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Altri autori (Persone)	TekliJoe KamradtMarc
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Sommario/riassunto	The book concentrates on the impact of digitalization and digital transformation technologies on the Industry 4.0 and smart factories, how the factory of tomorrow can be designed, built, and run virtually as a digital twin likeness of its real-world counterpart, before the physical

structure is actually erected. It highlights the main digitalization technologies that have stimulated the Industry 4.0, how these technologies work and integrate with each other, and how they are shaping the industry of the future. It examines how multimedia data and digital images in particular are being leveraged to create fully virtualized worlds in the form of digital twin factories and fully virtualized industrial assets. It uses BMW Group's latest SORDI dataset (Synthetic Object Recognition Dataset for Industry), i.e., the largest industrial images dataset to-date and its applications at BMW Group and Idealworks, as one of the main explanatory scenarios throughout the book. It discusses the need of synthetic data to train advanced deep learning computer vision models, and how such datasets will help create the "robot gym" of the future: training robots on synthetic images to prepare them to function in the real world.