

Master Seminar (7 ECTS) in the Summer Term 2026

From Reddit to R&D: How Crowd Conversations on Digital Platforms Reveal Hidden Product Signals—and How These May Shape Firm Innovation

Empirical Seminar

Topic:

Have you ever looked up a product online and found that the most helpful information wasn't on the company website but in posts and comments from other users? People share what actually happens in practice: unexpected side effects in medications, recurring bugs in software applications, "this worked for me" workarounds, and other cases that have not (yet) shown up in official documentations.

These kinds of crowd exchanges can be valuable not only to other users, but also to firms—as an additional source of information for innovation and improvement activities, such as identifying unmet needs, detecting emerging product issues early, prioritizing fixes, and discovering new use cases. Online discussions can reveal *how* and *why* products succeed or fail in real-world contexts, often with a level of detail that is difficult to capture through traditional feedback channels.

At the same time, using crowd exchanges as an information source is not straightforward. Online data can be noisy, biased, and even manipulated; and in some industries firms face strict legal and regulatory constraints in how they monitor and respond. The pharmaceutical context is a particularly instructive case. Medicines undergo extensive clinical trials and formal safety monitoring, yet trials are conducted on limited and selected populations and may not capture every effect that emerges once a drug is used at scale across diverse patient groups. This is precisely why post-market surveillance and official reporting channels exist. Still, patients and caregivers increasingly discuss experiences in public online forums, creating a fast-moving "parallel channel" of information that may surface patterns earlier than formal recognition—without necessarily meeting the standards of clinical evidence.

In this seminar, we explore these dynamics and investigate how information travels in digital communities, how firms (or regulators) respond, and whether organizations that are better at detecting and interpreting these signals may learn faster and innovate more effectively. You will learn how to collect and build datasets from public online sources (e.g., Reddit, patient forums, review channels) and use them for exploratory analysis and infer meaningful insights.

No previous knowledge of programming is required for the data work in the seminar!

Objectives:

This seminar aims to provide an overview of current research on digital platforms as information infrastructures and their role in shaping innovation, organizational learning, and competitive advantage. Further, this seminar aims to develop students' skills in scientific writing, data collection and analysis, and presentation.

A central practical component is learning how to work with digital platforms as public data sources: students will gain an overview of potential data sources (e.g., platform APIs, open data portals, and publicly accessible web content) and learn how to collect such data responsibly (for instance, through using APIs and web scraping tools). Building on this, the seminar introduces recent AI-based methods for making unstructured data usable for research alongside established techniques. Finally, students will learn how to employ a suitable econometric toolset to draw meaningful insights from their data.

Ultimately, each participant will write a seminar paper, prepare a presentation, and conduct a peer review of another student's work. Active participation in seminar discussions is encouraged.

Course Assessment:

Participants are expected to read relevant literature, build a small dataset (guided), analyze the data, and write a paper that meets academic standards. In addition, each participant will give a 15-minute presentation and a short (5-minute) peer review presentation. We warmly welcome seminar papers and presentations in English, but German submissions and presentations are also accepted.

The following components will be graded:

- Seminar paper (~12 pages)
- Presentation (15 min)
- Peer review presentation (5 min)
- Active participation in discussions

Application Procedure:

Students can apply for the seminar **until March 31, 2026**. Please email your application as **one PDF file**, including a short statement of interest, your CV, and your current transcript of records (or record from your Bachelor studies, if you are in the first Master semester), to robin.nowak@uni-passau.de

Spots are limited as the seminar's character involves close guidance and feedback. We recommend applying early.