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Titolo	Machine Learning for Cyber Physical Systems : Selected papers from the International Conference ML4CPS 2016 / / edited by Jürgen Beyerer, Oliver Niggemann, Christian Kühnert
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Nota di contenuto	A Concept for the Application of Reinforcement Learning in the Optimization of CAM-Generated Tool Paths -- Semantic Stream Processing in Dynamic Environments Using Dynamic Stream Selection -- Dynamic Bayesian Network-Based Anomaly Detection for In-Process Visual Inspection of Laser Surface Heat Treatment -- A Modular Architecture for Smart Data Analysis using AutomationML, OPC-UA and Data-driven Algorithms -- Cloud-based event detection platform for water distribution networks using machine-learning algorithms -- A Generic Data Fusion and Analysis Platform for Cyber-Physical Systems -- Agent Swarm Optimization: Exploding the search space -- Anomaly Detection in Industrial Networks using Machine Learning. .
Sommario/riassunto	The work presents new approaches to Machine Learning for Cyber Physical Systems, experiences and visions. It contains some selected papers from the international Conference ML4CPS – Machine Learning for Cyber Physical Systems, which was held in Karlsruhe, September

29th, 2016. Cyber Physical Systems are characterized by their ability to adapt and to learn: They analyze their environment and, based on observations, they learn patterns, correlations and predictive models. Typical applications are condition monitoring, predictive maintenance, image processing and diagnosis. Machine Learning is the key technology for these developments. The Editors Prof. Dr.-Ing. Jürgen Beyerer is Professor at the Department for Interactive Real-Time Systems at the Karlsruhe Institute of Technology. In addition he manages the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB. Prof. Dr. Oliver Niggemann is Professor for Embedded Software Engineering. His research interests are in the field of Distributed Real-time Software and in the fields of analysis and diagnosis of distributed systems. He is a board member of the inIT and a senior researcher at the Fraunhofer Application Center Industrial Automation INA located in Lemgo. Dr. Christian Kühnert is a senior researcher at the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB. His research interests are in the field of machine-learning, data-fusion and data-driven condition monitoring. .