Dear Dr. Editorial Team,

We wish to submit a new manuscript entitled “Bayesian LDA for categorical mixture model clustering” for consideration by the Journal of Statistical Software as a **code snippets paper**. We confirm that this work is original and has not been published elsewhere nor is it currently under consideration for publication elsewhere.

We presented in this paper a small code project that implements and describe the Bayesian LDA model for fuzzy clustering based on different types of data (i.e., Multinomial, Bernoulli, and Binomial entries). This project resulted in a new R package called Rlda for which these types of data can be used to model fuzzy clustering trough a Bayesian paradigm.

In a program language perspective, this packaged used the Rcpp library and C++ code as a support to speed up the gibbs samples, which resulted in an efficient way to obtain the posterior samples for those three types of distributions. On the other hand, we also presented all proofs associated with the Full Conditional Distributions for those different types of data.

Finally, we believe that this paper is of interest of the Journal of Statistical Software since not only implement a new statistical methodology, but also present real applications of how this method can be used in different ways. Specifically we introduce three applications in Marketing, Remote Sensing and Ecology motivating the reader about the importance of this project in applied fields.

We are available to answer any questions or concerns about the paper.

Thank you for your consideration of this manuscript.

Sincerely,

The authors.