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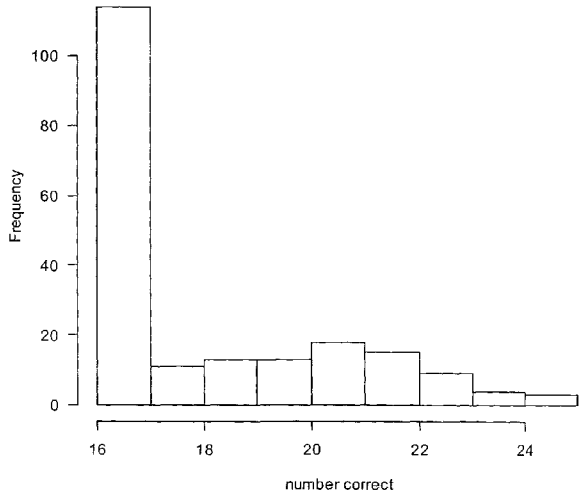
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(54) Title: METHOD AND APPARATUS FOR IDENTIFYING DIAGNOSTIC COMPONENTS OF A SYSTEM



(57) Abstract: A method and apparatus is described for identifying a subset of components of a system, the subset being capable of predicting a feature of a test sample. The method comprises generating a linear combination of components and component weights in which values for each component are determined from data generated from a plurality of training samples, each training sample having a known feature. A model is defined for the probability distribution of a feature wherein the model is conditional on the linear combination and wherein the model is not a combination of a binomial distribution for a two class response with a probit function linking the linear combination and the expectation of the response. A prior distribution is constructed for the component weights of the linear combination comprising a hyperprior having a high probability density close to zero, and the prior distribution and the model are combined to generate a posterior distribution. A subset of components is identified having component weights that maximise the posterior distribution.

WO 03/034270 A1

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