



实验与分析

实验目的

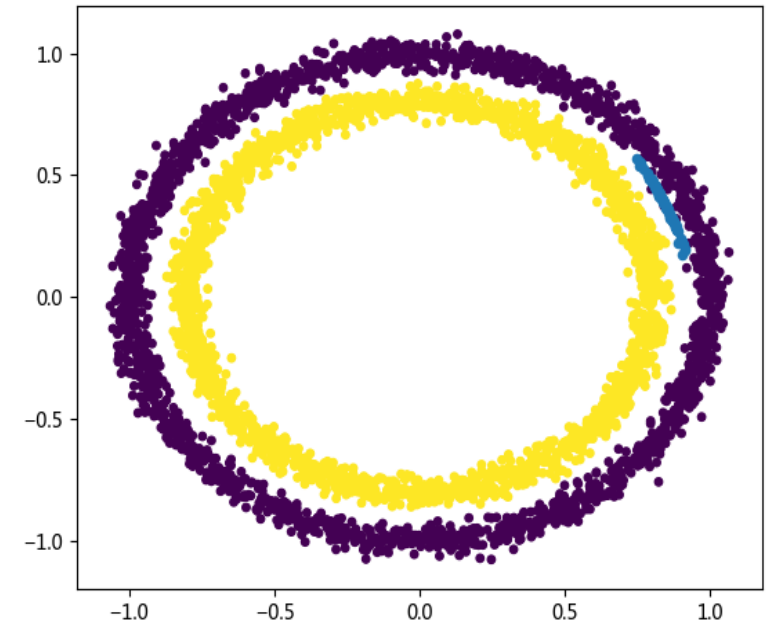
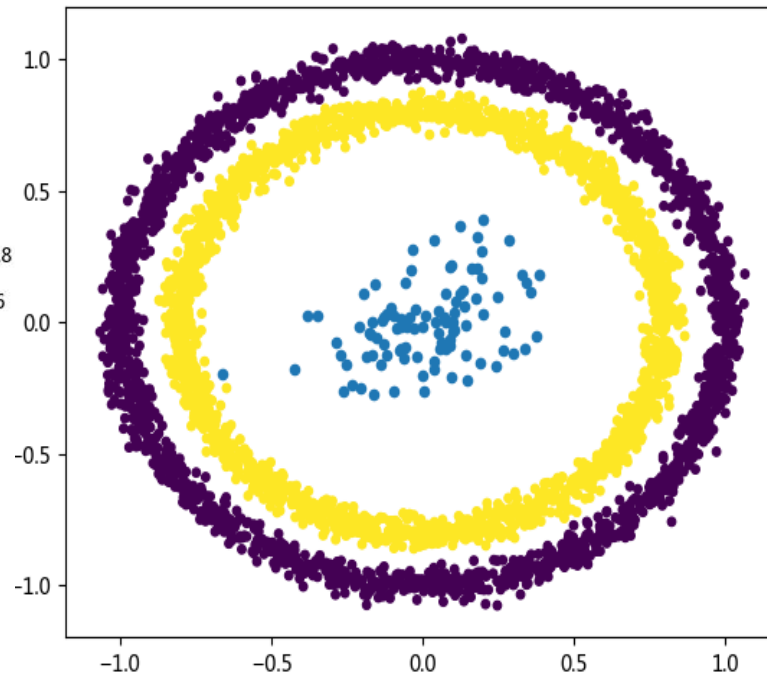
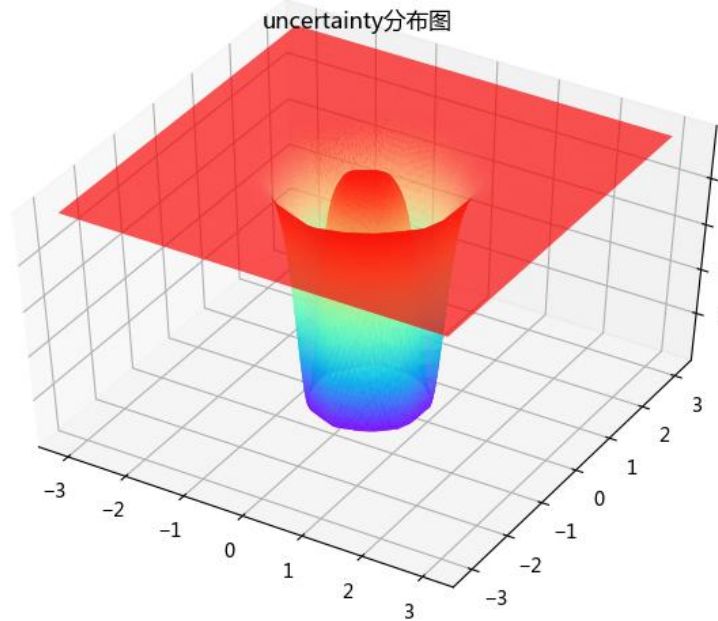
