Smart data - not just big data: 
Real-world decision making with Bayesian networks

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They expect so much from me, but even when I am really big, I may be limited, unstructured, or even flawed.

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Inverse inference

[1 in 1,000 people have disease D. A test for disease D is 100% accurate for patients who have the disease and 95% accurate for those who don't.]

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Some of our results

Forensics

Improved predictive accuracy with respect to whether a prisoner is determined suitable for release on the basis of risk management of the individual's risk of reoffending [1].

Sports and gambling market efficiency

Consistent profitability against published market odds by predicting the outcome of football matches and simulating bets against the football market [2, 3].

Decision theory

Determining whether a decision (such as which type of investment to make) requires further information and what is the value of getting further information prior to making a decision [4].

Medicine

Improved decision support with respect to whether a mentally ill patient is determined suitable for discharge on the basis of simulating relevant interventions and assessing the individual's risk of violence [5].

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References


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