ScikitLearn操作記錄單2

組別: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 學號: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 姓名: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Supervised Learning

1. 請根據以下教學資源操作: <http://www.cse.msu.edu/~ptan/dmbook/tutorials/tutorial6/tutorial6.html>
2. 請自行查詢了解下列scikit-learn 模組的功能作用<https://scikit-learn.org/stable/>

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| --- | --- | --- | --- |
| Classification | Module | Function | 試寫程式，實驗該函式所提供功能及主要參數設定效果 |
| K-Neighbors  classification | sklearn.neighbors | KNighborsClassifier () |  |
| sklearn.neighbors | KNighborsRegressor () |  |
| Naïve Bayes Classifiers | sklearn.naive\_bayes | Gaussian Naive Bayes() |  |
| sklearn.naive\_bayes | [MultinomialNB](http://scikit-learn.org/stable/modules/generated/sklearn.naive_bayes.MultinomialNB.html#sklearn.naive_bayes.MultinomialNB)() |  |
| Decision Trees Classification | sklearn.tree | DecisionTreeClassifier() |  |
| sklearn.tree | DecisionTreeRegressor() |  |
| SVM  Classification | Sklearn.svm | LinearSVC() |  |
| Sklearn.svm | SVC() |  |
| ANN  Classification | Sklearn. neural\_network | MLPClassifier() |  |
| Sklearn. neural\_network | MLPRegressor() |  |
| Ensemble  classifier | Sklearn.ensemble | RandomForestClassifier () |  |
|  | Sklearn.ensemble | GradientBoostingClassifier()  GradientBoostingRegressor() |  |
| Evaluation | Sklearn.model\_selection | KFold() |  |
| Sklearn.model\_selection | ShuffleSplit() |  |
| Sklearn.metrics | confusion\_matrix()  classification\_report()  f1\_score()  precision\_recall\_curve() |  |

補充(regression model)

<http://www.cse.msu.edu/~ptan/dmbook/tutorials/tutorial5/tutorial5.html>

其他參考資源:

* machine learning 參考書: "[Introduction to Machine Learning with Python](https://www.amazon.com/Introduction-Machine-Learning-Python-Scientists/dp/1449369413)" 之github code

<https://github.com/amueller/introduction_to_ml_with_python/blob/master/02-supervised-learning.ipynb>

<https://github.com/amueller/introduction_to_ml_with_python/blob/master/05-model-evaluation-and-improvement.ipynb>

Scikit Learn documentation(<http://scikit-learn.org/stable/index.html>)

* 尋搜尋其他可信網路資源