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4.5 R1

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Suppose that in Ad Clicks (a problem where you try to model if a user will click on a particular ad) it is well known that the majority of the time an ad is shown it will not be clicked. What is another way of saying that?

☐ Ad Clicks have a low Prior Probability ✓

☐ Ad Clicks have a high Prior Probability.

☒ Ad Clicks have a low Density. ✗

☐ Ad Clicks have a high Density.

Explanation

Whether or not an ad gets clicked is a Qualitative Variable. Thus, it does not have a density. The Prior Probability of Ad Clicks is low because most ads are not clicked.

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📘 Answers are displayed within the problem

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<https://stats.stackexchange.com/questions/158772/can-we-use-categorical-independent-variable-in-discriminant-analysis>
Can we use categorical independent variable in discriminant analysis?

=>
Discriminant analysis assumes a multivariate normal distribution because what we usually consider to be predictors are really a multivariate dependent variable, and the grouping variable is considered to be a predictor. This means that categorical variables that are to be treated as predictors in the sense you wish are not handled well. This is one reason that many, including myself, consider discriminant analysis to have been made obsolete by logistic regression. Logistic regression makes no distributional assumptions of any kind, on either the left hand or the right hand side of the model. Logistic regression is a direct probability model and doesn't require one to use Bayes' rule to convert results to probabilities as does discriminant analysis.