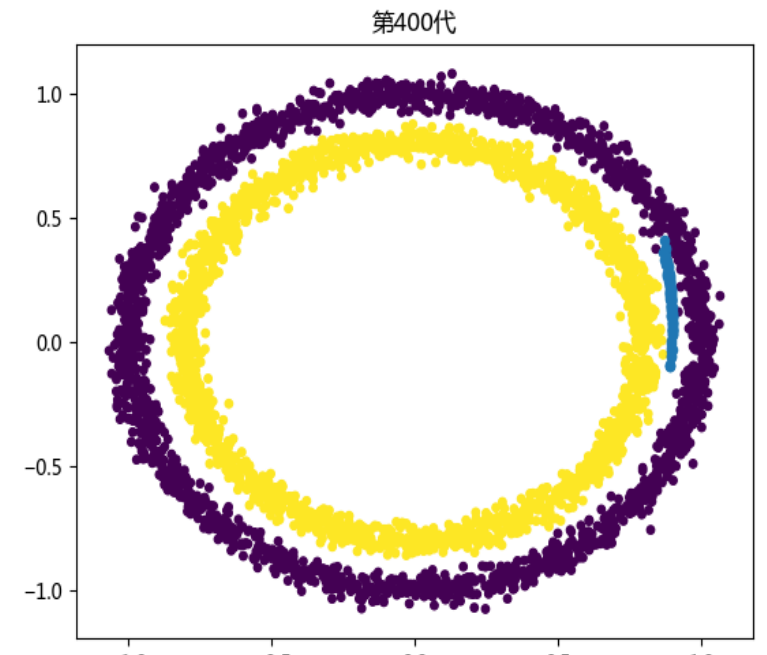
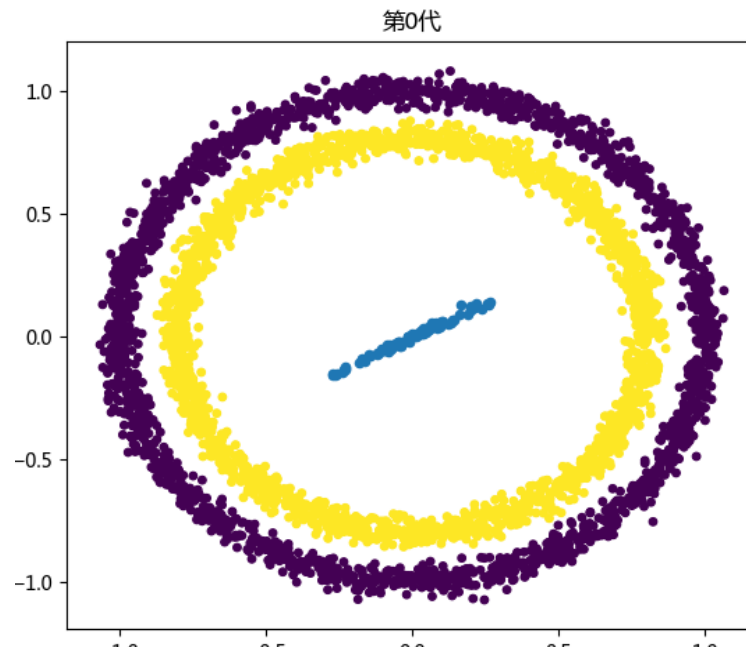
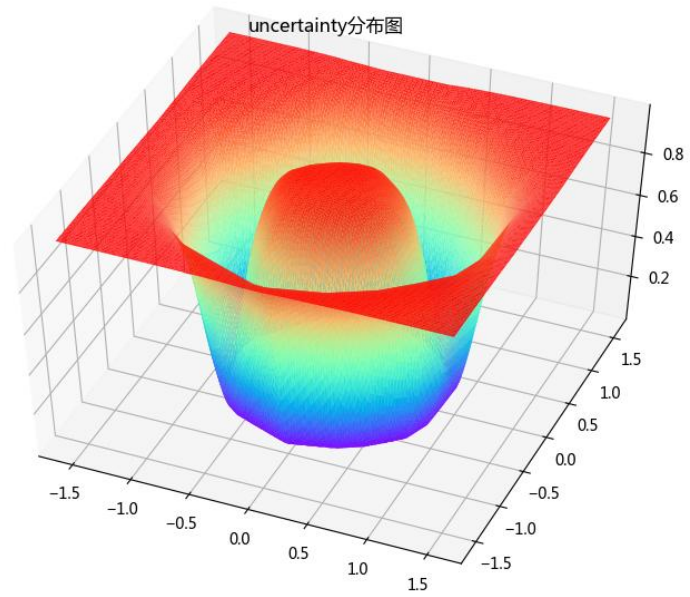
SVM(rbf)+circle实验验证

