

Imputation of multivariate continuous data with nonignorable missingness

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Resumo

Regular imputation methods have been used to deal with non-response in several types of survey data. However, in some of these studies, the assumption of missing at random is not valid since that the probability of missing depends on the response variable. We propose an imputation method for multivariate data sets when there is nonignorable missingness. A Dirichlet process mixture of multivariate normals is fit to the observed data under a Bayesian framework to provide exhibility. We provide some guidelines on how to alter the estimated distribution using the posterior samples of the mixture model and obtain imputed data under different scenarios. Lastly, we apply the method to a real data set.