AdaBoost in sklearn

Building an AdaBoost model in sklearn is no different than building any other model. You can use scikit-learn's `AdaBoostClassifier` class. This class provides the functions to define and fit the model to your data.

```
>>> from sklearn.ensemble import AdaBoostClassifier
>>> model = AdaBoostClassifier()
>>> model.fit(x_train, y_train)
>>> model.predict(x_test)
```

In the example above, the `model` variable is a decision tree model that has been fitted to the data `x_train` and `y_train`. The functions `fit` and `predict` work exactly as before.

Hyperparameters

When we define the model, we can specify the hyperparameters. In practice, the most common ones are

- `base_estimator`: The model utilized for the weak learners (**Warning:** Don't forget to import the model that you decide to use for the weak learner).
- `n_estimators`: The maximum number of weak learners used.

For example, here we define a model which uses decision trees of max_depth 2 as the weak learners, and it allows a maximum of 4 of them.

```
>>> from sklearn.tree import DecisionTreeClassifier
>>> model = AdaBoostClassifier(base_estimator = DecisionTreeClassifier(max_depth=2),
                               n_estimators = 4)
```