MLPC+circle实验验证

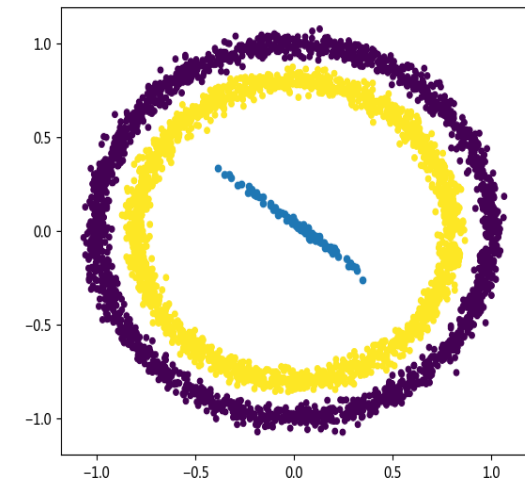
Epsilon数据集时间对比

Susy数据集SVM(rbf)

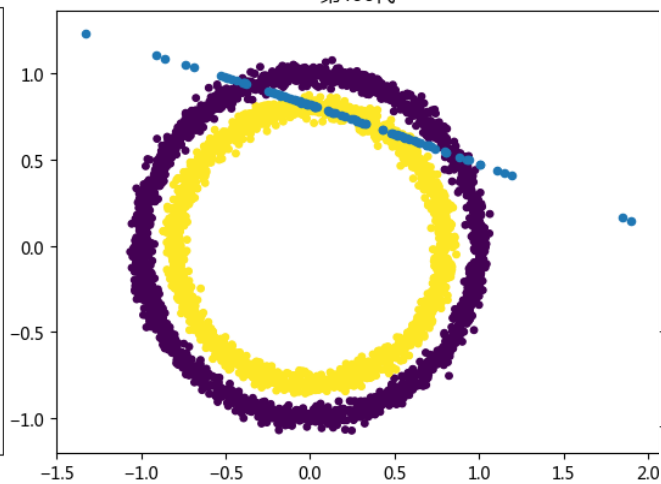
2017.12.28



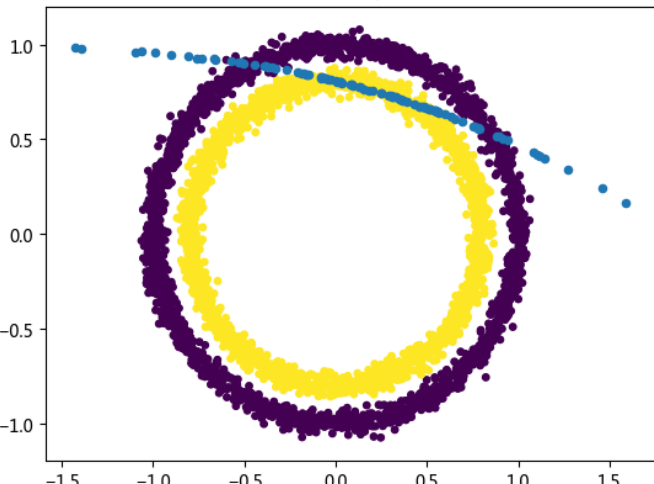
