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Soggetti	Statistics Statistical Theory and Methods Bayesian Inference Models lineals (Estadística) Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di contenuto	Introduction -- Exponential Family of Distributions -- Univariate GLM -- Estimation and Tests for Univariate GLM -- Quasi Likelihood -- Multivariate Data and GLM: Generalized Estimating Equations -- Generalized Linear Mixed Models -- Extension of GLM for Bivariate Data -- Extension of GLM for Multivariate Data: Alternative Models -- Generalized Quasi Likelihood Methods -- Bayesian Approach for GLM -- GLM for Big Data Analytics.
Sommario/riassunto	This book presents a wide range of topics to address the needs of several groups of users of rapidly growing methods of generalized linear models. Since the introduction of the idea of generalized linear models (GLM) in early seventies, during the past four decades the modelling of statistical data have experienced a major transformation from linear models based on normality assumption to a more flexible unified approach of generalized linear models. The number of readers and users of generalized linear models have increased manifold. In addition, the use of generalized linear models has expanded in many new fields of applications where statistical models are being employed at an increasing rate. It is important to note here that the learners and users of GLM have a widely varied background in different disciplines.

Considering these pressing needs, this book focuses on: (i) upper undergraduate and graduate level students in need of a thorough understanding about the basic concepts of generalized linear models along with appropriate applications; (ii) researchers and users in need of advanced generalized linear models for analysing bivariate or multivariate data stemming from longitudinal or repeated measures data; and (iii) new challenges to analyse big data where the traditional techniques fail to provide any reasonable modelling strategy. In other words, this book starts with a thorough background of the generalized linear models for the new learners, then provides multivariate extensions to advanced level techniques for researchers and users in various disciplines, and finally some innovative modelling strategies are introduced using generalized linear models in the emerging field of big data analytics. It provides materials for new learners, for users/researchers who are in need of more advanced techniques and also strategies for employing linear models in big data analytics. Hence, techniques of generalized linear models will be presented in the proposed book covering the needs of new learners, users of advanced techniques, researchers in need of statistical modelling of any data type and users of big data analytics wanting to increase predictive accuracy of classification and regression tree techniques.