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Nota di contenuto	Introduction -- Introduction to Fog data analytics for IoT applications -- Fog Data Analytics: Systematic Computational Classification and Procedural Paradigm -- Fog Computing: Building a Road to IoT with Fog Analytics -- Data Collection in Fog Data Analytics -- Mobile FOG Architecture Assisted Continuous Acquisition of Fetal ECG Data for Efficient Prediction -- Proposed Framework for Fog Computing to Improve Quality-of-Service in IoT applications -- Fog Data Based Statistical Analysis to Check Effects of Yajna and Mantra Science: Next Generation Health Practices -- Process Model for Fog Data Analytics for IoT Applications -- Medical Analytics Based on Artificial Neural Networks Using Cognitive Internet of Things.

Sommario/riassunto

This book discusses the unique nature and complexity of fog data analytics (FDA) and develops a comprehensive taxonomy abstracted into a process model. The exponential increase in sensors and smart gadgets (collectively referred as smart devices or Internet of things (IoT) devices) has generated significant amount of heterogeneous and multimodal data, known as big data. To deal with this big data, we require efficient and effective solutions, such as data mining, data analytics and reduction to be deployed at the edge of fog devices on a cloud. Current research and development efforts generally focus on big data analytics and overlook the difficulty of facilitating fog data analytics (FDA). This book presents a model that addresses various research challenges, such as accessibility, scalability, fog nodes communication, nodal collaboration, heterogeneity, reliability, and quality of service (QoS) requirements, and includes case studies demonstrating its implementation. Focusing on FDA in IoT and requirements related to Industry 4.0, it also covers all aspects required to manage the complexity of FDA for IoT applications and also develops a comprehensive taxonomy.