第0代



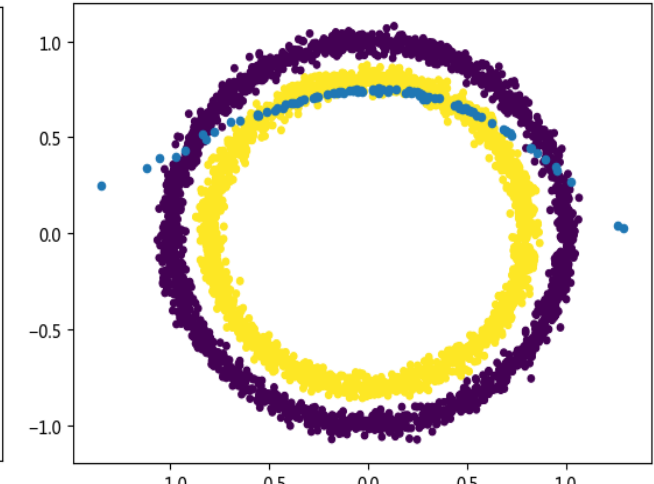
第400代



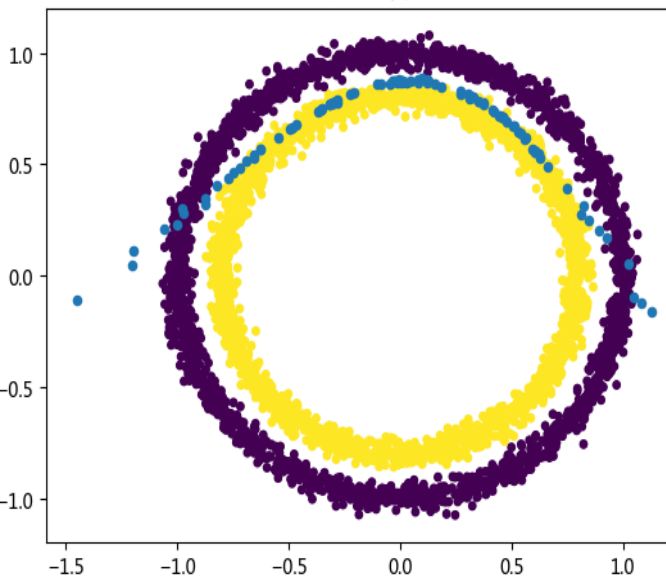
第2400代



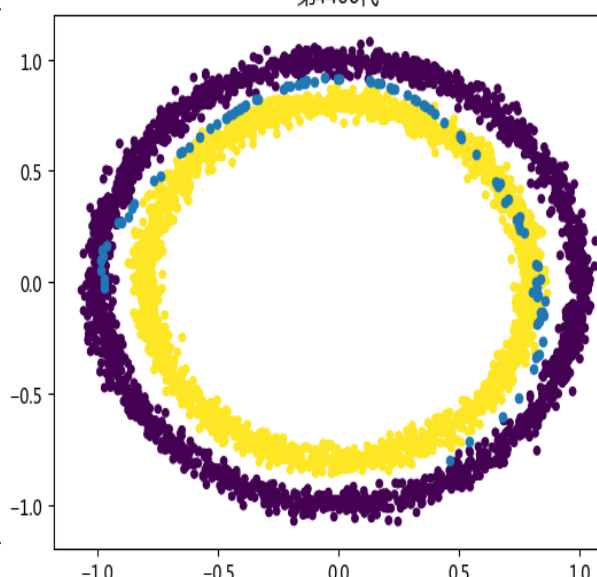
