bnlearn - an R package for Bayesian network learning and inference
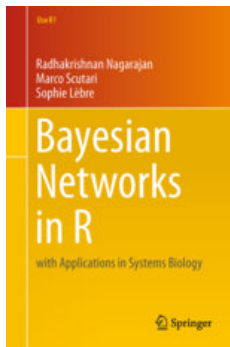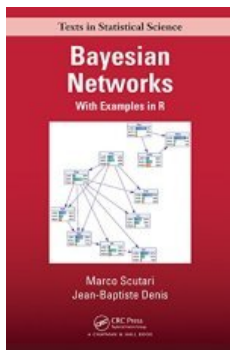
- Home Page
- Documentation
- Examples
- Research Notes
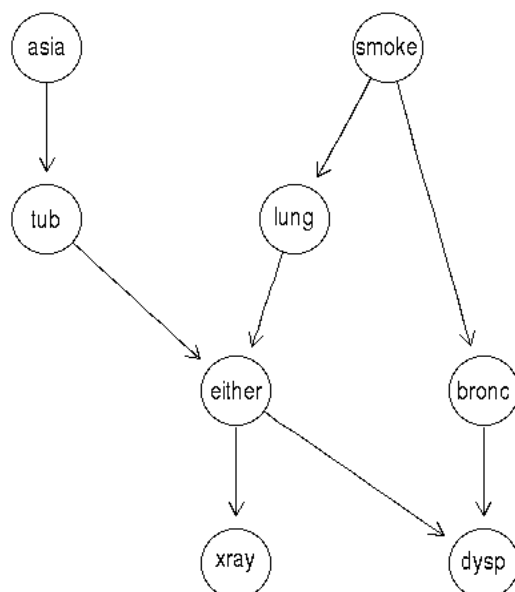- Bayesian Network Repository

- About the Author

data & R code

data & R code
(2nd edition
coming soon!)

Small Networks (<20 nodes)

ASIA (sometimes called LUNG CANCER)

Number of nodes: 8
Number of arcs: 8
Number of parameters: 18
Average Markov blanket size: 2.50
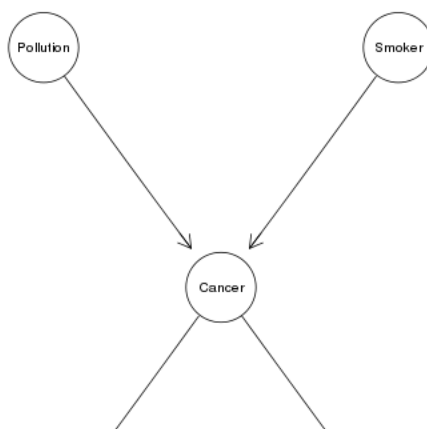Average degree: 2.00
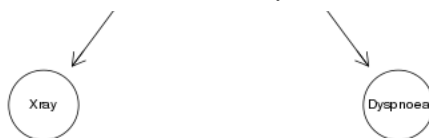Maximum in-degree: 2

BIF (310B)
DSC (322B)
NET (276B)
RDA (bn.fit) (551B)
RDS (bn.fit) (538B)

S. Lauritzen, D. Spiegelhalter. Local Computation with Probabilities on Graphical Structures and their Application to Expert Systems (with discussion). Journal of the Royal Statistical Society: Series B (Statistical Methodology), 50(2):157-224, 1988.
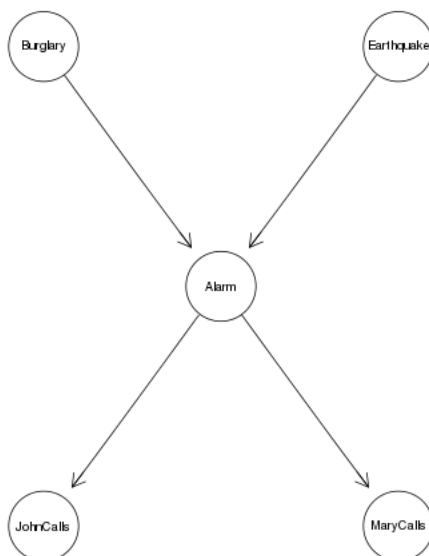
CANCER

