

Putting it all together

Pipelining

We have seen that some estimators can transform data and that some estimators can predict variables. We can also create combined estimators:

```
System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\scikit-learn-main\doc\tutorial\statistical_inference\[scikit-learn-main] [doc] [tutorial] [statistical_inference]putting_together.rst, line 14)
```

Unknown directive type "literalinclude".

```
.. literalinclude:: ../../auto_examples/compose/plot_digits_pipe.py
   :lines: 23-63
```

Face recognition with eigenfaces

The dataset used in this example is a preprocessed excerpt of the "Labeled Faces in the Wild", also known as [LFW](http://vis-www.cs.umass.edu/lfw/lfw-funneled.tgz):

<http://vis-www.cs.umass.edu/lfw/lfw-funneled.tgz> (233MB)

```
System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\scikit-learn-main\doc\tutorial\statistical_inference\[scikit-learn-main] [doc] [tutorial] [statistical_inference]putting_together.rst, line 32)
```

Unknown directive type "literalinclude".

```
.. literalinclude:: ../../auto_examples/applications/plot_face_recognition.py
```

Prediction

Eigenfaces

Expected results for the top 5 most represented people in the dataset:

	precision	recall	f1-score	support
Gerhard_Schroeder	0.91	0.75	0.82	28
Donald_Rumsfeld	0.84	0.82	0.83	33
Tony_Blair	0.65	0.82	0.73	34
Colin_Powell	0.78	0.88	0.83	58
George_W_Bush	0.93	0.86	0.90	129
avg / total	0.86	0.84	0.85	282

Open problem: Stock Market Structure

Can we predict the variation in stock prices for Google over a given time frame?

ref: `stock_market`

```
System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\scikit-learn-main\doc\tutorial\statistical_inference\[scikit-learn-main] [doc] [tutorial] [statistical_inference]putting_together.rst, line 62); backlink
```

Unknown interpreted text role "ref".