Big data: related technologies, challenges and future prospects
Chen M., Mao S., Zhang Y., Leung V., Springer Publishing Company, Incorporated, Cham, Switzerland, 2014. 89 pp. Type: Book (978-3-319062-44-0)

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In recent years, big data has been a very active research field and its related technologies have been in practical use. In particular, scientists have adopted relevant technologies to conduct advanced research and companies have adopted them for increasing their competitiveness. One major concept of big data is to extract valuable information from massive amounts of data, which may not be stored or processed by using traditional computing methods. The book not only provides readers with a fundamental understanding of big data, but also points to many future research topics and directions. Although the book contains less than 90 pages of content, it covers comprehensive aspects of big data and provides abundant references. I believe that it will be a valuable resource for researchers working with big data, especially those working in computer science, computer engineering, or related fields.

Chapter 1 clearly introduces the idea of big data and highlights its importance. Chapter 2 discusses the relation between big data and other relevant key technologies, which include cloud computing, Internet of Things (IoT), data centers, and Hadoop; all of these technologies have also attracted much attention in recent years. Chapter 3 discusses big data generation and acquisition. Chapter 4 overviews computing systems designed for storing massive amount data. Chapter 5 presents methods, architectures, and tools for big data analysis, which involves extracting valuable information and is regarded as one of the most important phases in the concept of big data. Note that data mining techniques can be used in the phase. Chapter 6 discusses applications of big data. Finally, chapter 7 presents open research topics and suggests future research directions.

As the number of electronic devices increases and the applications of computing technologies grow, more and more data will be generated, even in a short period of time. In order to obtain useful information from the massive amount of data, computing technologies need to be advanced and further research on big data is required. Not only does the book introduce and overview many technologies that are relevant to big data, but it also provides suggestions for big data related research topics. Although the book may not be suitable for general readers, it can be a valuable resource for researchers who work on or are in need of finding research topics relevant to big data.

Reviewer: I-Lun Tseng
Review #: CR143485 (1508-0675)

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