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Sommario/riassunto	METAHEURISTICS for MACHINE LEARNING The book unlocks the power of nature-inspired optimization in machine learning and presents a comprehensive guide to cutting-edge algorithms, interdisciplinary insights, and real-world applications. The field of metaheuristic optimization algorithms is experiencing rapid growth, both in academic research and industrial applications. These nature-inspired algorithms, which draw on phenomena like evolution, swarm behavior, and neural systems, have shown remarkable efficiency in solving complex optimization problems. With advancements in machine learning and artificial intelligence, the application of metaheuristic optimization techniques has expanded, demonstrating significant potential in optimizing machine learning models, hyperparameter tuning, and feature selection, among other use-cases. In the industrial landscape, these techniques are becoming indispensable for solving real-world problems in sectors ranging from healthcare to cybersecurity and sustainability. Businesses are incorporating metaheuristic optimization into machine learning workflows to improve decision-making,

automate processes, and enhance system performance. As the boundaries of what is computationally possible continue to expand, the integration of metaheuristic optimization and machine learning represents a pioneering frontier in computational intelligence, making this book a timely resource for anyone involved in this interdisciplinary field. Metaheuristics for Machine Learning: Algorithms and Applications serves as a comprehensive guide to the intersection of nature-inspired optimization and machine learning. Authored by leading experts, this book seamlessly integrates insights from computer science, biology, and mathematics to offer a panoramic view of the latest advancements in metaheuristic algorithms. You'll find detailed yet accessible discussions of algorithmic theory alongside real-world case studies that demonstrate their practical applications in machine learning optimization. Perfect for researchers, practitioners, and students, this book provides cutting-edge content with a focus on applicability and interdisciplinary knowledge. Whether you aim to optimize complex systems, delve into neural networks, or enhance predictive modeling, this book arms you with the tools and understanding you need to tackle challenges efficiently. Equip yourself with this essential resource and navigate the ever-evolving landscape of machine learning and optimization with confidence. Audience The book is aimed at a broad audience encompassing researchers, practitioners, and students in the fields of computer science, data science, engineering, and mathematics. The detailed but accessible content makes it a must-have for both academia and industry professionals interested in the optimization aspects of machine learning algorithms.