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Title: Semiparametric fractional imputation using Gaussian Mixture Models

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Abstract:
Item nonresponse is frequently encountered in practice. Ignoring missing data can lose efficiency and lead to misleading inference. Fractional imputation is a statistical tool for handling missing data. However, the parametric fractional imputation of Kim (2011) may be subject to bias due to model misspecification. In this talk, we propose a novel semiparametric fractional imputation method using Gaussian mixture model. The proposed method is computationally efficient and leads to robust estimation. The proposed method is further extended to incorporate the categorical auxiliary information. Some asymptotic properties are presented. Results from a limited simulation study are presented to check the finite sample performance of the proposed method.