L31 + L32 MACHINE LEARNING FAT LAB EXAM QUESTIONS

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* Use of intelligence is highly appreciated.
* You have to create an ipy notebook and conduct all the experiments.
* Mention the question  in the text cell and next ’code cell’ shall contain the code related to the respective
* question.
* All your inferences shall be put in the text cell with the respective question number.
* You are requested to convert interactive python note book (ipynb) into a pdf file (single file) and upload in Moodle and vtop
* Upload the html file and jpynb file in respective links

Create a report after completing your experiment having the following details in the separate cell:

a)      Objective of the experiment

b)     Inference from the experiment.

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Reg no and Name in the cell

Question No and Question in the cell

Aim

Code with every step output

split x and y

correlation

graphs plot

accuracy

etc etc

Inference in the last cell

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Methodology          Comparitive analysis              Output

        10                            10                                         20

QUESTION  2

**The children.csv dataset contains the information of around 2300 children that attended the emergency services with fever and were tested for serious bacterial infection. The outcome of the children infected has 4 categories: Not Applicable(no infection) / UTI / Pneum / Bact**

**a.       Build a model using wcc, age, prevAB, pct, and crp to predict the outcome.**

**b.      Compute the confusion matrix .and calculate the accuracy, recall, precision and plot the graphs. Write your observations in a separate cell.**

**d.       Reduce the depth of the tree and infer the observations**

**c.       How does the model classify a child with 1 year of age, WCC=29, PCT=5, CRP=200 and no prevAB?**

**d.      Calculate probability for any given input (Note while calculating the probability you are not supposed to use library function )**