The Data Bonanza: Improving Knowledge Discovery in Science, Engineering, and Business
Malcolm Atkinson (Editor), Rob Baxter (Editor), Peter Brezany (Editor), Oscar Corcho (Editor), Michelle Galea (Editor), Mark Parsons (Editor), David Snelling (Editor), Jano van Hemert (Editor)

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DESCRIPTION

Complete guidance for mastering the tools and techniques of the digital revolution

With the digital revolution opening up tremendous opportunities in many fields, there is a growing need for skilled professionals who can develop data-intensive systems and extract information and knowledge from them. This book frames for the first time a new systematic approach for tackling the challenges of data-intensive computing, providing decision makers and technical experts alike with practical tools for dealing with our exploding data collections.

Emphasizing data-intensive thinking and interdisciplinary collaboration, The Data Bonanza: Improving Knowledge Discovery in Science, Engineering, and Business examines the essential components of knowledge discovery, surveys many of the current research efforts worldwide, and points to new areas for innovation. Complete with a wealth of examples and DISPEL-based methods demonstrating how to gain more from data in real-world systems, the book:

• Outlines the concepts and rationale for implementing data-intensive computing in organizations
• Covers from the ground up problem-solving strategies for data analysis in a data-rich world
• Introduces techniques for data-intensive engineering using the Data-Intensive Systems Process Engineering Language DISPEL
• Features in-depth case studies in customer relations, environmental hazards, seismology, and more
• Showcases successful applications in areas ranging from astronomy and the humanities to transport engineering
• Includes sample program snippets throughout the text as well as additional materials on a companion website

The Data Bonanza is a must-have guide for information strategists, data analysts, and engineers in business, research, and government, and for anyone wishing to be on the cutting edge of data mining, machine learning, databases, distributed systems, or large-scale computing.

ABOUT THE AUTHOR

MALCOLM ATKINSON, PhD, is Professor of e-Science in the School of Informatics at the University of Edinburgh in Scotland. He is also Data-Intensive Research Group leader, Director of the e-Science Institute, IT architect for the ADMIRE and VERCE EU projects and UK e-Science Envoy. Professor Atkinson has been leading research projects for several decades and served on many advisory bodies.

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