

Distilling Information Reliability and Source Trustworthiness from Digital Traces

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ABSTRACT

Online knowledge repositories typically rely on their users or dedicated editors to evaluate the reliability of their content. These evaluations can be viewed as noisy measurements of both information reliability and information source trustworthiness. Can we leverage these noisy evaluations, often biased, to distill a robust, unbiased and interpretable measure of both notions?

In this talk, I will first argue that the temporal traces left by these noisy evaluations give cues on the reliability of the information and the trustworthiness of the sources. Then, I will introduce a temporal point process modeling framework that links these temporal traces to robust, unbiased and interpretable notions of information reliability and source trustworthiness. Finally, I will elaborate on large-scale experiments on real-world data gathered from Wikipedia and Stack Overflow and show that our modeling framework accurately predicts evaluation events, provides an interpretable measure of information reliability and source trustworthiness, and yields interesting insights about real-world events. The corresponding paper, code, and demo is available at learning.mpi-sws.org/reliability.

Bio speaker

Manuel Gomez Rodriguez is a tenure-track faculty at Max Planck Institute for Software Systems. Manuel develops machine learning and large-scale data mining methods for the analysis, modeling and control of large real-world networks and processes that take place over them. He is particularly interested in problems arising in the Web and social media and has received several recognitions for his research, including an Outstanding Paper Award at NIPS'13 and a Best Research Paper Honorable Mention at KDD'10. Manuel holds a PhD and MS in Electrical Engineering from Stanford University and a BS in Electrical Engineering from Carlos III University in Madrid (Spain).

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WWW 2017 Companion, April 3–7, 2017, Perth, Australia.
ACM 978-1-4503-4914-7/17/04.
<http://dx.doi.org/10.1145/3041021.3054760>

