



Now, St=A Therefore we will differentiare the enough A

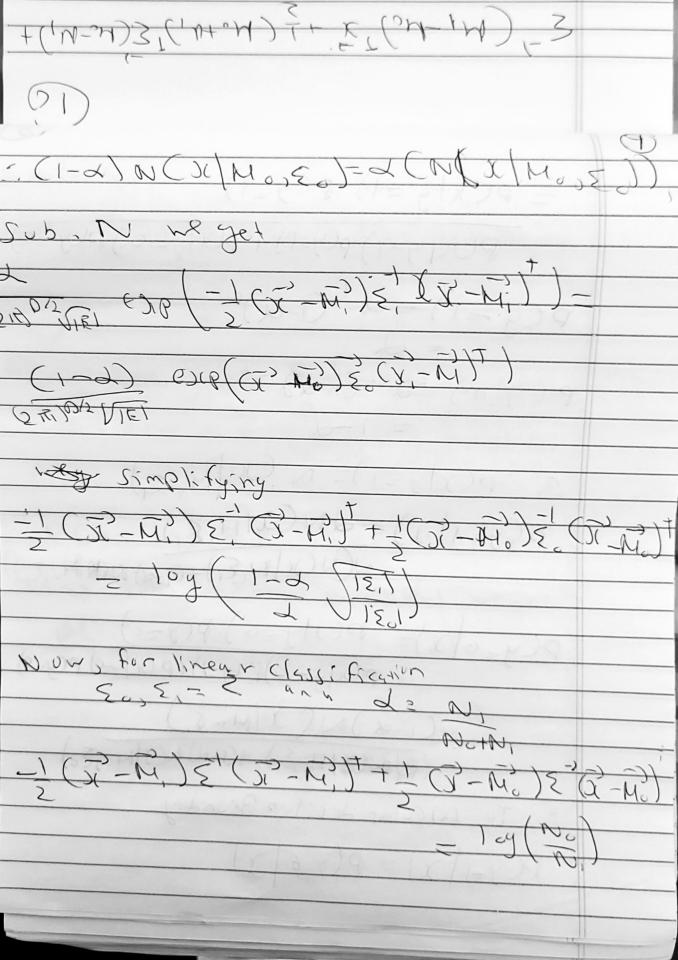
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Therefore we will differen 2 (A-1) - [\$ [07:-Mo](1]:-Mo]] 100 1 - 1 5 (x; -M°)(x; -M°)(=0 The patons when I free warring with No 50-18, (Di-Mo) (Di-Mo) =0 NU (E0) = E: (J) - MI (T) - MI) + 50 = 00 & (00; -10) (00; -10)

Similarly, $\sum_{i=1}^{n} \sum_{i=1}^{n} (x_{i}^{n} - M_{i}^{n})(x_{i}^{n} - M_{i}^{n})^{T}$ Now, The given Bayes optimal decision is y = argmax 9 - 50,13 P (y)) For a linear Lecision Boundry of 2 class profit P(y=1/2) = P(y=0 x)=0.5 Using the conditional pouranters we get in P(y=1/x) = P(3(,y=1) = 0()(, 7=1)+0(4=1) (a, y) = P(x(y=1)P(B=1) P()(, y=1) + P()(, y=0)







5-1 (M-M) 3 + + (MoH) 7 E (M-N) + 100 (N) 20 w = { (M, -40) b = - (Motal) { (MotM) - | Foy 1) F(x)= sign (w) (+h) IF, 5, \$ 2, + (- 1 - x) - 3 - 1 - x) + - (I) -MJ E-1 (I) Hi) + 1 1 9 20 + 104 (N) = 0