Title:

Visualization of Topic Transitions in SNSs Using Document Embedding and Dimensionality Reduction

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Abstract:

Social networking services (SNSs) have become the main avenue, where people speak their thoughts. Accordingly, we can explore people's thoughts by analyzing topics in SNS. When do topics change? Do they ever come back? What do people mainly talk about? In this study, we design and propose a novel visual analytics system to answer these interesting questions. We abstract the topic per unit time as a point in a two-dimensional space through document embedding and dimensionality reduction techniques and provide supplemented charts that represent words appearing at a certain time and the time-series change of word occurrence over the entire period. We employ a novel text visualization technique, called semantic preserving word bubbles, to visualize words at a certain time. In addition, we demonstrate the effectiveness of our system using Twitter data about early COVID-19 trends in Japan. We propose our system to help users to explore and understand transitions in posted contents on SNS.

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