

✓ DimensionalityReduction

```
import numpy as np
import matplotlib.pyplot as plt
from sklearn import datasets
from sklearn.decomposition import PCA
import pandas as pd
from sklearn.preprocessing import StandardScaler
```

```
#load the data
iris = datasets.load_iris()
X=iris.data
Y=iris.target
```

```
#Z-score the features
scaler = StandardScaler()
scaler.fit(X)
X = scaler.transform(X)
```

```
#PCA model
pca = PCA(n_components=2) #estimate only 2 pcs
X_new = pca.fit_transform(X) #projects the original data into PCA space
print(abs(pca.components_))
```

```
[[0.52106591 0.26934744 0.5804131 0.56485654]
 [0.37741762 0.92329566 0.02449161 0.06694199]]
```