SG_Colloquium

Leveraging social media to model collective mood states

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Online social networking services now function as a medium for the exchange of personal as well as public information for hundreds of millions of individuals. Advances in natural language processing now allow us to tap into that reservoir of psycho-social data, and perform computational social science in realtime. In this presentation I will provide an overview of existing text analysis approaches that have been used to extract indicators of social opinion and sentiment from social media data. Researchers have used these techniques to gauge "national happiness" as well as consumer sentiment towards particular brands and products. Perhaps most tantalizing, evidence has been found that social media feeds may contain predictive information with regards to a variety of socio-economic phenomena, such as movie box office receipts, product adoption rates, elections, and even stock market fluctuations. With respect to the latter, I will outline our own research on the subject of stock market prediction. My team and I have analyzed large-scale Twitter data to assess daily fluctuations of the public's mood state. We found that these fluctuations contain predictive information with regards to up and down movements of broad market indices, such as the Dow Jones Industrial Average.

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