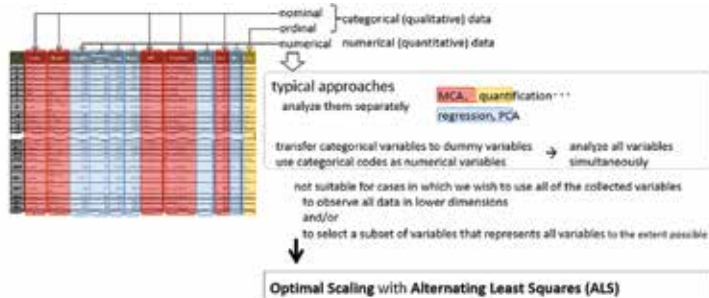
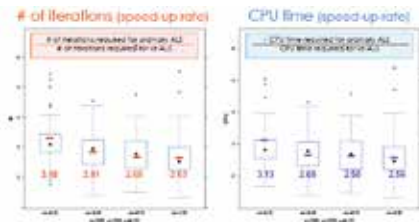


Some applications in multivariate methods with alternating least squares

In recent years, we can obtain a huge data which have quantitative and qualitative variable. We call this type of data as mixed measurement levels data. The alternating least squares (ALS) algorithm is a most popular iterative computational method for mixed measurement levels data. The ALS algorithm alternates between the optimal scaling step and the parameter estimation step. The optimal scaling step is to obtain optimal scaled data by quantifying nominal and ordinal scaled data. The parameter estimation step is to compute parameters for the optimal scaled data. However, the drawback of the ALS algorithm is that its convergence is linear and very slow for very large data with mixed measurement levels.



In order to circumvent the problem of slow convergence of the ALS algorithm, we provide an acceleration algorithm. The algorithm converges faster than the original sequence of ALS iterations.



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