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Autore	Wagner Achim
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Altri autori (Persone)	AlexopoulosKosmas MakrisSotiris
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Nota di contenuto	Preface -- Organization -- Contents -- Artificial Intelligence at Manufacturing System Level -- An Integrated Active Learning Framework for the Deployment of Machine Learning Models for Defect Detection in Manufacturing Environments -- 1 Introduction -- 2 The Problem -- 2.1 Active Learning -- 2.2 Deployment -- 2.3 Monitoring -- 2.4 Explainability -- 3 Use Cases -- 3.1 Binary Classification -- 3.2 Multiclass Classification -- 3.3 Object Detection -- 4 Results -- 4.1 Binary Classification -- 4.2 Multiclass Classification -- 4.3 Object Detection -- 4.4 MLOps -- 5 Conclusions -- 6 Acknowledgments -- References -- Complex and Big Data Handling and Monitoring Through Machine Learning Towards Digital-Twin in High Precision Manufacturing -- 1 Introduction -- 2 Brief Overview of the State-of-the-Art -- 3 Real

Sommario/riassunto

This book reports on recent developments of artificial intelligence applications in the manufacturing industry. Gathering contributions to the first European Symposium on Artificial Intelligence in Manufacturing, held on September 19, 2023, in Kaiserslautern, Germany, it reports on machine learning models and algorithms for systems monitoring and industrial data management, on advances in human-robot collaboration, and on artificial intelligence applications in industrial control and process monitoring. Giving a special emphasis to the integration of artificial intelligence in manufacturing systems and processes, this book offers a timely and practice-oriented guide to a multidisciplinary audience of engineering researchers, software developers and industrial managers.

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