MACHINE LEARNING

Multiple Linear Regression

Step-1 Import Dataset

```
import pandas as pd
df = pd.read_csv("ml_data_salary.csv")
df.head()
```

	age	distance	YearsExperience	Salary
0	31.1	77.75	1.1	39343
1	31.3	78.25	1.3	46205
2	31.5	78.75	1.5	37731
3	32.0	80.00	2.0	43525
4	32.2	80.50	2.2	39891

Step-2 Define dependent and independent variables

```
X = df[["age","distance", "YearsExperience"]]
y = df["Salary"]
```

Step-3 Fit Linear Regression Model

```
from sklearn.linear_model import LinearRegression
model = LinearRegression()
model = model.fit(X, y)
model
```

```
LinearRegression
LinearRegression()
```

```
model.coef_
```

```
array([-3.00216193e+15,  1.18788781e+15,  3.24424072e+13])
```

Step-4 Evaluating Model Fitness

```
 # Model Fitness
print("Score for data =" ,model.score(X, y))
```

```
Score for data = 0.9569960750337954
```

Step-5 Prediction of unknown values

```
model.predict([[31.1,77.75,1.1]])
```

```
/usr/local/lib/python3.10/dist-packages/sklearn/base.py:439: UserWarning: X does not hav
```

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