Demo 19-12-2018

December 19, 2018

```
In [1]: from demo_utils.playground import auto_demo
        from demo_utils.demo0 import Demo0

In [2]: %%javascript
        IPython.OutputArea.prototype._should_scroll = function(lines) {
            return false;
        }
```

```
<IPython.core.display.Javascript object>
```

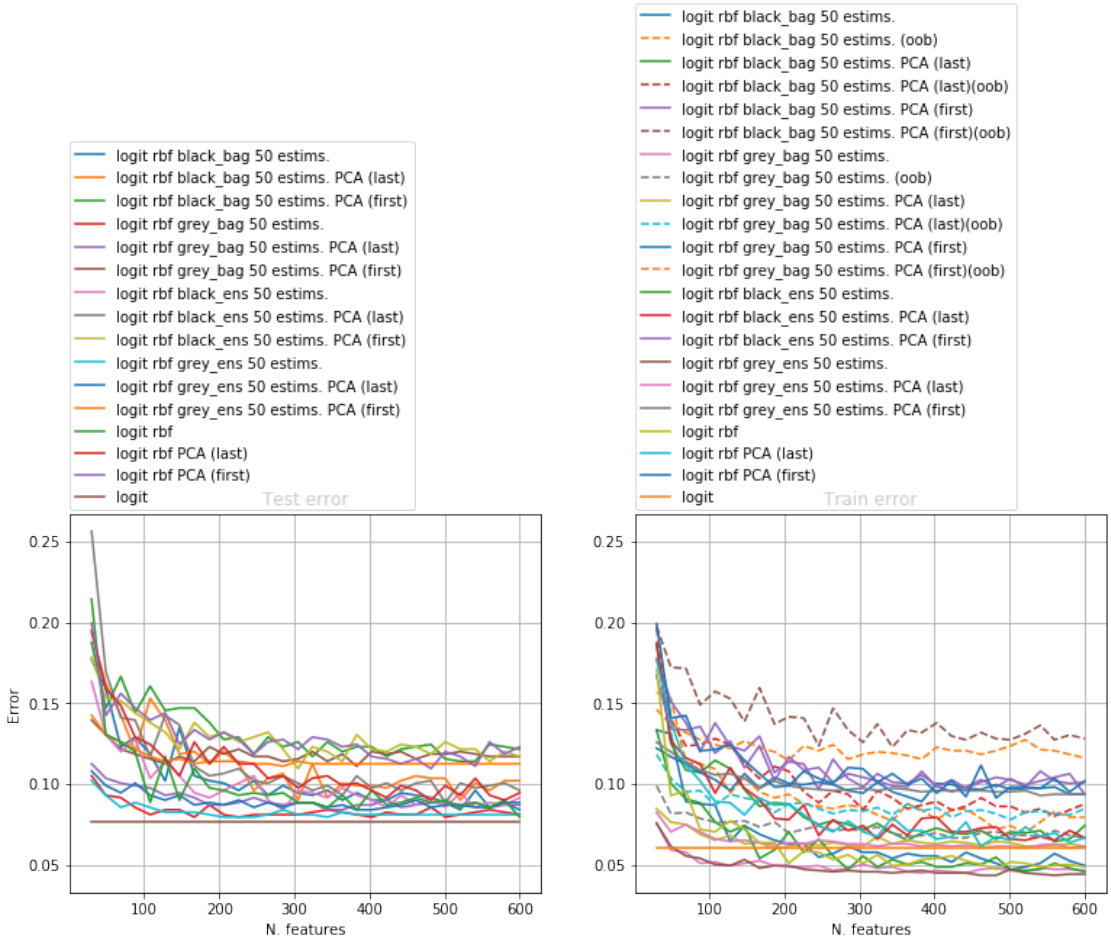
1 Segment

```
In [3]: Demo0().non_interactive(**auto_demo('logit', 'segment'))
```

2 Una demo genérica

```
/home/hobber/.local/lib/python3.6/site-packages/sklearn/linear_model/logistic.py:757: Converge
  "of iterations.", ConvergenceWarning)
```

