TA Write Pseudo Code of Naive Boges Classifier Ans. Input: D= {x1, x2, ... , xn} / Training Data Output: A naive boyes model

method. and thick south from the board is

philips of animalist and his a Jon each class, C; ED, do find the Proion Probabilities P(Ci)

end fon zone Rebeblily Course to eller

Jon each attribute, A: ED, do and land - Jon each attribute Value, Mis & Mi, do Find the class conditional Phobabilities, P(Ait) (i) stax la gular pfildledadt lend for

lend for a personne de applicable out afforth

Son each instance, X: ED, do Find the Posterion Probability, P(Ci IXi); HULL : end Jon

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and the instance of the multi-class

It write the Majors aless of Naive Bayes Classifiers The majors aleps and see it as paral a. find the Projon Probabilities, P(Ci) b. Find the class conditional Probabilities, P[Ais1 (i) c. Find the Postenion Probability p (C:1xi) 2 What is taplace Connection? Why we need taplace Connection not 603 Ins. A zero Roobability Cancels the effect of all others (Posteriori) Roobabilities (on (i) involved in the Pooduct. This is known as laplace Connection. the case of Proobability values of zero & Write the advantages & disadvantages of boken & Naive Bajes Classifien. Jon each instance, XI ED do Advantages in a minuted on boil KNN: a. No assumptions b. No training step c. Easy to implement for multi-class Problem. d. Only hypers Parameters e. Vaniety of distance chiteria.

וח כות ביותו למולין -

Naive Bajes:

a. Fast to use and shi

b. Only one sean of the training data required

c. Handling missing attribute values.

d. Continuous data

e High classification Penformance

Disadvantages of icasts and a redonitions no

KNN:

Total a. Slow algorithm me so test not of b. Dimensonality Constraint of side should of

c. Very high roun time

d. Missing Value Problem.

Naive Bayes! som stop our of emission and

a. Zeno Inequency Problem

b. Assumption of & independent Proedictors.

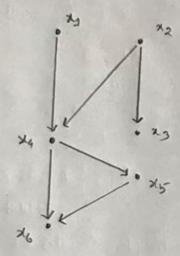
c. Data Seancity

d. Continuous fealunes.

c. Incomplète training deta plaine Boges Room nemade noisy declared I

pends broke their state sent scion out while

12 How to hande big data. White the advantage of handing sig data by Naive Byes. Small Parols and load them. Naive bajes only nequires a small amount of treating data to estimate Panameters necessary for classification & the classifier can be trained · Whit in enementally. so for that we can use Granssian distribution to handle big data. Bauppose You have some noisy data. Now write a technique to make data noise free de qualit Ay: NAN & Zeno - Insquency Problem b Assuration of the independent specialons Naive Bayes, Dinoise & place 3 DNOISY sample quous los b c. Incomplete training data Naive Bayes can bemove noisy vectors Then With the noise free data KNN would classify.



AT.

Jd2

 $P(x_{6}|x_{6},x_{4},x_{3},x_{2},x_{1}) = P(x_{6}|x_{5},x_{4})$ $P(x_{5}|x_{4}|x_{3},x_{2},x_{1}) = P(x_{5}|x_{4})$ $P(x_{4}|x_{3},x_{2},x_{1}) = P(x_{4}|x_{1},x_{2})$ $P(x_{4}|x_{3},x_{2},x_{1}) = P(x_{4}|x_{1},x_{2})$ $P(x_{3}|x_{3},x_{1}) = P(x_{3}|x_{3})$ $P(x_{4}|x_{1}) = P(x_{2})$