Applying Generalized Linear Models / 256 pages / Springer Science & Business Media, 2000 / 9780387982182 / James K. Lindsey / 2000

Generalized linear models provide a unied approach to many of the most common statistical procedures used in applied statistics. They have ap-plications in disciplines as widely varied as agriculture, demography, eco-logy, economics, education, engineering, environmental studies and pollu-tion, geography, geology, history, medicine, political science, psychology, and sociology, all of which are represented in this text.Â In contrast, relatively few books on generalized linear models, as such, are available. Perhaps the explanation is that normal and discrete, as well as survival, data continue to be the major elds of application. Thus, many students, even in relatively advanced statistics courses, do not have. The generalized linear model expands the general linear model so that the dependent variable is linearly related to the factors and covariates via a specified link function. Moreover, the model allows for the dependent variable to have a non-normal distribution. It covers widely used statistical models, such as linear regression for normally distributed responses, logistic models for binary data, loglinear models for count data, complementary log-log models for interval-censored survival data, plus many other statistical models through its very general model formulation. Examples. In statistics, the generalized linear model (GLM) is a flexible generalization of ordinary linear regression that allows for response variables that have error distribution models other than a normal distribution. The GLM generalizes linear regression by allowing the linear model to be related to the response variable via a link function and by allowing the magnitude of the variance of each measurement to be a function of its predicted value. Generalized Linear Models (GLM) is a parametric modeling technique. Parametric models make assumptions about the distribution of the data. When the assumptions are met, parametric models can be more efficient than non-parametric models.Â When building or applying a model, Oracle Data Mining automatically replaces missing values of numerical attributes with the mean and missing values of categorical attributes with the mode. You can configure a Generalized Linear Models to override the default treatment of missing values. With the ODMS_MISSING_VALUE_TREATMENT setting, you can cause the algorithm to delete rows in the training data that have missing values instead of replacing them with the mean or the mode.