Record Nr. UNINA9910437846303321 Autore Cleophas Ton J Titolo Machine Learning in Medicine [[electronic resource]]: Part Three // by Ton J. Cleophas, Aeilko H. Zwinderman Dordrecht:,: Springer Netherlands:,: Imprint: Springer,, 2013 Pubbl/distr/stampa **ISBN** 94-007-7869-4 Edizione [1st ed. 2013.] 1 online resource (XIX, 224 p. 41 illus.) Descrizione fisica Disciplina 610.28563 Soggetti Medicine Statistics Optical data processing Biomedicine, general Medicine/Public Health, general Statistics, general Computer Imaging, Vision, Pattern Recognition and Graphics Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Includes bibliographical references and index. Nota di bibliografia Preface -- Introduction to Machine Learning Part Three.- Evolutionary Nota di contenuto Operations.- Multiple Treatments -- Multiple Endpoints -- Optimal Binning -- Exact P-Values -- Probit Regression -- Over - dispersion. 10 Random Effects -- Weighted Least Squares -- Multiple Response Sets -- Complex Samples -- Runs Tests.- Decision Trees -- Spectral Plots -- Newton's Methods -- Stochastic Processes, Stationary Markov Chains -- Stochastic Processes, Absorbing Markov Chains -- Conjoint Models -- Machine Learning and Unsolved Questions -- Index. Sommario/riassunto Machine learning is concerned with the analysis of large data and multiple variables. It is also often more sensitive than traditional statistical methods to analyze small data. The first and second volumes

Machine learning is concerned with the analysis of large data and multiple variables. It is also often more sensitive than traditional statistical methods to analyze small data. The first and second volumes reviewed subjects like optimal scaling, neural networks, factor analysis, partial least squares, discriminant analysis, canonical analysis, fuzzy modeling, various clustering models, support vector machines, Bayesian networks, discrete wavelet analysis, association rule learning, anomaly detection, and correspondence analysis. This third volume addresses more advanced methods and includes subjects like

evolutionary programming, stochastic methods, complex sampling, optional binning, Newton's methods, decision trees, and other subjects. Both the theoretical bases and the step by step analyses are described for the benefit of non-mathematical readers. Each chapter can be studied without the need to consult other chapters. Traditional statistical tests are, sometimes, priors to machine learning methods, and they are also, sometimes, used as contrast tests. To those wishing to obtain more knowledge of them, we recommend to additionally study (1) Statistics Applied to Clinical Studies 5th Edition 2012, (2) SPSS for Starters Part One and Two 2012, and (3) Statistical Analysis of Clinical Data on a Pocket Calculator Part One and Two 2012, written by the same authors, and edited by Springer, New York.