109306011 資管四甲 朱茂榛

1. Workflow
   a. Without PCA

   b. Go through PCA
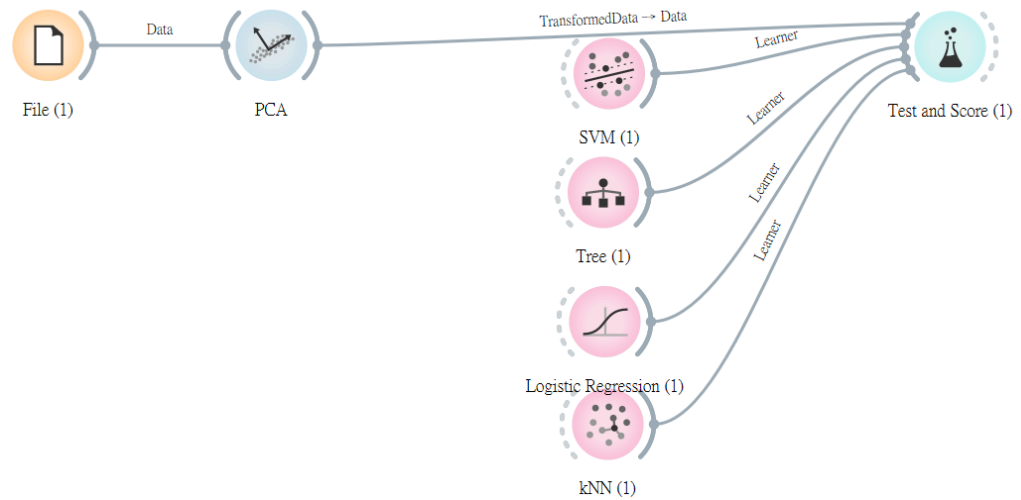
2. 參數(Without PCA以及Go through PCA的模型參數皆相同)

a. SVM

SVM - Orange   ?   ✕

File   View   Window   Help

Name

SVM

SVM Type

- ◉ SVM   Cost (C): 1.00
-    Regression loss epsilon (ε): 0.10
- ○ ν-SVM   Regression cost (C): 1.00
-    Complexity bound (ν): 0.50

