## bayes\_naive\_classifier

## March 3, 2019

```
In [1]: from sklearn import datasets
        iris = datasets.load_iris()
        from sklearn.model_selection import train_test_split
        X_train, X_test, Y_train, Y_test = train_test_split(iris.data, iris.target, test_size=
In [2]: from sklearn.naive_bayes import GaussianNB
        cif = GaussianNB()
        cif.fit(X_train, Y_train)
        Y_pred = cif.predict(X_test)
In [3]: from sklearn.metrics import classification_report
        print(classification_report(Y_test, Y_pred))
              precision
                           recall f1-score
                                               support
           0
                                       1.00
                   1.00
                             1.00
                                                    11
           1
                   0.93
                             1.00
                                       0.96
                                                    13
           2
                   1.00
                             0.83
                                       0.91
                                                     6
                   0.97
                             0.97
                                       0.97
                                                    30
  micro avg
                   0.98
                             0.94
                                       0.96
  macro avg
                                                    30
weighted avg
                   0.97
                             0.97
                                       0.97
                                                    30
In [4]: %timeit cif.fit(X_train, Y_train)
452 ts $ 11.5 ts per loop (mean $ std. dev. of 7 runs, 1000 loops each)
```

In []: