General Bayesian Networks for Classification: Structure Learning Methods and Comparison.

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Abstract: *Bayesian Networks are Directed Acyclic Graphs (DAGs) that represents the random variables by nodes and its respective conditional dependencies by arcs in the graph. One of the main tasks of BN is classification and in this study we compare flexible structures of Bayesian Classifiers, called* General Bayesian Network*. The methods, based on tests or scores, learn the structure of all variables and classify the target using its posterior distribution. Simulated data and evaluation scores are taken for comparison and rule-based methods has shown a slightly better performance values.*

Keywords: Bayesian Networks; Classifiers; Structure Learning; Comparison.

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