

Dimension reduction in multivariate analysis using maximum entropy criterion

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Abstract

In the present communication dimension reduction criteria in Multivariate data with no external variables are studied by using Entropy Optimization Principles. Maximum entropy criterion is provided and its relation with other criteria for selection of principal variables in multivariate analysis is established. A comparative study of performance of principal variables with the corresponding number of principal components is made by considering empirical data set.

Keywords : *Principal variables and components, covariance matrix, information loss, singular transformation and correlation matrix.*

1. Introduction

Researchers often record several characters in their research experiments where each character has a special significance to the experimenter.

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