

```

import pandas as pd
import numpy as np
from sklearn.linear_model import LogisticRegression

df=pd.read_excel("/content/drive/MyDrive/diabetes (1).xlsx")
df.head()

{"summary":{"\n  \"name\": \"df\",\n  \"rows\": 768,\n  \"fields\": [\n    {\n      \"column\": \"preg\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 3,\n        \"min\": 0,\n        \"max\": 17,\n        \"num_unique_values\": 17,\n        \"samples\": [\n          6,\n          1,\n          3\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"plas\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 31,\n        \"min\": 0,\n        \"max\": 199,\n        \"num_unique_values\": 136,\n        \"samples\": [\n          151,\n          101,\n          112\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"pres\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 19,\n        \"min\": 0,\n        \"max\": 122,\n        \"num_unique_values\": 47,\n        \"samples\": [\n          86,\n          46,\n          85\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"skin\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 15,\n        \"min\": 0,\n        \"max\": 99,\n        \"num_unique_values\": 51,\n        \"samples\": [\n          7,\n          12,\n          48\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"insu\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 115,\n        \"min\": 0,\n        \"max\": 846,\n        \"num_unique_values\": 186,\n        \"samples\": [\n          52,\n          41,\n          183\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"mass\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 7.8841603203754405,\n        \"min\": 0.0,\n        \"max\": 67.1,\n        \"num_unique_values\": 248,\n        \"samples\": [\n          19.9,\n          31.0,\n          38.1\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"pedi\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 0.33132859501277484,\n        \"min\": 0.078,\n        \"max\": 2.42,\n        \"num_unique_values\": 517,\n        \"samples\": [\n          1.731,\n          0.426,\n          0.138\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    },\n    {\n      \"column\": \"age\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 11,\n        \"min\": 21,\n        \"max\": 81,\n        \"num_unique_values\": 52,\n        \"samples\": [\n          1.731,\n          0.426,\n          0.138\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      }\n    }\n  ]\n}}

```

```
[\\n          60,\\n          47,\\n          72\\n          ],\\n
\\\"semantic_type\\\": \\\"\\\",\\n          \\\"description\\\": \\\"\\\"\\n          }\\n
n      },\\n      {\\n          \\\"column\\\": \\\"class\\\",\\n          \\\"properties\\\": {\\n
n          \\\"dtype\\\": \\\"category\\\",\\n          \\\"num_unique_values\\\": 2,\\n
\\\"samples\\\": [\\n          \\\"tested_negative\\\",\\n
\\\"tested_positive\\\"\\n          ],\\n          \\\"semantic_type\\\": \\\"\\\",\\n
\\\"description\\\": \\\"\\\"\\n          }\\n      }\\n  ]\\n
n}\\\", \"type\": \"dataframe\", \"variable_name\": \"df\"}
```

```
df.isnull().sum()
```

```
preg      0
plas      0
pres      0
skin      0
insu      0
mass      0
pedi      0
age       0
class     0
dtype: int64
```

```
inp=df[["age","mass","insu","plas"]]
out=df["class"]
```

```
Logr=LogisticRegression()
```

```
Logr.fit(inp,out)
```

```
LogisticRegression()
```

```
age=int(input("Enter the age:"))
mass=int(input("Enter the mass:"))
insulin=int(input("Enter the insulin level:"))
plasma=int(input("Enter the plasma level:"))
pred=Logr.predict([[age,mass,insulin,plasma]])
print(pred)
```

```
Enter the age:23
Enter the mass:78
Enter the insulin level:99
Enter the plasma level:32
['tested_negative']
```

```
/usr/local/lib/python3.12/dist-packages/sklearn/utils/
validation.py:2739: UserWarning: X does not have valid feature names,
but LogisticRegression was fitted with feature names
  warnings.warn(
```

```
Logr.score(inp,out)
```

```
0.7669270833333334
```