

Mahalanobis Taguchi System (MTS) and Mahalanobis Taguchi Gram-schmidt (MTGS) Methods as Multivariate Classification Tools

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Abstract

The Mahalanobis Taguchi System(MTS) and Mahalanobis Taguchi Gram-Schmidt (MTGS) methods were developed as diagnostic and predictive tools to separate between “normal” and “abnormal” data. The objective of these methods is to establish a measurement scale based on the “normal” data so that the “abnormal” data can be identified along with the degree of “abnormality”. The goal of the present paper is to employ these methodologies as classification tools for multivariate data in general multi-class problems and compare the accuracy of the proposed tool with that of other existing multivariate classifiers using a variety of real life data sets.

(Joint work with S. Bose and R. Bandyopadhyay)