

royal from onward are being sold at double speed but
 "most valuable" and "rare" are not double speed. Since
 double > being mounted enough satisfaction will
 royal robbins are onward are enough

1. What is linear regression?

Linear regression is a statistical approach that is commonly used to model the relationship between a dependent variable and one or more independent variables.

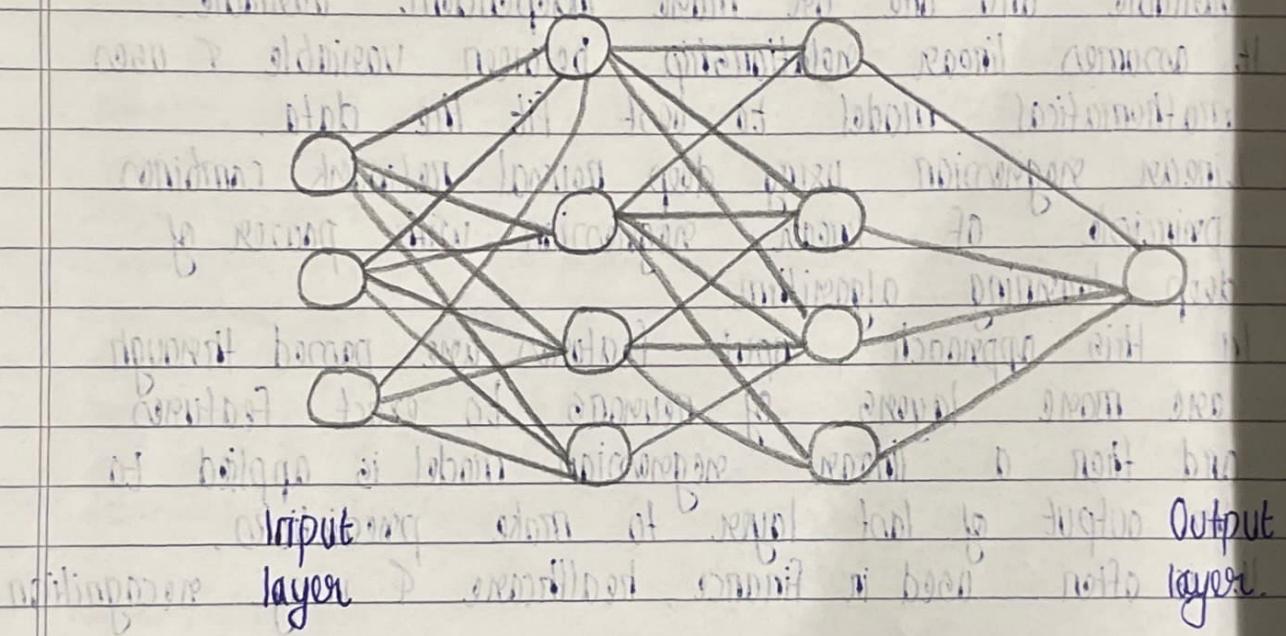
- It assumes linear relationship between variable & uses mathematical model to best fit the data.
- Linear regression using deep neural network combines principle of linear regression with power of deep learning algorithm.
- In this approach, input features are passed through one more layers of neurons to extract features and then a linear regression model is applied to the output of last layer to make predictions.
- It is often used in finance, healthcare & image recognition.

2. What is deep neural networks?

Deep neural network is a type of machine learning algorithm that is modeled after the structure & functioning of human brain, no single node can do all

- It consists of multiple layers of interconnected nodes that process data and learn from it to make predictions.
- Each layer performs a specific type of processing on the data.

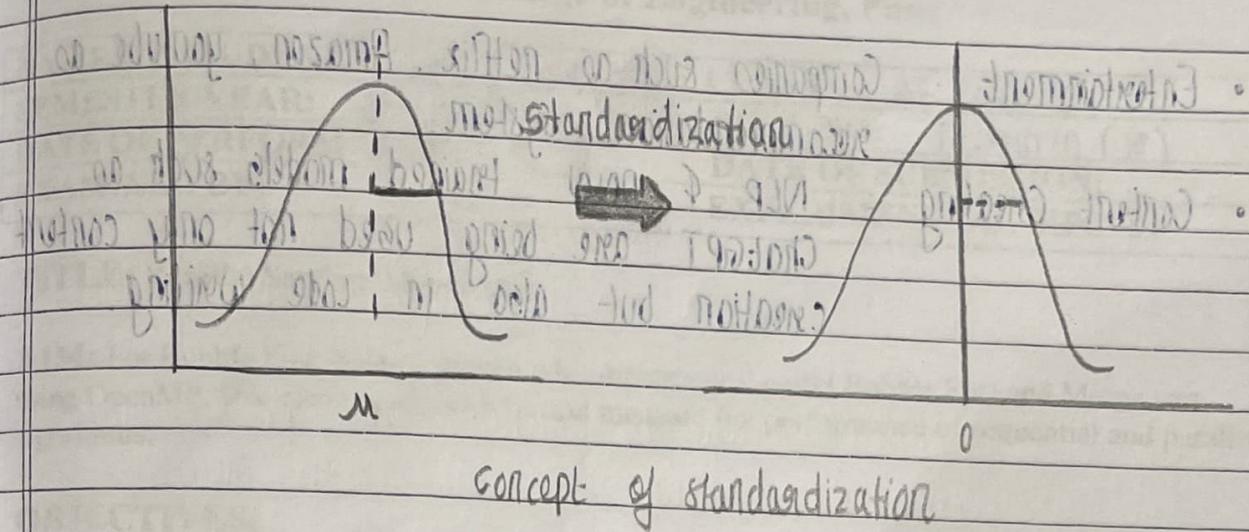
- The layer closest to the input are known as input layer, while layers closest to the output are "output layer".
- The intermediate layers between input & output layers are known as hidden layer.
- Deep neural networks are trained using back propagation to increase its accuracy.
- These network are used in NLP, image & speech recognition after a variety of subjects.



3. What is concept of Standardization?

Ans: Standardization is one of the feature scaling technique which scales down the data in such a way that the algorithm that are dependent on distance weights should not get affected by unnormalized data.

- If the data is scaled evenly, such data points are mean centric & standard deviation of the distribution is then the weights will be treated equally by the algorithm giving more relevant & results.



4. Why split data into train & test ?

- Ans:
- Data splitting is an important aspect of data science, particularly for creating models based on the data.
 - In basic two part data split, the training data set is used to train and develop models.
 - Training sets are commonly used to estimate different parameters or two compare different model performance.
 - The testing data set is used after the training is done.
 - The training & test data are compared to check that the final model works correctly.

5. Write down applications of Deep Neural Network ?

- Ans:
- Virtual Assistants : Cloud based application that understand natural language voice commands & complete tasks for users.
 - Chatbots : It solves customer problem in seconds.
 - Healthcare : Computer aided diseases detection & computer aided diagnosis.

- Entertainment : Companies such as netflix , Amazon , youtube as recommendation system.
- Content Creating : NLP & DNN trained models such as ChatGPT are being used not only content creation but also in code writing.