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ISBN	1-000-76672-1 0-429-34515-1
Descrizione fisica	1 online resource (xv, 355 pages) : illustrations
Collana	Chapman & Hall/CRC biostatistics series
Disciplina	610.28563
Soggetti	Artificial intelligence - Medical applications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A Chapman & Hall book".
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Overview of Modern Artificial Intelligence. 2. Classic Statistics and Modern Machine Learning. 3. Similarity Principle- Fundamental Principle of All Sciences. 4. Similarity-Principle-Based Artificial Intelligence. 5. Artificial Neural Network. 6. Deep Learning Neural Network. 7. Kernel Methods. 8. Decision Tree and Ensemble Methods. 9. Bayesian Learning Approach. 10. Unsupervised Learning. 11. Reinforcement Learning. 12. Swarm and Evolutionary Intelligence. 13. Applications of AI in Medical Science and Drug Development. 14. Future Perspectives-Artificial General Intelligence.
Sommario/riassunto	Artificial Intelligence for Drug Development, Precision Medicine, and Healthcare covers exciting developments at the intersection of computer science and statistics. While much of machine-learning is statistics-based, achievements in deep learning for image and language processing rely on computer sciences use of big data. Aimed at those with a statistical background who want to use their strengths in pursuing AI research, the book: Covers broad AI topics in drug development, precision medicine, and healthcare. Elaborates on supervised, unsupervised, reinforcement, and evolutionary learning methods. Introduces the similarity principle and related AI methods for both big and small data problems. Offers a balance of statistical and algorithm-based approaches to AI. Provides examples and real-world

applications with hands-on R code. Suggests the path forward for AI in medicine and artificial general intelligence. As well as covering the history of AI and the innovative ideas, methodologies and software implementation of the field, the book offers a comprehensive review of AI applications in medical sciences. In addition, readers will benefit from hands on exercises, with included R code.
