F0all 2020 Homework 1-Car Trouble Diagnostic Tool

Due0: September 16, 2020

Assignment: Code the following Bayesian network in python. The prior and conditional probabilities will be read in from a file when the program starts (you can decide the format as well as reasonable test values). Prompt the user for a hypothesis over one or more variables. Calculate and provide the probability of the query hypothesis.



Use the following abbreviations for each node. Queries will provided as a comma-delimited string with the state of each variable as true or false. Print out an error and exit if input is not in the right format.

IcyWeather=IW

Battery=B

Radio=R

Ignition=I

StarterMotor=SM

Gas=G

Starts=S

Moves=M

Example query:

* IW=true,B=false,Radio=false

Put code into a private github repository. Use the README.md to document your program/data files, execution examples and cite any sources that were used. Your submission should include any dependencies. Submit the Github zip via blackboard.