第3200代



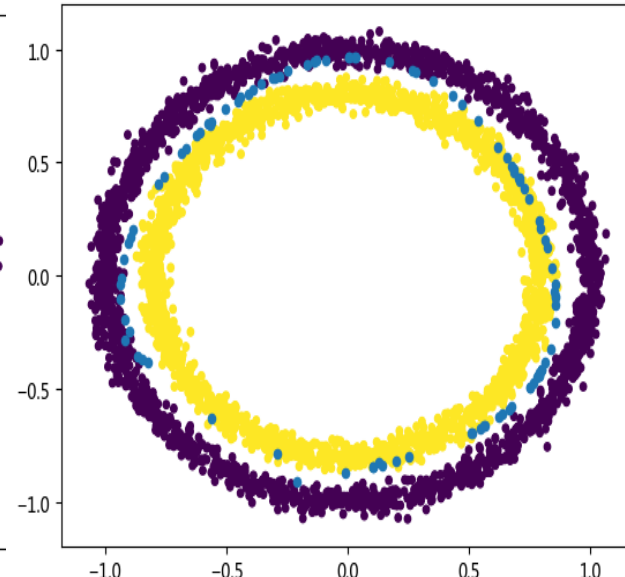
第3600代



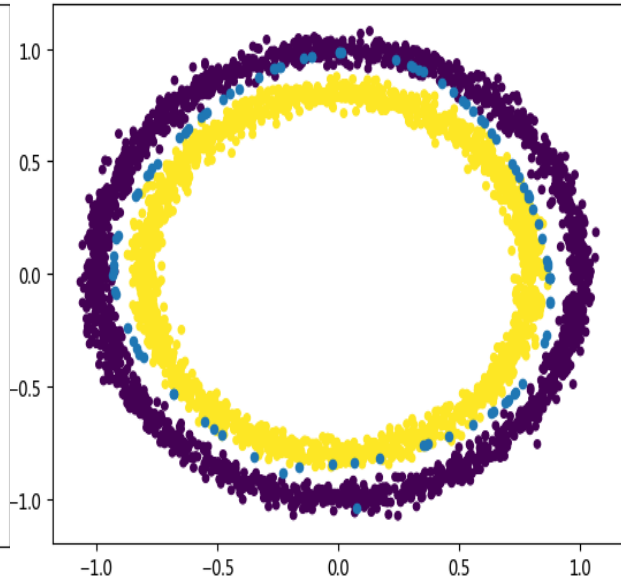
第4400代



第5600代

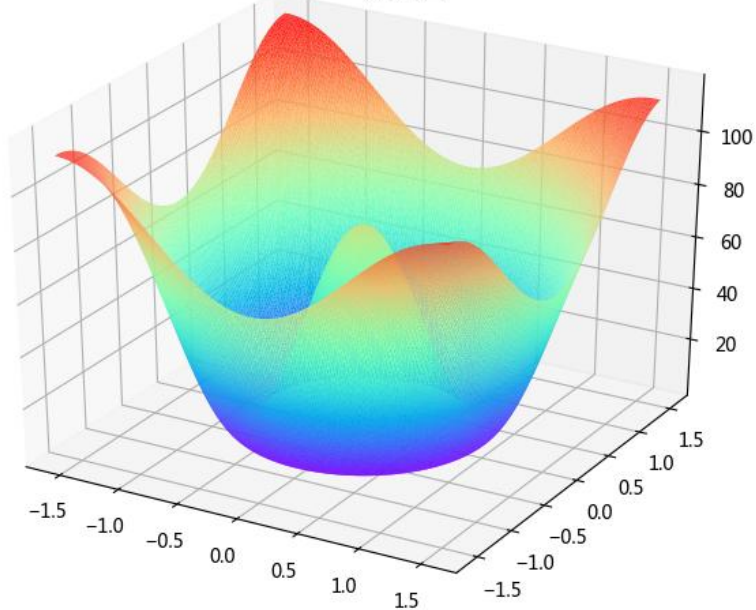


