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Subject - Machine Learning

Assignment - 2

Q.1. What is supervised learning ML?

→ ① Supervised learning is a type of machine learning where machine are trained using a well labled dataset.
② It is like learning under guidance of a teachere training dataset is like a teacher which is used to train the machine.
③ model is trained on a pre-defined dataset before it starts marking decision when given new data.

Q.2. What is difference beth classification and regression.

classification	Regression
① classification Algorithm are used with discreate data	① regression Algorithm are used with continous data
② o/p variable must be a discreate value	② o/p variable must be a continous nature or real value

Classification	Regression
① classification algorithm are used with discreate data.	② Regression Algorithm are used with continous data
③ O/P variable must be a cliscreate value	③ O/P variable must be a continous nature or real value.
④ A classification problem with two classification called binary more than two classes is called a multi class classification.	④ A regression problem with multiple input variable is called a multivariate regression ~~program~~/problem
⑤ A classification ~~problem~~ anemail ~~with two~~ as Spam or not Spam is an example of classification problem.	⑤ Predicting the price of a stock over a period of time is a regression problem.
⑥ The task of the classifi'n algorithm is to map the I/P value(x) with the discreate O/P variable(Y)	⑥ The task of a regression algorithm is to map the I/P value(x) ~~with~~ with the continous O/P variable(Y).

Q.3. What do you mean by unsupervised learning?

→ ① It is like a learning without a teacher.

② Unsupervised learning is the training of a machine using information that is neither classified nor labeled.

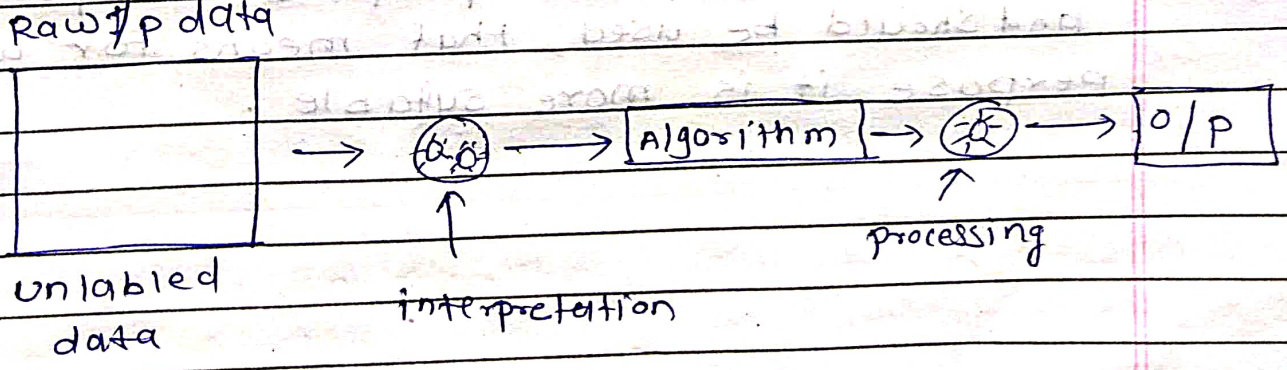
③ It allow the algorithm to act on that information without guidance.

④ Unlike supervised learning no teacher is provided that no training will be given to the machine.

⑤ Algorithm has no pre-idea about the features of a I/P But it can categorieze according together similarities, patterns and differences.

⑥ It mainly deals with unlabelled data.

⑦ A suitable machine learning algorithm will be applied which divides the data into seperate group according to the similarities and differences betn the data object.



Q.4. Write any four Application of clustering.

→ ① An identification of cancer cells :-
It divides the cancerous and non cancerous data sets into different groups.

② In search engines :- The search result appears based on the atleast object to the search query it a does. it by grouping similar data object in one group that is far from the other dismissal object.

③ Customer segmentation :- It is used in market research to segment the customer based on their choice and performance.

④ In Biology :- To classify different species of plant and animal using the image recognization technique.

⑤ Inland use :- This can be very useful to find that for what perpose the perticular land should be used, that means for which perpose it is more suitable.