Logistic_Regression_final

February 17, 2022

[1]:
```
import pandas as pd
import numpy as np
from sklearn import datasets
from sklearn.linear_model import LogisticRegression
```

[2]:
```
cancer = datasets.load_breast_cancer()
```

[3]:
```
li_ftrs = list(cancer.feature_names)
```

[4]:
```
def lr(x):
    #seed = 23345
    rng = np.random.default_rng(x)
    idx_feat = (np.floor(30*rng.uniform(size=4))).astype(int)
    X = cancer["data"][:,idx_feat]
    label = cancer["feature_names"][idx_feat]
    Y = cancer["target"]
    model = LogisticRegression().fit(X,Y)
    selected_features = [li_ftrs[index] for index in idx_feat]
    print(selected_features)
    score = model.score(X, Y)
    print(score)
```

[5]:
```
lst = []
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())

    lst.append(ele)

print(lst)
for i in range(len(lst)):
    lr(i)
```

```
Enter number of elements : 4
123333
12234
56271
66626
```

```
[123333, 12234, 56271, 66626]
['fractal dimension error', 'mean symmetry', 'mean texture', 'mean radius']
0.8910369068541301
['compactness error', 'worst symmetry', 'mean smoothness', 'worst symmetry']
0.7065026362038664
['mean concave points', 'mean symmetry', 'worst smoothness', 'mean perimeter']
0.8892794376098418
['mean perimeter', 'mean concave points', 'worst smoothness', 'concave points
error']
0.8857644991212654
```

[ ]: