TITLE

Bayesian Networks using Python

OBJECTIVES

• Create a Bayesian Network in Python

PREREQUISITES

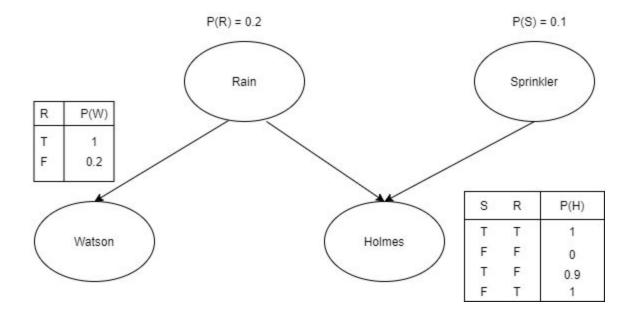
- Python 3+.
- Online Python IDE
- Solved problem no. 8

RESOURCES

- Course Slides (Chapter 9)
- Python Tutorial

LAB

Analyze the given code (the code is commented so that you can understand how to apply to your problems). A description of the code could be also found in the HTML file provided. An example of how to build the Bayesian Network of the Mr. Holmes example from chapter 9 is presented in the code.



Based on this example try to solve the following exercise:

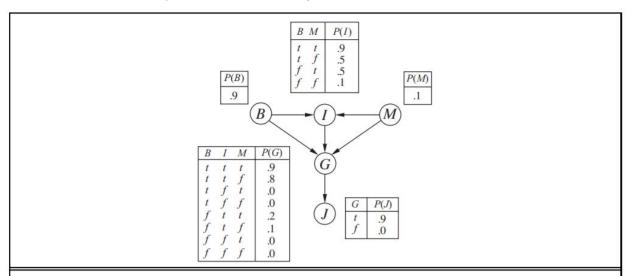


Figure 14.23 A simple Bayes net with Boolean variables B = BrokeElectionLaw, I = Indicted, M = PoliticallyMotivatedProsecutor, G = FoundGuilty, J = Jailed.

- a) Build the Bayesian Network in Python
- b) Calculate the value of $P(b, i, \neg m, g, j)$. First, you have to do it manually and then you can check using the programming technique.