DeepScience

Artificial Intelligence and Industry in Society 5.0

Edited By: Nitin Liladhar Rane

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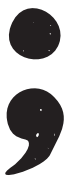
Vivekanand Education Society's College of Architecture (VESCOA), Mumbai, India



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Preface

The past few years have seen artificial intelligence (AI) acting as a force that has been changing industries, societies and also the educational landscape. The objective of this book is to present a holistic view of the different sectors being affected by AI and to list some of the challenges or opportunities that have arisen as part of this fast-moving area. The opening chapter is on the ethically fraught domain of AI technologies such as ChatGPT in educational contexts, noting new frontiers for cheating and suggesting ways that its integrity can be protected during this next industrial push of technological change. Even as AI tools grow in common use, educational institutions must grapple with these complexities to maintain notions of fair play and knowledge building. Further chapters move beyond AI in education to how it can be used as a broad lever for smart and sustainable campuses, cities, and infrastructure. The text in Chapter two centers on the way artificial intelligence (machine learning and deep learning) can steer more insightful urban planning, resource management and development that is sustainable. Chapter three presents a wider coverage of AI applications, including the concept of digital twins in different sectors-healthcare, finance and agriculture-as examples on how digital replicas improve productivity and innovation across various industries under Industry 4.0; 5.0 and Society 5.0. Chater four and five moves to the regulatory issues regarding AI. They talk about the importance of strong policies and the technological, economic, and regulatory obstacles holding back AI from realizing its promise in helping industries become smarter and more sustainable. The book also wraps up with a reflective commentary which presents the real-world applications of AI, future directions and potential research topics in AI, thereby providing readers some suggestions about where we could go regarding the development of AI in the next few years. This is the series of chapters that will show you how transformational AI can be; we hope it awakens the imagination and motivates people to conduct research and innovation in this exciting sector.

Nitin Liladhar Rane

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