

APPROXIMATE BAYESIAN METHODS FOR LOGISTIC REGRESSION MODEL

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- **ABSTRACT:** *In this paper we consider the Bayesian inference for the estimation of logistic regression model. The paper presents two approximate methods, Laplace's method (Tierney and Kadane, 1986) and Markov chain Monte Carlo (MCMC) to obtain the marginal posterior density for the parameters. A comparison of these methods is carried out for the prediction of the in-hospital death in patients with acute myocardial infarction in a particular hospital. Besides, we identify the risk factors that characterize the myocardial infarction. The Bayesian results are also compared with maximum likelihood estimation.*
- **KEYWORDS:** *Logistic regression; Bayesian inference; noninformative prior; Laplace's method; MCMC.*

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