第6400代

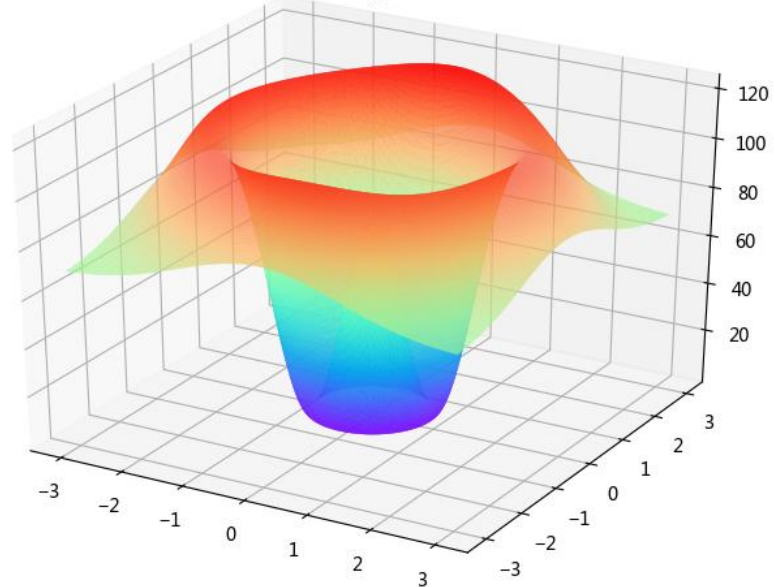




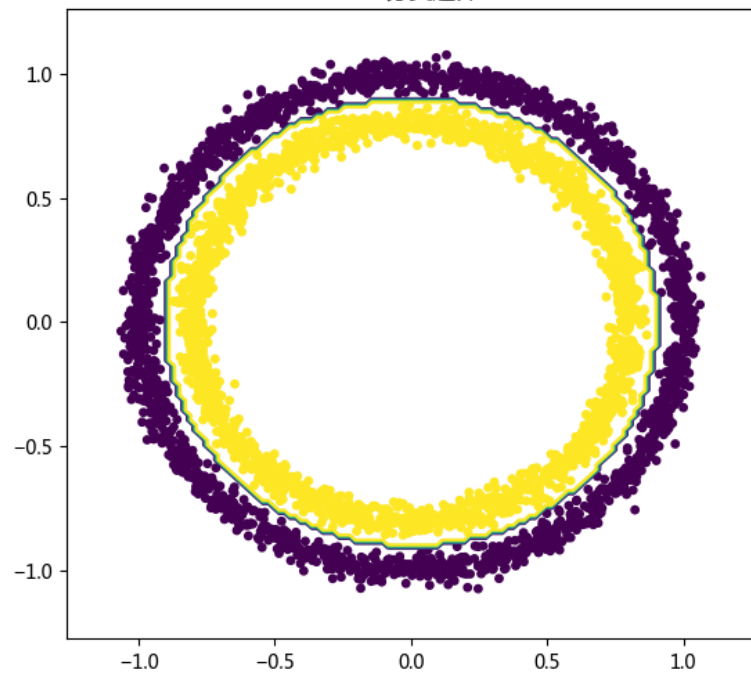
uncertainty分布图



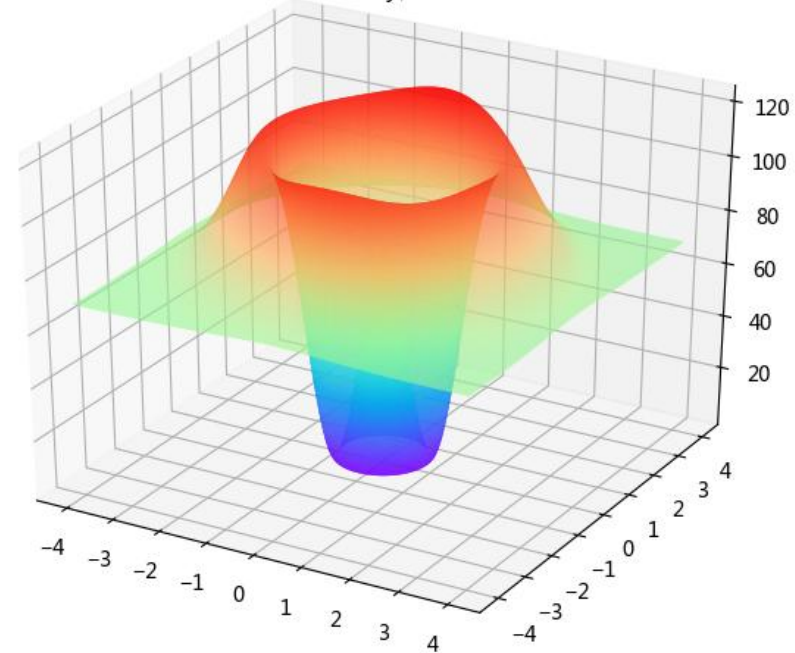
uncertainty分布图



