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Autore	Palta Mari <1948->
Titolo	Quantitative methods in population health [[electronic resource]] : extensions of ordinary regression / / Mari Palta
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley, c2003
ISBN	1-280-34400-8 9786610344000 0-470-24688-X 0-471-46798-7 0-471-46797-9
Descrizione fisica	1 online resource (339 p.)
Collana	Wiley series in probability and statistics
Disciplina	614.072 614.420727
Soggetti	Medical statistics Regression analysis Population - Health aspects - Statistical methods Health surveys - Statistical methods Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Quantitative Methods in Population Health; List of Figures; List of Tables; Contents; Preface; Acknowledgments; Acronyms; Introduction; I.1 Newborn Lung Project; I.2 Wisconsin Diabetes Registry; I.3 Wisconsin Sleep Cohort Study; Suggested Reading; 1 Review of Ordinary Linear Regression and Its Assumptions; 1.1 The Ordinary Linear Regression Equation and Its Assumptions; 1.1.1 Straight-Line Relationship; 1.1.2 Equal Variance Assumption; 1.1.3 Normality Assumption; 1.1.4 Independence Assumption; 1.2 A Note on How the Least-Squares Estimators are Obtained Output Packet I: Examples of Ordinary Regression Analyses2 The Maximum Likelihood Approach to Ordinary Regression; 2.1 Maximum Likelihood Estimation; 2.2 Example; 2.3 Properties of Maximum Likelihood Estimators; 2.4 How to Obtain a Residual Plot with PROC MIXED; Output Packet II: Using PROC MIXED and Comparisons to PROC

REG; 3 Reformulating Ordinary Regression Analysis in Matrix Notation; 3.1 Writing the Ordinary Regression Equation in Matrix Notation; 3.1.1 Example; 3.2 Obtaining the Least-Squares Estimator b in Matrix Notation; 3.2.1 Example: Matrices in Regression Analysis
3.3 List of Matrix Operations to Know4 Variance Matrices and Linear Transformations; 4.1 Variance and Correlation Matrices; 4.1.1 Example; 4.2 How to Obtain the Variance of a Linear Transformation; 4.2.1 Two Variables; 4.2.2 Many Variables; 5 Variance Matrices of Estimators of Regression Coefficients; 5.1 Usual Standard Error of Least-Squares Estimator of Regression Slope in Nonmatrix Formulation; 5.2 Standard Errors of Least-Squares Regression Estimators in Matrix Notation; 5.2.1 Example; 5.3 The Large Sample Variance Matrix of Maximum Likelihood Estimators
5.4 Tests and Confidence Intervals5.4.1 Example-Comparing PROC REG and PROC MIXED; 6 Dealing with Unequal Variance Around the Regression Line; 6.1 Ordinary Least Squares with Unequal Variance; 6.1.1 Examples; 6.2 Analysis Taking Unequal Variance into Account; 6.2.1 The Functional Transformation Approach; 6.2.2 The Linear Transformation Approach; 6.2.3 Standard Errors of Weighted Regression Estimators; Output Packet III: Applying the Empirical Option to Adjust Standard Errors; Output Packet IV: Analyses with Transformation of the Outcome Variable to Equalize Residual Variance Output Packet V: Weighted Regression Analyses of GHb Data on Age7 Application of Weighting with Probability Sampling and Nonresponse; 7.1 Sample Surveys with Unequal Probability Sampling; 7.1.1 Example; 7.2 Examining the Impact of Nonresponse; 7.2.1 Example (of Reweighting as Well as Some SAS Manipulations); 7.2.2 A Few Comments on Weighting by a Variable Versus Including it in the Regression Model; Output Packet VI: Survey and Missing Data Weights; 8 Principles in Dealing with Correlated Data; 8.1 Analysis of Correlated Data by Ordinary Unweighted Least-Squares Estimation; 8.1.1 Example 8.1.2 Deriving the Variance Estimator

Sommario/riassunto

Each topic starts with an explanation of the theoretical background necessary to allow full understanding of the technique and to facilitate future learning of more advanced or new methods and softwareExplanations are designed to assume as little background in mathematics and statistical theory as possible, except that some knowledge of calculus is necessary for certain parts.SAS commands are provided for applying the methods. (PROC REG, PROC MIXED, and PROC GENMOD)All sections contain real life examples, mostly from epidemiologic researchFirst chapter includes a SAS refresher

2. Record Nr. UNINA9910847588003321

Autore	Ntaimo Lewis
Titolo	Computational Stochastic Programming : Models, Algorithms, and Implementation / / by Lewis Ntaimo
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ISBN	3-031-52464-0
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (518 pages)
Collana	Springer Optimization and Its Applications, , 1931-6836 ; ; 774
Disciplina	519.7
Soggetti	Mathematical optimization Calculus of variations Probabilities Computer science - Mathematics Neural networks (Computer science) Algorithms Dynamics Calculus of Variations and Optimization Probability Theory Mathematical Applications in Computer Science Mathematical Models of Cognitive Processes and Neural Networks Dynamical Systems Programació estocàstica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introduction -- 2 Stochastic Programming Models -- 3 Modeling and Illustrative Numerical Examples -- 4 Example Applications of Stochastic Programming -- 5 Deterministic Large-Scale Decomposition Methods -- 6 Risk-Neutral Stochastic Linear Programming Methods -- 7 Mean-Risk Stochastic Linear Programming Methods -- 8 Sampling-Based Stochastic Linear Programming Methods -- 9 Stochastic Mixed-Integer Programming Methods -- 10 Computational Experimentation. .
Sommario/riassunto	This book provides a foundation in stochastic, linear, and mixed-

integer programming algorithms with a focus on practical computer algorithm implementation. The purpose of this book is to provide a foundational and thorough treatment of the subject with a focus on models and algorithms and their computer implementation. The book's most important features include a focus on both risk-neutral and risk-averse models, a variety of real-life example applications of stochastic programming, decomposition algorithms, detailed illustrative numerical examples of the models and algorithms, and an emphasis on computational experimentation. With a focus on both theory and implementation of the models and algorithms for solving practical optimization problems, this monograph is suitable for readers with fundamental knowledge of linear programming, elementary analysis, probability and statistics, and some computer programming background. Several examples of stochastic programming applications are included, providing numerical examples to illustrate the models and algorithms for both stochastic linear and mixed-integer programming, and showing the reader how to implement the models and algorithms using computer software.