Social emotion detector: Investigating emotional reactions to social events

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Seemingly, half the world population now uses social media to share their thoughts and to experience the thoughts of others. There is no topic left unrepresented by users from opinions about technology, politics,

society, celebrities, sport, music, cinema, health, war, religion, sex and beyond. Nothing is taboo.

Extracting the collective emotional responses to social events from the local to the international scale from social media updates remains a goal of computer science and those it aims to assist in making use of the semantic and emotional data that might be extracted from social media.

An Italian team writing in the *International Journal of Metadata, Semantics and Ontologies*, discusses an approach to investigating emotional reactions to social events.

"Social media has become a fulcrum for sharing information on everyday-life events; people, companies, and organizations express opinions there," Danilo Cavaliere and Sabrina Senatore of the University of Salerno, in Fisciano explain. They add that studying and identifying different feelings and emotions, as represented by social network updates, such as so-called "tweets" on the microblogging platform known as Twitter requires handling big data and being able to understand the underlying emotional character of the updates in context.

The team has taken an approach that allows them to home in on a particular topic based on specific keywords, highlighted in tweets with a # symbol and commonly known as hashtags. They have built a glossary of emotions having extracted the semantics from a sample database of updates and refer to this as an "emotional concept ontology."

The team then demonstrates how their ontology can be used to train a database classification tool (Support Vector Machine) to "understand" the emotional character and content of new tweets with which an algorithm built on this training is presented. They have demonstrated proof of principle successfully with sample datasets even with complicated, multifaceted tweets.

More information: Danilo Cavaliere et al, An ontology-driven perspective on the emotional human reactions to social events, *International Journal of Metadata, Semantics and Ontologies* (2021). DOI: 10.1504/IJMSO.2021.117104