (5 ECTS)**

Assessment   Attending and actively participating in all sessions is mandatory.

The assessment for this course is based on the following partial grades:

- Class participation that includes paper discussion and a peer review (50%)
- Individual research paper(50%)

Course structure

Dates	Time	Location	Topic
Tuesday 1 April 2025	10:00-13:00	Zoom	Introduction to digital data and programmatic data collection
Tuesday 8 April 2025	10:00-13:00 14:00-17:00	VU campus	Analyzing large-scale data

Wednesday 9 April 2025	10:00-13:00 14:00-17:00	VU campus	Analyzing textual data
Thursday 10 April 2025	09:00-12:00 13:00-16:00	VU campus	Analyzing audiovisual data
Tuesday 22 April 2025	10:00-13:00	Zoom	The publication process
TBC	TBC	Zoom	Individual research project consultations
Friday 16 May 2025	23:59	Online	Submission deadline individual research paper

Literature   TBC