Some Perspectives about Generalized Linear Modeling

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Abstract

This talk discusses several topics pertaining to generalized linear modeling. With focus on categorical data, the topics include (1) bias in using ordinary linear models with ordinal categorical response data, (2) interpreting effects with nonlinear link functions, (3) cautions in using Wald inference (tests and confidence intervals) when effects are large or near the boundary of the parameter space, (4) the behavior and choice of residuals for GLMs, and (5) an improved way to use the generalized estimating equations (GEE) method for marginal modeling of a multinomial response. I will present few new research results, but these topics got my attention while I was writing the book `Foundations of Linear and Generalized Linear Models,' recently published by Wiley.