

A quantitative Heppes Theorem and multivariate Bernoulli distributions

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Using some extensions that we provide of a theorem of Heppes on finitely supported discrete probability measures, we address the problems of classification and testing based on projections.

In particular, when the support of the distributions is known in advance (as for instance for multivariate Bernoulli distributions), a single suitably chosen projection determines the distribution. Several applications of these results are considered.