



机器学习笔记

感受经典算法之美

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用心记录学习过程，方可于不经意处发现至美

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第 2 章 降维

内容提要

- Definition of Theorem
- Ask for help
- Optimization Problem
- Property of Cauchy Series
- Angle of Corner

2.1 线性降维

2.1.1 主成分分析 (PCA)

Algorithm 1 An example for format For & While Loop in Algorithm

```
1: for each  $i \in [1, 9]$  do
2:   initialize a tree  $T_i$  with only a leaf (the root);
3:    $T = T \cup T_i$ ;
4: end for
5: for all  $c$  such that  $c \in \text{RecentMBatch}(E_{n-1})$  do
6:    $T = T \cup \text{PosSample}(c)$ ;
7: end for;
8: for  $i = 1; i < n; i++$  do
9:   // Your source here;
10: end for
11: for  $i = 1$  to  $n$  do
12:   // Your source here;
13: end for
14: // Reusing recent base classifiers.
15: while  $(|E_n| \leq L_1) \text{ and } (D \neq \phi)$  do
16:   Selecting the most recent classifier  $c_i$  from  $D$ ;
17:    $D = D - c_i$ ;
18:    $E_n = E_n + c_i$ ;
19: end while
```

定理 2.1 (theorem name)

这是一个有名字和标签的定理。用2.1来引用这个定理。



2.2 非线性降维