ML LAB CIE-1

P. SAI DEEKSHILH 18M18C5148 6th Seur 18

 $\frac{P(C=T)}{0.5} \frac{P(C=F)}{0.5}$

cloudy

2 perceller C | P(S=T) | P(S=F) T | 0.1 | 0.9 F | 0.5 | 0.5

Rain.

 $\begin{array}{c|c}
C & P(R=T) & P(e=F) \\
\hline
T & 0.8 & 0.2 \\
\hline
F & 0.2 & 0.8
\end{array}$

Wet Grown

S|R|P(W=T)| P(W=F) T| T| 0.99 0.01 T| F| 0.9 0.1 T| T| 0.9 0.1 T| T| 0.9 0.1

r. SAI DEEKSHITH (ode: from fampy, models infort Bayerian Hodel
from pampy, factor discrete import Tabulas CPD
from pampy, inference import variable Elimination Bayerian Hodel ([('Cloudy', 'Sperinkler'),

('Elady', 'Rosin'),

('Sperinkler', 'Wet Goars'), Cour model ('Rain', 'Wellown'))) print ("Bayman retwork noder ere!") peint (" Baymon network edger core:")
Lessent (" Manilan . I and) perint (model.udges()) Epd-cloudy = Tabular (PD (Voriable = 'Cloudy', Variable - cord = 2, Values = [[0.5], [0.5])

- cord = 2, Values = [obular CPD (Variable = Sprinkler),

Cpd - Sprinkler = Tobular CPD (Variable = Sprinkler) Variable cord = 2, Valuer=[[0.1,0.5], [0.9,0.5]]+, cpd fair [clandy], evidence cord = [2])
evidence - [clandy], A 97. (2)

P. SAI DEE MSTAM IBHIBCSIUS

epd-soin: Toholone TOE Voniable : Rain'. Maluer: [['08,0,0],[0,1,0.8]] en denne = l'étoudy Janideune conde [et] Gld melogram: Tabalan CTD (raniable: "WelGoraci") Voluer- Mr 0,99,0,9,0,9,0,0], [0.01,0.1,0.1,1.0] Cyrilanie Variable cord = [2], evidence = cord. [sponintle! Rain] evidence cond : [2,2]) model. oddepols (cpd-ploudy, cpd-spenukler, cpd-welgears). paid ("chuking Carectmers!")
print (nodel! check-nodel()) Communication get independencies () point (model. get char ('cloudey'))

point (model. get char ('spainbles'))

point (model. get char ('Rain'))

point (model. get char ('Wet gean'))

point (model. get char ('Wet gean'))

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infer = Voriolde Elimination (model)

print (' Perotooloility of spenker and Wetgram

print (' Perotooloility of spenker and Wetgram

given (tondy')

given (vorioldes = ['spenikler', Wedgram,

eridenne = E'cloudy'; 13)

print (g)

Scanned with CamScanner