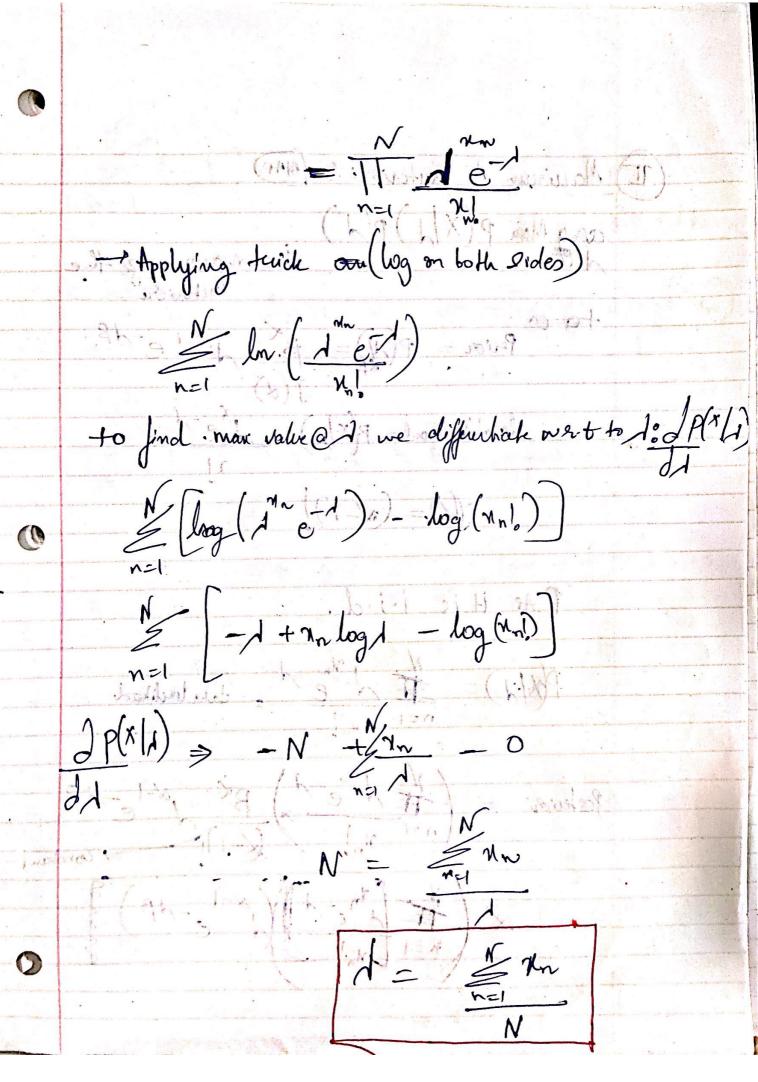
RILHAB LOKERY 9357-3447 Fundamentals of Machine learning 0 0 Bublem-1 0 0 i.i.d = $X = \sum_{i=1}^{n} x_i y_{i=1}$ 0 6 P(X/u) = Data likelihoool 0 0 = Possione distribution (() = 1 e) 0 6 0 0 0 Marirum - Likelihard Estimator & (MLE) 0 0 en-By MLE method we ried to Mom. the data Clikelihood. @ I on-9 · ary man P(X/1) he know - P(X/1) can be written as P(X/1)=P(11/1)P(12/1) -5 = (I P(MM/H) 6



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Marinen A-posterior: 5 (MAP) ang Man P(X/1) P(1)

1.c. maunimi
Prelessorie Peron = P(V) = B / x-1e datalikelihood = P(X/1) = 1 e-1 J(A) = (a-1) P(N/i) = # 1 e = data likelihood = (Net Nn! Bx x-1= NB

(Net Nn! x-1) Bx x-1= NB

(conobaut

 $-\log(n_n!) = 1\beta + \log(n)(1-d) - \leq n_n$ 1 (1-d - & Mm) d= (= 72)+0/-1 N+B

999

Problem-3 . I - The samples of X are i.i.d. ie. 9 0 0 M 0 9 As the Value from XN-10 to XN are ruising uc can use assure the value are ansored to 0 0 D 0 **6** Ja-observed data likelihood: P(M; 10) 0 6 6 L' = ! TIP (Nilo) x Tasp(rilo) 6 6 0 6 As values are missing we cannot first substitute of o es as we will show the rusults. each of the data point. whose magnitudes we alo not know.

I

enume une know the values of the willing data points zj---N.

if we have the .Z's we can find the Mon of L' . and find O. values.

Buoblen 2