Veracity of Big Data: From Truth Discovery Computation Algorithms to Models of Misinformation Dynamics

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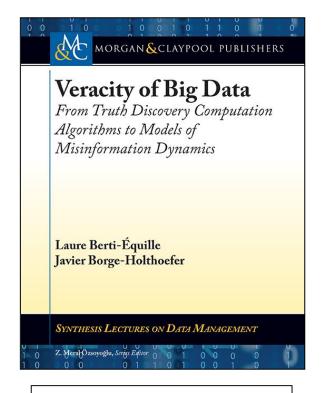
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Abstract:

The evolution of the Web from a technology platform to a social ecosystem has resulted in unprecedented data volumes being continuously generated, exchanged, and consumed. Usergenerated content on the Web is massive, highly dynamic, and characterized by a combination of factual data and opinion data. False information, rumors, and fake contents across multiple sources can be easily spread, making it hard to distinguish between what is true and what is not. Truth discovery also called fact-checking has recently gained lot of interest in Data Science communities. Ascertaining the veracity of data and understanding the dynamics of misinformation in the Web are two interdependent challenges for researchers and practitioners in Databases, Information Retrieval, and Knowledge Management.

This book explores the progress that has been made in discovering truth, checking facts, and modeling the propagation of falsified and distorted information in the context of Big Data. We will review in details current models, algorithms, and techniques proposed by various research communities in Complex System Modeling, Data Management, and Knowledge Discovery, for ascertaining the veracity of data in a dynamic world. Finally, this book will identify a wide range of open problems and research directions for discovering truth from falsehood(s) in the Web Data and understanding the evolution and propagation of information source trustworthiness.



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