AdaBoost Classifier

January 23, 2020

[1]:
```
#Loading dependencies
from sklearn.ensemble import AdaBoostClassifier
import pandas as pd
import numpy as np
# Import train_test_split function
from sklearn.model_selection import train_test_split
#Import scikit-learn metrics module for accuracy calculation
from sklearn import metrics
```

[2]:
```
iris = pd.read_table("iris.data",sep=",",names=['Sepal_Length','Sepal_Width','Petal_Length','Petal_Width','Class'])
iris.head()
```

```
C:\Users\Trilo\Anaconda3\lib\site-packages\ipykernel_launcher.py:1:
FutureWarning: read_table is deprecated, use read_csv instead.
  """Entry point for launching an IPython kernel.
```

[2]:

	Sepal_Length	Sepal_Width	Petal_Length	Petal_Width	Class
0	5.1	3.5	1.4	0.2	Iris-setosa
1	4.9	3.0	1.4	0.2	Iris-setosa
2	4.7	3.2	1.3	0.2	Iris-setosa
3	4.6	3.1	1.5	0.2	Iris-setosa
4	5.0	3.6	1.4	0.2	Iris-setosa

[3]:
```
X = np.array(iris.drop(['Class'], 1).astype(float))
y = np.array(iris['Class'])
```

[4]:
```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3,random_state = 4)
```

[5]:
```
# Create adaboost classifer object
abc = AdaBoostClassifier(n_estimators=50,
                         learning_rate=1)
# Train Adaboost Classifer
model = abc.fit(X_train, y_train)

#Predict the response for test dataset
y_pred = model.predict(X_test)
```

[6]:
```
# Model Accuracy, how often is the classifier correct?
print("Accuracy:",metrics.accuracy_score(y_test, y_pred))
```

```
Accuracy: 0.9555555555555556
```