Number of nodes: 5
Number of arcs: 4
Number of parameters: 10
Average Markov blanket size: 2.00
Average degree: 1.60
Maximum in-degree: 2

BIF (288B)
DSC (294B)
NET (256B)
RDA (bn.fit) (520B)
RDS (bn.fit) (508B)

K. B. Korb, A. E.
Nicholson. Bayesian
Artificial Intelligence,
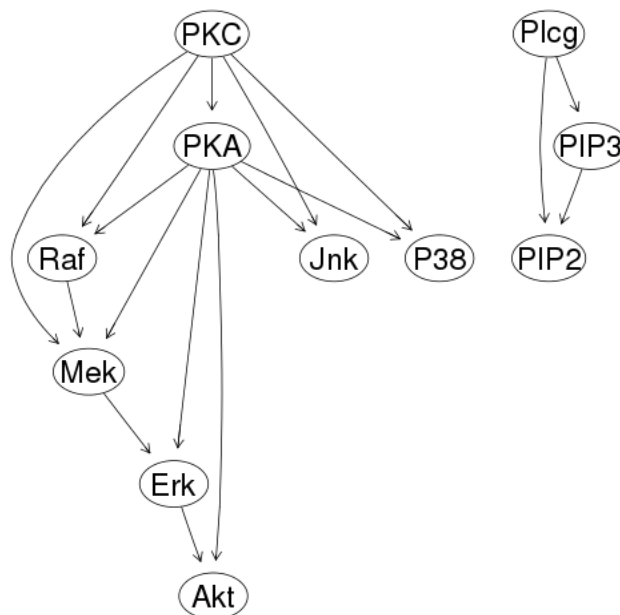2nd edition, Section
2.2.2. CRC Press,
2010.

EARTHQUAKE

Number of nodes: 5
Number of arcs: 4
Number of
parameters: 10
Average Markov
blanket size: 2.00
Average degree: 1.60
Maximum in-degree: 2

BIF (271B)
DSC (282B)
NET (243B)
RDA (bn.fit) (482B)
RDS (bn.fit) (470B)

K. B. Korb, A. E.
Nicholson. Bayesian
Artificial Intelligence,
2nd edition, Section
2.5.1. CRC Press, 2010.

SACHS

Number of nodes: 11

Number of arcs: 17

Number of parameters: 178

Average Markov blanket size: 3.09
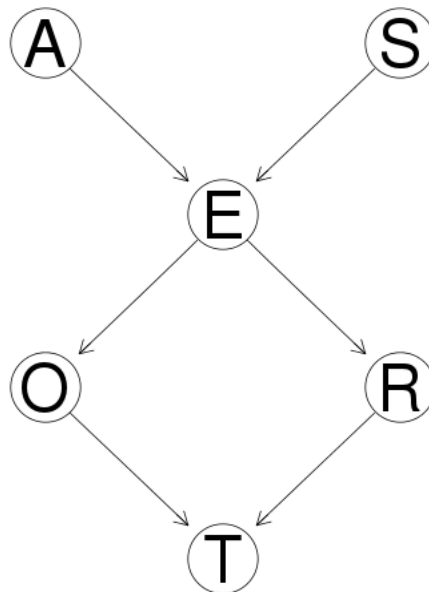
Average degree: 3.09

Maximum in-degree: 3

BIF (1.9kB)
DSC (1.9kB)
NET (1.7kB)
RDA (bn.fit) (2.4kB)
RDS (bn.fit) (2.4kB)

K. Sachs, O. Perez, D. Pe'er, D. A. Lauffenburger and G. P. Nolan. Causal Protein-Signaling Networks Derived from Multiparameter Single-Cell Data. Science, 308:523-529, 2005.

SURVEY

Number of nodes: 6
Number of arcs: 6
Number of parameters: 21
Average Markov blanket size: 2.67
Average degree: 2.00
Maximum in-degree: 2

BIF (368B)
DSC (360B)
NET (306B)
RDA (bn.fit) (617B)
RDS (bn.fit) (606B)

M. Scutari and J.-B. Denis. Bayesian Networks: with Examples in R. Chapman & Hall, 2014.