F14076083 魏湧致

2.66

(a) (2+30) / 100 = 0.32

(b) (32+25+30) / 100 = 0.87

(c) (5+6+2) / 100 = 0.13

(d) (6+25+2+30) / 100 = 0.63

2.82

P(h)=0.2 P(w)=0.28 P(h∩w)=0.15

(a) P(h) + P(w) - P(h∩w) = P(h∪w) = 0.2 + 0.28 - 0.15 = 0.33

(b) P( w|h ) = P(h∩w)/P(h) = 0.15/0.2 = 0.75

(c) P( h|w’ ) = P(h∩w’)/P(w’) = = =

2.90

(a) P(C|A∩B) = = 0.20 P(B|A) = = 0.75 P(A) = 0.3

P(A∩B∩C) = 0.20 \* (0.75\*0.3) = 0.045

(b) P(B’ ∩ C) = P(A ∩ (B’ ∩ C)) + P(A’ ∩ (B’ ∩ C)) = P(A) \* P(B’|A) \* P(C|A∩B’) +

P(A’) \* P(B’|A’) \* P(C|A’∩B’) = 0.3\*(1-P(B|A))\*0.8 + (1-0.3)\*(1- P(B|A’))\*0.9 = 0.3\*0.25\*0.8 + 0.7\*0.8\*0.9 = 0.564

(c) P(C) = P( (A∩B) ∩ C) + P( (A∩B’) ∩ C) + P( (A’∩B) ∩ C) + P( (A’∩B’) ∩ C)

P( (A∩B) ∩ C) = 0.045 P( (A∩B’) ∩ C) = 0.06 P( (A’∩B’) ∩ C) = 0.504

P( (A’∩B) ∩ C) = P(C|A’∩B) \* P(A’∩B) = 0.15 \* 0.14 = 0.021

P(C) = 0.045 + 0.06 + 0.021 + 0.504 = 0.63

(d) P(A|B’∩C) = = 0.06 / 0.564 =

2.100

令S為problems with electricity supplied, C為computer malfunction, E為malfunctioning electrical equipment, H為hunam errors

P(A) = (2+4+5+7) / 43= P(B) = (1+3+4+7) / 43= P(C) = (1+2+2+5) / 43=

P(H|A) = P(H|B) = P(H|C) = =

P(C|H) = =

=

= =

2.126

令U為union, U’為nonunion, S為same company, N為new company, F為new filed, Un為unemployed

(a) P(U|N) = = =

(b) P(Un|U) = = =