

9. Write a Python program to demonstrate the generation of Logistic Regression models using Python

```
import numpy

from sklearn import linear_model

x=numpy.array([3.78,2.44,2.09,0.14,1.72,1.65,4.92,4.37,4.96,4.52,3.69,5.88]).reshape(-1,1)

y=numpy.array([0,0,0,0,0,0,1,1,1,1,1,1])

logr=linear_model.LogisticRegression()

logr.fit(x,y)

def logit2prob(logr,x):

    log_odds=logr.coef_*x+logr.intercept_

    odds=numpy.exp(log_odds)

    probability=odds/(1+odds)

    return(probability)

probabilities = logit2prob(logr, x)

for x, prob in zip(x.flatten(), probabilities.flatten()):

    print(f"Input: {x}, Probability: {prob}")
```

10. Write a python program to demonstrate Timeseries analysis with Pandas.

```
import pandas as pd

dates = pd.Series(pd.date_range('2022-12-01',periods=31, freq='D'))

print("Month of December 2022:")

print(dates)

dates = pd.Series(pd.date_range('2022-12-01',periods=31, freq='D'))

print("\nMaximum date: ", dates.max())

print("Minimum date: ", dates.min())

print("Maximum index: ", dates.idxmax())

print("Minimum index: ", dates.idxmin())
```

11. Write a Python program to demonstrate Data Visualization using Seaborn.

```
import seaborn as sb
df = sb.load_dataset('diamonds')
print (df.head())

import numpy as np

import matplotlib.pyplot as plt

sb.set(style="white")

ru = np.random.RandomState(10)
d = ru.normal(size=100)

#sb.histplot(d, kde=True, color="m")
#plot = sb.histplot(d, kde=True, color="m")
#print(plot)
#plt.show()
sb.scatterplot(df['table'],df['carat'])
```