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Sommario/riassunto	The book offers cutting-edge insights into AI-driven optimization algorithms and their crucial role in enhancing real-time applications within fog and Edge IoT networks and addresses current challenges and future opportunities in this rapidly evolving field. This book focuses on artificial intelligence-induced adaptive optimization algorithms in fog and Edge IoT networks. Artificial intelligence, fog, and edge computing, together with IoT, are the next generation of paradigms offering services to people to improve existing services for real-time applications. Over the past few years, there has been rigorous growth in AI-based optimization algorithms and Edge and IoT paradigms. However, despite several applications and advancements, there are still some limitations and challenges to address including security, adaptive, complex, and heterogeneous IoT networks, protocols, intelligent offloading decisions, latency, energy consumption, service

allocation, and network lifetime. This volume aims to encourage industry professionals to initiate a set of architectural strategies to solve open research computation challenges. The authors achieve this by defining and exploring emerging trends in advanced optimization algorithms, AI techniques, and fog and Edge technologies for IoT applications. Solutions are also proposed to reduce the latency of real-time applications and improve other quality of service parameters using adaptive optimization algorithms in fog and Edge paradigms. The book provides information on the full potential of IoT-based intelligent computing paradigms for the development of suitable conceptual and technological solutions using adaptive optimization techniques when faced with challenges. Additionally, it presents in-depth discussions in emerging interdisciplinary themes and applications reflecting the advancements in optimization algorithms and their usage in computing paradigms. Audience Researchers, industrial engineers, and graduate/post-graduate students in software engineering, computer science, electronic and electrical engineering, data analysts, and security professionals working in the fields of intelligent computing paradigms and similar areas.