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3.2 Least squares criterion3.3 Model evaluation; 3.3.1 Regression standard error; 3.3.2 Coefficient of determination-R2; 3.3.3 Regression parameters-global usefulness test; 3.3.4 Regression parameters-nested model test; 3.3.5 Regression parameters-individual tests; 3.4 Model assumptions; 3.4.1 Checking the model assumptions; 3.5 Model interpretation; 3.6 Estimation and prediction; 3.6.1 Confidence interval for the population mean, E(Y); 3.6.2 Prediction interval for an individual Y-value; 3.7 Chapter summary; Problems; 4 Regression model building I; 4.1 Transformations
4.1.1 Natural logarithm transformation for predictors4.1.2 Polynomial transformation for predictors; 4.1.3 Reciprocal transformation for predictors; 4.1.4 Natural logarithm transformation for the response; 4.1.5 Transformations for the response and predictors; 4.2 Interactions; 4.3 Qualitative predictors; 4.3.1 Qualitative predictors with two levels; 4.3.2 Qualitative predictors with three or more levels; 4.4 Chapter summary; Problems; 5 Regression model building II; 5.1 Influential points; 5.1.1 Outliers; 5.1.2 Leverage; 5.1.3 Cook's distance; 5.2 Regression pitfalls; 5.2.1 Autocorrelation
5.2.2 Multicollinearity5.2.3 Excluding important predictor variables; 5.2.4 Overfitting; 5.2.5 Extrapolation; 5.2.6 Missing Data; 5.3 Model building guidelines; 5.4 Model interpretation using graphics; 5.5 Chapter summary; Problems; 6 Case studies; 6.1 Home prices; 6.1.1 Data description; 6.1.2 Exploratory data analysis; 6.1.3 Regression model building; 6.1.4 Results and conclusions; 6.1.5 Further questions; 6.2 Vehicle fuel efficiency; 6.2.1 Data description; 6.2.2 Exploratory data analysis; 6.2.3 Regression model building; 6.2.4 Results and conclusions; 6.2.5 Further questions; 7 Extensions
7.1 Generalized linear models

Sommario/riassunto

An applied and concise treatment of statistical regression techniques for business students and professionals who have little or no background in calculusRegression analysis is an invaluable statistical methodology in business settings and is vital to model the relationship between a response variable and one or more predictor variables, as well as the prediction of a response value given values of the predictors. In view of the inherent uncertainty of business processes, such as the volatility of consumer spending and the presence of market uncertainty, business professionals use regr