- Dataset: **segment**
- Size: **2000**



3 MNIST

```
In [5]: Demo0().non_interactive(**auto_demo('logit', 'mnist'))
```

4 Una demo genérica

```
    ---------------------------------------------------------------------------

    LinAlgError                               Traceback (most recent call last)

    <ipython-input-5-d67f21a13180> in <module>
----> 1 Demo0().non_interactive(**auto_demo('logit', 'mnist'))


    ~/git/TFG/code/notebooks/python/demo_utils/generic_demo.py in non_interactive(self, **a
```

```
     59     def non_interactive(self, **argw):
     60         display(md(self.desc))
---> 61         train_scores, test_scores = self.run_demo(**argw)
     62         fig = self.get_generic_graph_from_scores(train_scores, test_scores)
     63         # fig.suptitle(self.title)


    ~/git/TFG/code/notebooks/python/demo_utils/demo0.py in run_demo(self, dts_name, dts_siz
    263                 # train_score y test_score son diccionarios
    264                 train_score, test_score =\
--> 265                     get_sampling_model_scores(clf, dataset, features)
    266                 lab = self.get_label(model_name, sampler_name, box_type,
    267                                      n_estim, pca, pca_first)


    ~/git/TFG/code/notebooks/python/demo_utils/learning.py in get_sampling_model_scores(cli
    292         # print(clf)
    293         # end borrar
--> 294         clf.fit(data_train, target_train)
    295         # TODO sucio, no me gusta nada
    296         if isinstance(clf, BaggingClassifier):


    ~/.local/lib/python3.6/site-packages/sklearn/ensemble/bagging.py in fit(self, X, y, sam
    242         self : object
    243         """
--> 244         return self._fit(X, y, self.max_samples, sample_weight=sample_weight)
    245
    246     def _fit(self, X, y, max_samples=None, max_depth=None, sample_weight=None):


    ~/.local/lib/python3.6/site-packages/sklearn/ensemble/bagging.py in _fit(self, X, y, ma
    372                 total_n_estimators,
    373                 verbose=self.verbose)
--> 374             for i in range(n_jobs))
    375
    376         # Reduce


    ~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/parallel.py in __call__(s
    981             # remaining jobs.
    982             self._iterating = False
--> 983             if self.dispatch_one_batch(iterator):
    984                 self._iterating = self._original_iterator is not None
    985


    ~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/parallel.py in dispatch_o
```

```
    823                 return False
    824             else:
--> 825                 self._dispatch(tasks)
    826                 return True
    827
```

```
~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/parallel.py in _dispatch
    780         with self._lock:
    781             job_idx = len(self._jobs)
--> 782             job = self._backend.apply_async(batch, callback=cb)
    783             # A job can complete so quickly than its callback is
    784             # called before we get here, causing self._jobs to
```

```
~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/_parallel_backends.py in
    180     def apply_async(self, func, callback=None):
    181         """Schedule a func to be run"""
--> 182         result = ImmediateResult(func)
    183         if callback:
    184             callback(result)
```

```
~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/_parallel_backends.py in
    543         # Don't delay the application, to avoid keeping the input
    544         # arguments in memory
--> 545         self.results = batch()
    546
    547     def get(self):
```

```
~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/parallel.py in __call__(s
    259         with parallel_backend(self._backend):
    260             return [func(*args, **kwargs)
--> 261                     for func, args, kwargs in self.items]
    262
    263     def __len__(self):
```

```
~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/parallel.py in <listcompr
    259         with parallel_backend(self._backend):
    260             return [func(*args, **kwargs)
--> 261                     for func, args, kwargs in self.items]
    262
    263     def __len__(self):
```

```
~/.local/lib/python3.6/site-packages/sklearn/ensemble/bagging.py in _parallel_build_est
```

```
    112
    113         else:
--> 114             estimator.fit((X[indices])[:, features], y[indices])
    115
    116         estimators.append(estimator)


~/.local/lib/python3.6/site-packages/sklearn/pipeline.py in fit(self, X, y, **fit_para
    263             This estimator
    264         """
--> 265         Xt, fit_params = self._fit(X, y, **fit_params)
    266         if self._final_estimator is not None:
    267             self._final_estimator.fit(Xt, y, **fit_params)


~/.local/lib/python3.6/site-packages/sklearn/pipeline.py in _fit(self, X, y, **fit_para
    228                 Xt, fitted_transformer = fit_transform_one_cached(
    229                     cloned_transformer, Xt, y, None,
--> 230                     **fit_params_steps[name])
    231                 # Replace the transformer of the step with the fitted
    232                 # transformer. This is necessary when loading the transformer


~/.local/lib/python3.6/site-packages/sklearn/externals/joblib/memory.py in __call__(sel
    327
    328     def __call__(self, *args, **kwargs):
--> 329         return self.func(*args, **kwargs)
    330
    331     def call_and_shelve(self, *args, **kwargs):


~/.local/lib/python3.6/site-packages/sklearn/pipeline.py in _fit_transform_one(transfor
    612 def _fit_transform_one(transformer, X, y, weight, **fit_params):
    613     if hasattr(transformer, 'fit_transform'):
--> 614         res = transformer.fit_transform(X, y, **fit_params)
    615     else:
    616         res = transformer.fit(X, y, **fit_params).transform(X)


~/.local/lib/python3.6/site-packages/sklearn/decomposition/pca.py in fit_transform(self
    357
    358         """
--> 359         U, S, V = self._fit(X)
    360         U = U[:, :self.n_components_]
    361


~/.local/lib/python3.6/site-packages/sklearn/decomposition/pca.py in _fit(self, X)
```

```
    404         # Call different fits for either full or truncated SVD
    405         if self._fit_svd_solver == 'full':
--> 406             return self._fit_full(X, n_components)
    407         elif self._fit_svd_solver in ['arpack', 'randomized']:
    408             return self._fit_truncated(X, n_components, self._fit_svd_solver)


    ~/.local/lib/python3.6/site-packages/sklearn/decomposition/pca.py in _fit_full(self, X
    435         X -= self.mean_
    436
--> 437         U, S, V = linalg.svd(X, full_matrices=False)
    438         # flip eigenvectors' sign to enforce deterministic output
    439         U, V = svd_flip(U, V)


    ~/.local/lib/python3.6/site-packages/scipy/linalg/decomp_svd.py in svd(a, full_matrices
    130
    131     if info > 0:
--> 132         raise LinAlgError("SVD did not converge")
    133     if info < 0:
    134         raise ValueError('illegal value in %d-th argument of internal gesdd'


    LinAlgError: SVD did not converge
```