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# BI Assignment - 4

★ Aim :-

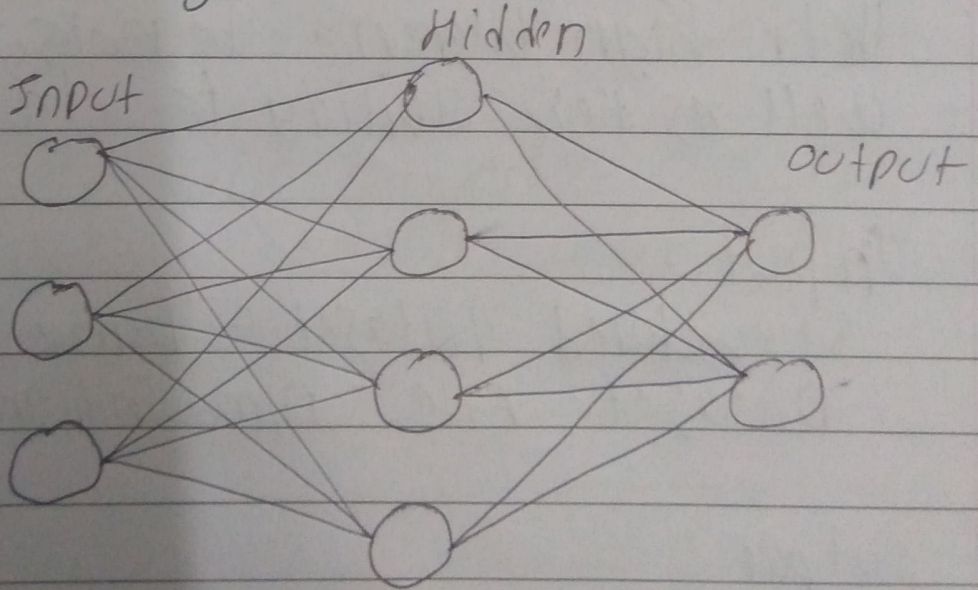
Implement a classification algorithm (ANN Algorithm)

★ Theory :-

Brief theory on ANN Algorithm

ANN algorithm i.e. artificial neural network (ANN) usually called neural networks (NN).

- they are computing systems inspired by biological neural network.



- An ANN is an interconnected group of nodes inspired by a simplification of neuron in a brain.
- Here each circular node represents an AN and an arrow represents a connection from the output of one artificial neuron to the input of another.
- Neural Networks are used for solving many business problems such as sales forcasting, customer research, data validation and risk management
- Advantages of neural networks include their high tolerance to noisy data, as well as their ability to classify patterns

★ Input :
Structured Dataset :- Pima Indians Diabetes Dataset File - Pima Indians Diabetes.csv

★ Output :
Data is partitioned into training and testing and applied the classifier for visualization of the performance of an algorithm.

★ conclusion:

Hence, using ANN classification algorithm, the classification on Pima Indians Dataset is performed using Python program.

★ FAQ

Q which classifier is considered computationally efficient for high dimensional problems? why?

⇒ - Naive Bayesian classifier is considered computationaly efficient for high dimensional problems.

- Beause Naive bayesian classifier handle categorical variables with large number of levels.

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9 Explain Supervised and Unsupervised Learning?

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A Supervised Learning algorithm learns from labeled training data, helps you to predict outcomes for unforeseen data. Results are highly accurate. In this data input & output variables are given.

Types :- 1. Regression
2. Classification

An Unsupervised Learning is a machine learning technique where you do not need to supervise the model. Instead you need to allow the model to work on its own to discover information. Only input data is given. Data is not labeled. It is computationaly complex that does not use output data.

Types: 1. clustering
2. Association.