**Future Sales Prediction using Python**

CODE:

import pandas as pd

import numpy as np

from sklearn.model\_selection import train\_test\_split

from sklearn.linear\_model import LinearRegression

import plotly.io as io

io.renderers.default='browser'

data = pd.read\_csv("C:/Users/prith/Desktop/MACHINE LEARNING/futuresale prediction.csv")

print(data.head())

print(data.sample(5))

print(data.isnull().sum())

import plotly.express as px

import plotly.graph\_objects as go

figure = px.scatter(data\_frame = data, x="Sales",

y="TV", size="TV", trendline="ols")

figure.show()

figure = px.scatter(data\_frame = data, x="Sales",

y="Newspaper", size="Newspaper", trendline="ols")

figure.show()

figure = px.scatter(data\_frame = data, x="Sales",

y="Radio", size="Radio", trendline="ols")

figure.show()

correlation = data.corr()

print(correlation["Sales"].sort\_values(ascending=False))

x = np.array(data.drop(["Sales"], 1))

y = np.array(data["Sales"])

xtrain, xtest, ytrain, ytest = train\_test\_split(x, y,

test\_size=0.2,

random\_state=42)

model = LinearRegression()

model.fit(xtrain, ytrain)

print(model.score(xtest, ytest))

features = [[TV, Radio, Newspaper]]

features = np.array([[230.1, 37.8, 69.2]])

print(model.predict(features))

OUTPUT:

========== RESTART: C:/Users/prith/Desktop/MACHINE LEARNING/20. APP.py =========

TV Radio Newspaper Sales

0 230.1 37.8 69.2 22.1

1 44.5 39.3 45.1 10.4

2 17.2 45.9 69.3 12.0

3 151.5 41.3 58.5 16.5

4 180.8 10.8 58.4 17.9

TV Radio Newspaper Sales

178 276.7 2.3 23.7 16.8

3 151.5 41.3 58.5 16.5

158 11.7 36.9 45.2 7.3

139 184.9 43.9 1.7 20.7

23 228.3 16.9 26.2 20.5

TV 0

Radio 0

Newspaper 0

Sales 0

dtype: int64

Sales 1.000000

TV 0.901208

Radio 0.349631

Newspaper 0.157960

Name: Sales, dtype: float64

>>>





