python nmf.py

Total dataset size:

n\_samples: 1140

n\_features: 2914

n\_classes: 5

Extracting the top 150 eigenfaces from 855 faces

done in 0.458s

Projecting the input data on the eigenfaces orthonormal basis

done in 4.447s

Fitting the classifier to the training set

done in 25.999s

Best estimator found by grid search:

SVC(C=50000.0, break\_ties=False, cache\_size=200, class\_weight='balanced',

coef0=0.0, decision\_function\_shape='ovr', degree=3, gamma=0.1, kernel='rbf',

max\_iter=-1, probability=False, random\_state=None, shrinking=True,

tol=0.001, verbose=False)

Predicting people's names on the test set

done in 0.025s

precision recall f1-score support

Colin Powell 0.62 0.59 0.61 64

Donald Rumsfeld 0.26 0.31 0.29 32

George W Bush 0.68 0.80 0.73 127

Gerhard Schroeder 0.44 0.14 0.21 29

Tony Blair 0.36 0.30 0.33 33

accuracy 0.57 285

macro avg 0.47 0.43 0.43 285

weighted avg 0.56 0.57 0.55 285

[[ 38 12 11 1 2]

[ 6 10 12 0 4]

[ 9 9 101 2 6]

[ 5 2 12 4 6]

[ 3 5 13 2 10]]