

第八课 机器学习简单介绍

第六节 机器学习工具scikit-learn

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机器学习工具 scikit-learn



Machine Learning



what society thinks I
do



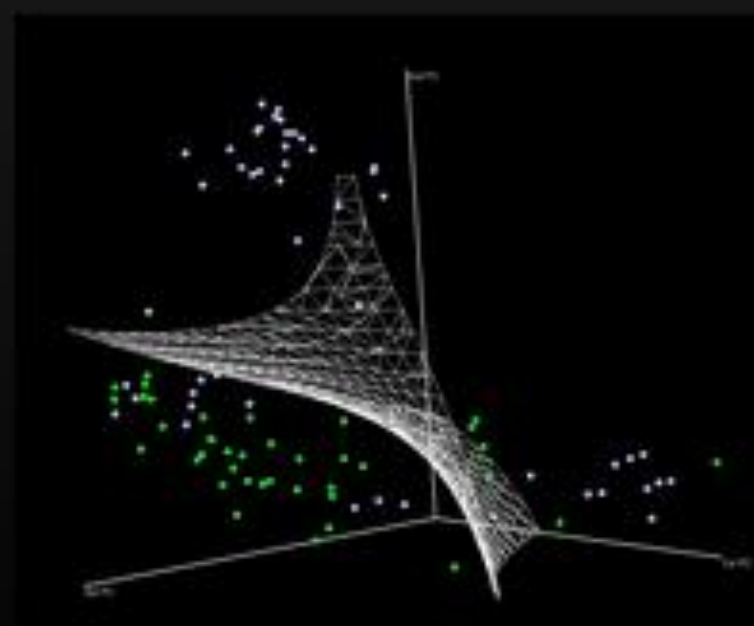
what my friends think
I do



what my parents think
I do

$$\begin{aligned} L_p &= \frac{1}{2} \|\mathbf{w}\|^2 - \sum_i \alpha_i y_i (\mathbf{x}_i \cdot \mathbf{w} + b) + \sum_i \alpha_i \\ \alpha_i &\geq 0, \forall i \\ \mathbf{w} &= \sum_i \alpha_i y_i \mathbf{x}_i, \sum_i \alpha_i y_i = 0 \\ \nabla \hat{g}(\theta_t) &= \frac{1}{n} \sum_{i=1}^n \nabla \ell(x_i, y_i; \theta_t) + \nabla r(\theta_t) \\ \theta_{t+1} &= \theta_t - \eta_t \nabla \ell(x_{i(t)}, y_{i(t)}; \theta_t) - \eta_t \cdot \nabla r(\theta_t) \\ \mathbb{E}_{i(t)}[\ell(x_{i(t)}, y_{i(t)}; \theta_t)] &= \frac{1}{n} \sum_i \ell(x_i, y_i; \theta_t). \end{aligned}$$

what other programmers
think I do



what I think I do

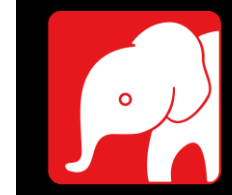
```
>>> from sklearn import svm
```

what I really do

机器学习工具 scikit-learn

- 面向Python的免费机器学习库
- 包含分类、回归、聚类算法，比如：SVM、随机森林、k-means等
- 包含降维、模型筛选、预处理等算法
- 支持NumPy和SciPy数据结构
- 用户 <http://scikit-learn.org/stable/testimonials/testimonials.html>





只为遇见明天更优秀的你！