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## Abstract



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## An application of the Geometry of Random Vectors in Data Analysis

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In this article we present a protocol to generate a data center, using the underlying geometry of random variables and random vectors. The geometry of random vectors enables us to establish simulation procedures to generate quite a rich data center. The idea is to match observed samples of the data to the data center. This technique appears to be quite a powerful tool for data analysis, parametric and nonparametric estimation. The technique also appears to be a nice contribution to the field of machine learning and the nearest neighbor estimation method. The protocol can be expanded to generate data centers for the realizations of large classes of stochastic processes.