Learning optimal independence tests for Bayesian Networks

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Abstract

1 Introduction

2 Related work

Existing independence tests:

• Pearson's χ -squared. The problem is the null hypothesis is independence, but independence is what we're trying to show.

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Margaritis [2003]

3 Independence testing

Manifold of Independence

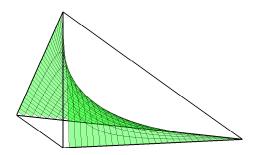


Figure 1: A

- 3.1 Discrete variables formulation
- 3.2 Continuous variables formulation
- 4 Experiments

- 4.1 Classification of Synthetic CPDs
- 4.2 Classification of CPDs from Gene Expression
- 4.3 Synthetic Bayesian networks
- 4.4 Gene expression data
- 5 Discussion

References

D. Margaritis. *Learning Bayesian network model structure from data*. PhD thesis, University of Pittsburgh, 2003.