

ML_Task1 (/github/GaneshPrabhut/ML_Task1/tree/main)

/ Task 1_LogisticRegression.ipynb (/github/GaneshPrabhut/ML_Task1/tree/main/Task 1_LogisticRegression.ipynb)

```
In [3]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
In [4]: df=pd.read_csv('Basic_task1_dataset.csv')
df
```

```
Out[4]:
```

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction
0	6	148	72	35	0	33.6	0.627
1	1	85	66	29	0	26.6	0.351
2	8	183	64	0	0	23.3	0.672
3	1	89	66	23	94	28.1	0.167
4	0	137	40	35	168	43.1	2.288
...
763	10	101	76	48	180	32.9	0.171
764	2	122	70	27	0	36.8	0.340
765	5	121	72	23	112	26.2	0.245
766	1	126	60	0	0	30.1	0.349
767	1	93	70	31	0	30.4	0.315

768 rows × 9 columns

```
In [5]: df.isnull().sum()
```

```
Out[5]: Pregnancies      0
Glucose      0
BloodPressure  0
SkinThickness  0
Insulin      0
BMI          0
DiabetesPedigreeFunction  0
Age          0
Outcome      0
dtype: int64
```

```
In [6]: X=df.drop('Outcome',axis='columns')
```

```
In [7]: y=df.Outcome
```

```
In [8]: from sklearn.model_selection import train_test_split
```

```
In [9]: X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2)
```

```
In [10]: from sklearn.linear_model import LogisticRegression
model=LogisticRegression()
```

```
In [11]: model.fit(X_train,y_train)
```

C:\Users\ganes\Desktop\sample_project_1\env\Lib\site-packages\sklearn\linear_model_logistic.py:469: ConvergenceWarning: lbfgs failed to converge (status=1):
STOP: TOTAL NO. of ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression

n_iter_i = _check_optimize_result(

```
Out[11]: LogisticRegression (https://scikit-learn.org/1.4/modules/generated/sklearn.linear_model.LogisticRe
LogisticRegression()
```



```
In [12]: model.predict(X_test)
```

```
Out[12]: array([1, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0,
                0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0,
                0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
                0, 0, 0, 0, 0, 1, 0, 1, 1, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0,
                0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1, 0, 0, 0, 1,
                1, 1, 1, 1, 0, 0, 1, 0, 1, 0, 0, 0, 0, 1, 0, 1, 0, 0, 0, 0,
                0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 1, 0, 0,
                0, 0],
                dtype=int64)
```

```
In [14]: model.score(X,y)
```

```
Out[14]: 0.7799479166666666
```

```
In [ ]:
```