Bachelorseminar Informationsvisualisierung

English Title: Bachelor Seminar Information Visualization

Dozent/in

Prof. Dr. Fabian Beck

Shahid Latif

Angaben

Seminar (Bachelor)

2,00 SWS, 3 ECTS

Time: Thursday, 16:15-17:45

Room: WE5/04.014 and/or virtual (more information will follow mid of October)

The first meeting will be in the second week of the teaching period, Oct 28.

If interested, please pre-register with fabian.beck@uni-bamberg.de to receive updates.

Voraussetzungen/Organisatorisches

Prior knowledge: none required

Typical work load:

- Meetings and talks: ~ 20h
- Reading and research: ~ 25h
- Preparation of presentation: ~ 15h
- Written report: ~ 30h

Language: English/German (course language as requested, submissions as individually preferred)

Inhalt

In the seminar, we will study applied examples of visualization systems. We will discuss and compare their features, as well as investigate their style of implementation and tools used. All participants will research individually assigned subtopics that all contribute different facets to the overarching seminar topic. We will also discuss and practice methods for writing and presenting in professional context. The seminar sessions will be concluded by presentations of the individual topics and joint discussions. A written seminar report on the individual topics will document the state of research in the area at greater depth.

The trained competences for this course are the following. The participants

- can research and learn independently about a given topic of applied computer science,
- understand and practice methods of professional communication in oral and written form,
- learn to discuss and evaluate state-of-the-art user interfaces and visualization systems, and
- develop a deep understanding of the individual topic, its potential use and application as well as limitations.

In this semester, we will focus on data-driven storytelling. It is applied by journalist, activists, and other stakeholders to not only report data in numbers, but to embed it into meaningful context and a story. Many news media, nowadays, publish such stories as interactive documents and annotated visualizations, mixing textual content with visualizations and interactions. We will discuss available tools for creating such stories and analyze state-of-the-art examples of stories regarding the data shown, the data analysis and statistical methods applied, the visualization techniques used, and the interactive features added.

General literature:

- Segel, E., & Heer, J. (2010). Narrative visualization: Telling stories with data. *IEEE Transactions on Visualization and Computer Graphics*, *16*(6), 1139-1148.
- Latif, S., Chen, S., & Beck, F. (2021). A Deeper Understanding of Visualization-Text Interplay in Geographic Data-driven Stories. In *Computer Graphics Forum* (Vol. 40, No. 3, pp. 311-322).