

## **L2E Modeling of a Binary Response Variable**

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### **ABSTRACT:**

David Scott's parametric L2E criterion has proven to be a useful tool in robust data analysis. In regression models with a continuous response variable, the L2E criterion gives us robust estimates that can also help us in identifying outliers. In this report, we explore application of the L2E criterion to a regression model with a binary response variable. Application of the L2E criterion to estimation of the mean of a Bernoulli random variable leads to the sensible closed form solution. We then present various ways the L2E criterion can be used to estimate the parameters in a regression model with a binary response variable and compare them with the existing methodologies.

**KEY WORDS:** Robust statistics, Minimum distance estimation, Binary response regression

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