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The Role of Big Data in Transforming Communities and Shaping the Future

Technology for Societal Transformation: Exploring the Intersection of Information Technology and Societal Development • Book Chapter • 2025 • DOI: 10.1007/978-981-96-1721-0_12

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Abstract

Big Data plays a central role in the progress and development of society, reshaping the ways in which societies function and determine the future across a variety of industries. Its value from the economic standpoint is evident from its capacity to improve decision-making, enhance economic growth, and raise living standards. Big Data encompasses numerous opportunities and challenges, centered on such points as optimizing project management, fostering socioeconomic development, and data privacy management. It allows better planning because it enables a much more understandable and quicker decision-making experience from which the response time can be reduced and risk management, operational resolutions straightforward. It takes less time for changes to be made and eliminates enterprise-related risks, thereby advancing risk management. The greatest contribution from an economic angle is made to social and economic development,

encouraging sustainable development and shedding light on the new perspectives emerging indicators can offer. Nevertheless, successfully realizing the full transformative potential of Big Data implies overcoming certain obstacles and solving numerous ethical issues related to the extensive use of data. To overcome these challenges is critical to ensure that Big Data does make a difference in society and helps to improve the lives of people everywhere. © The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2025.

Indexed keywords

Engineering controlled terms

Information management; Project management; Risk perception

Engineering uncontrolled terms

Decisions makings; Economic growths; Economic standpoints; Living standards; Making experience; Operational resolution; Privacy management; Related risk; Risks management; Socio-economic development

Engineering main heading

Risk management

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