MACHINE LEARNING

ASSIGNMENT-1

BY

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DATASET: HERE I CONSIDER HOUSE ,RENT ETC AS MY EXAMPLE

S.NO	SIZE	LOCATION	BEDROOMS	AGE	CONDITION	PRICE
01	1600	Rural	3	20	Fair	180,000
02	2200	Suburb	5	2	Excellent	600,000
03	1400	City Center	2	12	Good	350,000
04	3000	Rural	4	25	Fair	250,000

In the above Example Training Data Set,

1.Features:

A measurable property or characteristic of the data. For example, in a housing dataset, features could include size, location, number of bedrooms, and age of the house.

2.Label:

The output variable that you want to predict. In the housing example, the label would be the price of the house.

3.Prediction

The process of using a model to estimate the label based on the features.

4.Outlier
A data point that differs significantly from other observations, which can skew results.

5.Test Data:
A subset of the dataset used to evaluate the performance of a model after it has been trained.

6.Training Data:
The portion of the dataset used to train the model, allowing it to learn patterns.

7.Model
A separate subset of data used to fine-tune the model and prevent overfitting.

8.Hyperparameter:
A parameter whose value is set before the learning process begins, such as the learning rate in a machine learning algorithm.

9.Epoch:
One complete pass through the entire training dataset during the training process.

10.Loss Function
A method of evaluating how well your algorithm models your dataset, quantifying the difference between predicted and actual values

11.Learning Rate:
A hyperparameter that determines the step size at each iteration while moving toward a minimum of the loss function. A high learning rate may converge faster but can overshoot the minimum, while a low learning rate can ensure steady convergence but may take a longer time.