Kernel   Kernel: $(g\,x \cdot y + c)^d$

- ○ Linear
- ◉ Polynomial   g: auto
- ○ RBF   c: 1.00
- ○ Sigmoid   d: 3.0

Optimization Parameters

Numerical tolerance: 0.0010

☑ Iteration limit: 100

☑ Apply Automatically

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b. Tree

Tree - Orange   ?   ✕

File   View   Window   Help

Name

Tree

Parameters

☐ Induce binary tree

☑ Min. number of instances in leaves: 2

☑ Do not split subsets smaller than: 5

☑ Limit the maximal tree depth to: 100

Classification

☑ Stop when majority reaches [%]: 95

☑ Apply Automatically

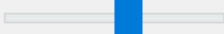☰ ? 🗎 | ⤑ - ↦ 🔲| -

c. Logistic Regression

d. kNN

3. PCA(90% explained variance, 33 principle components)

PCA - Orange

File Edit View Window Help

Components Selection

Components: 33

Explained variance: 90%

Options

☑ Normalize variables

Show only first 20

☑ Apply Automatically

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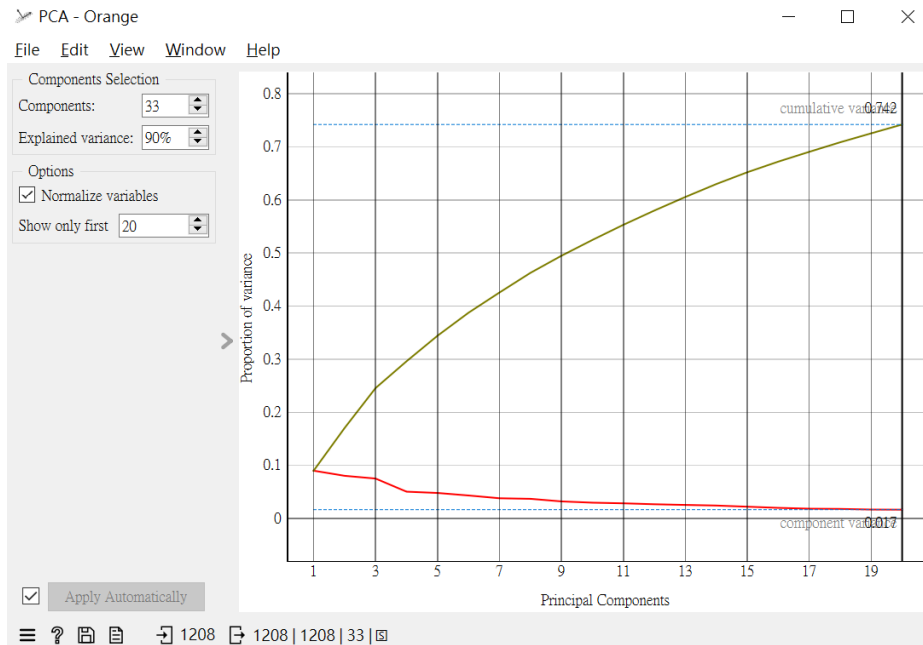
4. Result Comparison
a. Without PCA
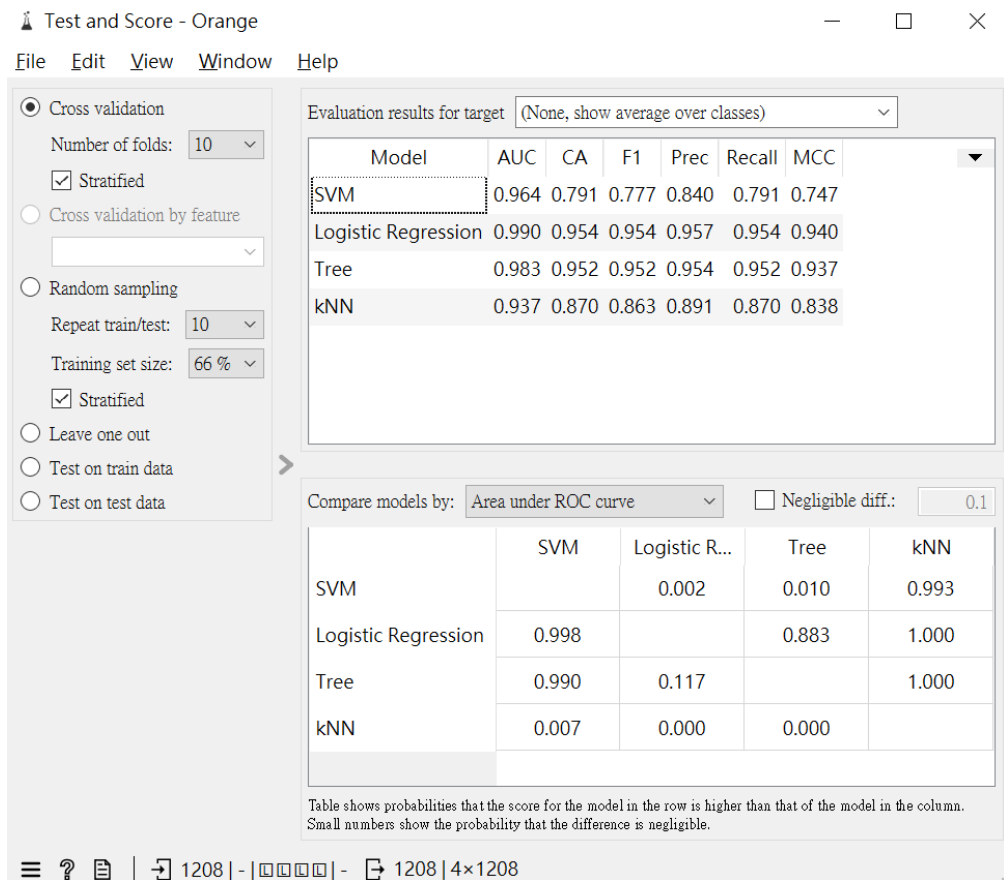
ROC analysis
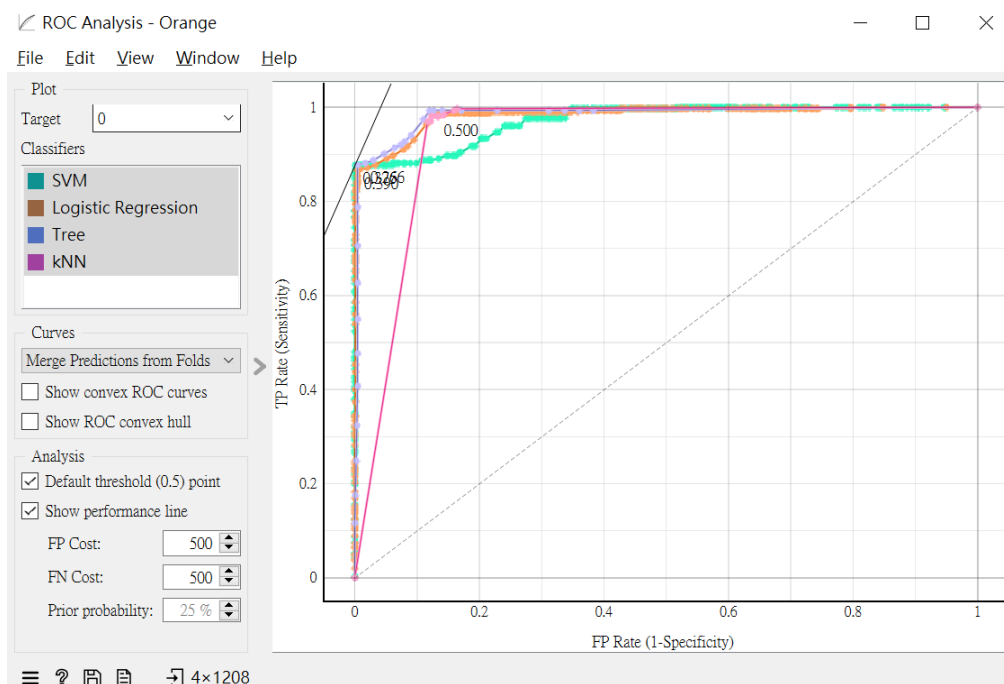
b. Go through PCA

ROC analysis