Dimension Reduction case study

```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
%matplotlib inline

from sklearn.datasets import load_breast_cancer
cancer=load_breast_cancer()
 cancer.keys()

print(cancer['DESCR'])
```

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```
cancer.data
cancer.feature_names
df=pd.DataFrame(cancer['data'],columns=cancer['feature_names'])
df.head(10)
df.tail(10)
df.shape
from sklearn.preprocessing import StandardScaler
Scaler=StandardScaler()
Scaler.fit(df)
Scaled_data=Scaler.transform(df)
```

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```
Scaled_data
from sklearn.decomposition import PCA
pca=PCA(n_components=2)
pca.fit(Scaled_data)
x_pca=pca.transform(Scaled_data)
Scaled_data.shape
x_pca.shape
Scaled_data
x_pca
plt.figure(figsize=(8,6))
plt.scatter(Scaled_data[:,0],Scaled_data[:,1],c=cancer['target'])
```

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