Paper 23, A Learning Automata-Based Technique for Training Bayesian Networks

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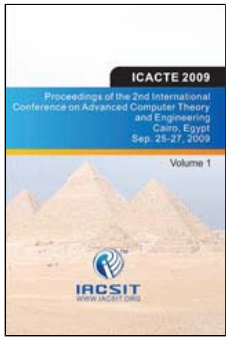

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Excerpt

One of the most important challenges of Bayesian networks is training an optimal network based on existing training samples. We propose two Learning Automata-based methods for training parameters and structure of the network. Parameter training method is an incremental method which performs training and testing simultaneously and has lower computational cost than enumerative or search based parameter training methods. The structure training method uses a guided search scheme and avoids getting stuck in local maxima. This outputs a network that improves classification accuracy. We could also use both these methods together to train the network. Results indicated that this combinational method further improved classification accuracy while still kept computational cost rational.

BOOK DATA

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