

**Murthy, S. K.; Kasif, S.; Salzberg, S.**

**A system for induction of oblique decision trees.** (English) Zbl 0900.68335

*J. Artif. Intell. Res. (JAIR)* 2, 1-32 (1994).

Summary: This article describes a new system for induction of oblique decision trees. This system, OC1, combines deterministic hill-climbing with two forms of randomization to find a good oblique split (in the form of a hyperplane) at each node of a decision tree. Oblique decision tree methods are tuned especially for domains in which the attributes are numeric, although they can be adapted to symbolic or mixed symbolic/numeric attributes. We present extensive empirical studies, using both real and artificial data, that analyze OC1's ability to construct oblique trees that are smaller and more accurate than their axis-parallel counterparts. We also examine the benefits of randomization for the construction of oblique decision trees.

**MSC:**

**68R10** Graph theory (including graph drawing) in computer science

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