

# KOLLOQUIUM

Informatik-Sonderkolloquium

## About Data Storytelling and its Application to Happiness Analysis

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A successful data scientist does not only need to know how to process data and how to use „fancy tools“, but the most important part of a data scientist’s job is qualitative: asking questions, creating actionable knowledge from the data, and telling its story. The first part of this talk will center on data storytelling, explaining why it is important, what its challenges are, and also giving an example of “good” data storytelling. The second part of the talk centers on a Spatio-temporal Emotion Analysis and Storytelling Methodology that my research group currently develops. The input for our approach are the location and time were and when the tweets were posted and an emotion assessment score in  $[-1, +1]$ , with  $+1$  denoting a very positive emotion and  $-1$  a very negative emotion. First, we segment this dataset into batches with each batch containing tweets that occur in a particular time interval. Second, by generalizing kernel density estimation techniques, we transform each batch into a continuous function. Next, we use contouring algorithms to find contiguous regions with highly positive and highly negative emotions for each batch. Next, we apply a change analysis framework that summarizes how positive and negative emotion regions evolve over time. Finally, we propose animation techniques to facilitate spatio-temporal data storytelling based on the obtained emotion analysis results.

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