Beating the news using social media: the case study of American Idol

FABIO CIULLA, DELIA MOCANU, ANDREA BARONCHELLI, BRUNO GONCALVES, NICOLA PERRA, ALESSANDRO VESPIGNANI, Northeastern University — We present a contribution to the debate on the predictability of social events using big data analytics. We focus on the elimination of contestants in the American Idol TV shows as an example of a well defined electoral phenomenon to assess the predictive power of twitter signals. We provide evidence that Twitter activity during the time span defined by the TV show airing and the voting period following it allows the anticipation of the voting outcome. Twitter data have been analyzed to attempt the winner prediction ahead of the airing of the official result. We also show that the fraction of Tweets that contain geolocation information allows us to map the fanbase of each contestant, both within the US and abroad, showing that strong regional polarizations occur. The geolocalized data are crucial for the correct prediction of the final outcome of the show, pointing out the importance of considering information beyond the aggregated twitter signal. Although American Idol voting is just a minimal and simplified version of complex societal phenomena, this work shows that the volume of information available in online systems permits the real time gathering of quantitative indicators that may be able to anticipate the future unfolding of opinion formation events.

Fabio Ciulla
Northeastern University

Date submitted: 05 Nov 2012

Electronic form version 1.4