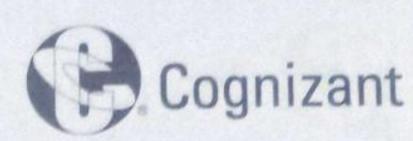
wan Christian 1003056 Cognizant Home nork 1 Theory and Practice For Deep Learning 1. Theory Homework: known P(xx, 12) p(10=0 kc(x)) = p(10=0 1 c(x)) Starting p (m=0 k,cex)=1) + p (m=1 hc(x)=0=1 p(y=01x,c(x)=2) + p(y=1 1x,c/x)=2)=1 of P(c(x)=1), P(c(x)=2), f(x)c(x)=1), f(x)c(x)=2), and P(y=0|K,c(x)=1), P(y=0|X,c(x)=2)p(K, y) => as function -> Gince disjoint event > play, x> = p(xx, x, &c(x)=1 or c(x)=2}) y is dependent on c(x) ? P(mol x, c(x) =p(m=0)c(x)) of is independent of x example from the question P(y,x)= P(1x,x,c(x)=1)+p(y,x,c(x)=2) P(my, x, c(x)=1) = p(y 1x, c(9=1) P(x, c(x)=1) = P(y | c(x)=1) P(x,c(x)=1) = P(-g1ccx)=1) [f(x/c(x)=1) P(ca)=1)] (3) P(y, x, c(x)=2) = p(y 1 x, c(x)=2) P(x, c(x)=2) = P (y 1 cax) = 2) [f (x | c(x)=2) P(cax)=2]7

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~ P(x, y) = P(y) 1 c(x)=1) [f(x 1 c(x)=1) P(c(x)=1)] + P(y) (c(x)=2) [f(x 1 c(x)=2) P(c(x)=1)]
   P(0=0) = P(N=0/n,c(x)=1) P(x,c(x)=1) + P(M=0/x,c(x)=2) P(x,c(x)=1)
    Since we are considering only 2 possibilityes (bloomy) and of 15 depending
                   P(m=1/c(x) = i - P(m=0/c(x))
                  P(y=1) = P(y=1/x,c(x)=) P(x,c(x)=1) +
P(y=1/x,c(x)=2) P(x,c(x)=2)
                         = (1-P(y=1/c(x)=1)) P(x,c(x)=1) +
(1-P(y=1/c(x)=2)) P(x,c(x)=2)
 1 10=0 -> P(x, 10=0) = P(10=0 | C(x)=1) [f(x | C(x)=1) P(c(x)=1)]
                            + P(10=0 / c(x)=2) [ f(x / c(x) =2) P(c(x)=2)]
                       = 0.2 (f(x1c(x)=1) P(c(x)=1)) + 0.7 [F(x1c(x)=2)
                             P(c(x)=2)
                      = 0.2 (0.5) f(x (C(x)=1) + 0.7 (0.5) f(x (c(x)=2)
                         b. 1 f(x)((x)=1) + 0.35 f(x1 c(x)=2)
1910=1 -> p(x, 15=1) = (1-0.2) (f(x)c(x)=1) 0.5) 7 (1-0.3) (0.5) [falor
                       = 0.4f(x(c(x)=1) + 0.15f(x(c(x)=2)
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| 2. Theory | Homework | -> modrit | as just | vectors |
|-----------|----------|-----------|---------|---------|
|           | roduce v |           |         |         |

$$(C)_{ij} = \sum_{k=1}^{m} a_{ki}b_{kj}$$

$$F = \sum_{k=1}^{m} a_{ki}b_{ki}$$

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