New research helps visualise sentiment and stance in social media

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How can you find and make sense of opinions and emotions in the vast amount of texts in social media? Kostiantyn Kucher's research helps visualise for instance public opinions on political issues in tweets over time. In the future, analysis and visualisation of sentiment and stance could contribute to such tasks as detection of hate speech and fake news.

Our society relies on language and text to express our thoughts, exchange opinions, and gain new knowledge. But with so much text data being produced nowadays, in particular in social media, it's impossible to read everything manually. In his dissertation in computer science at Linnaeus University, Kostiantyn Kucher has looked for a solution to this problem.

"My research shows how one can investigate and make sense of opinions and emotions in collections of text data by combining computerised text mining methods and interactive visual representations, that is, special types of charts and graphs," says Kostiantyn Kucher.

As part of a research project called StaViCTA, Kostiantyn and colleagues have provided online survey browsers that are now used by researchers, practitioners, and students interested in text visualisation (textvis.lnu.se and sentimentvis.lnu.se). They have designed and implemented multiple visual analytics approaches that have helped their collaborators in linguistics and computational linguistics in their research on stance analysis.

The approaches presented in the dissertation can be applied in academic

research, business intelligence, social media monitoring, and journalism. Besides social media texts, these approaches can also be used to visualise stance in books and business reports, for instance.

"In the future, analysis and visualisation of sentiment and stance could contribute to such tasks as detection of hate speech and fake news, improvement and adaptation of graphical user interfaces in software and web applications, and visual representation of the models used by artificial intelligence agents," concludes Kostiantyn Kucher.

More information: Sentiment and stance visualization of textual data for social media: lnu.diva-portal.org/smash/reco … sf?pid=diva2:1296288

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