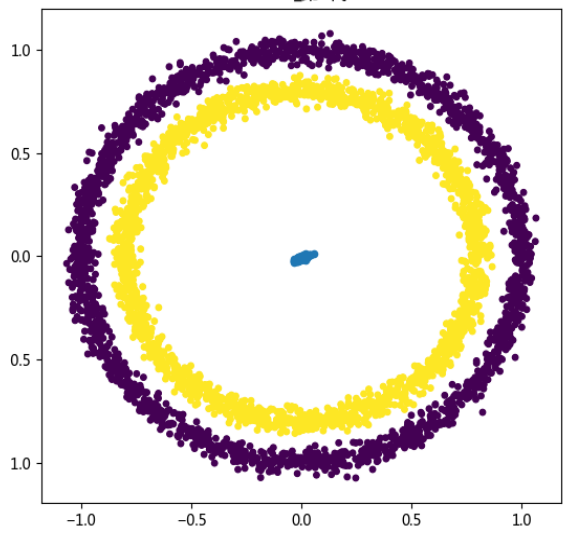
svm分类边界



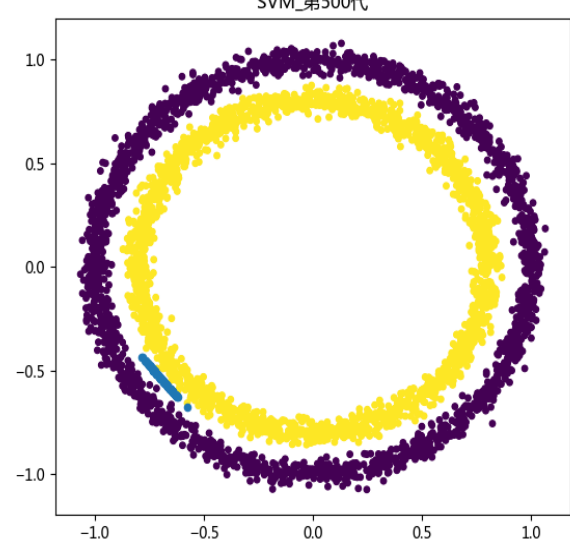
uncertainty分布图



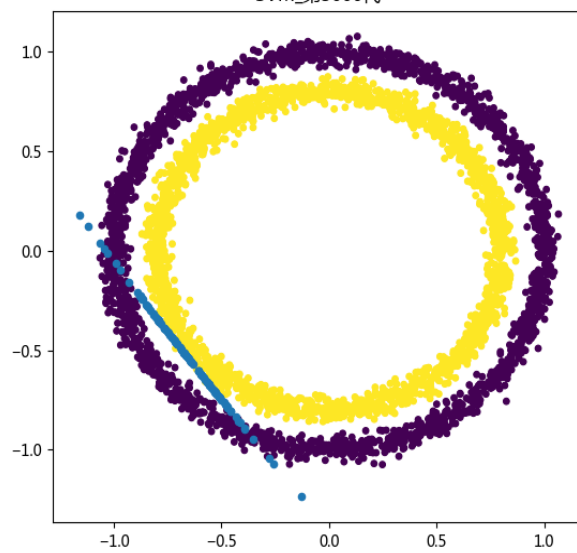
SVM_第0代



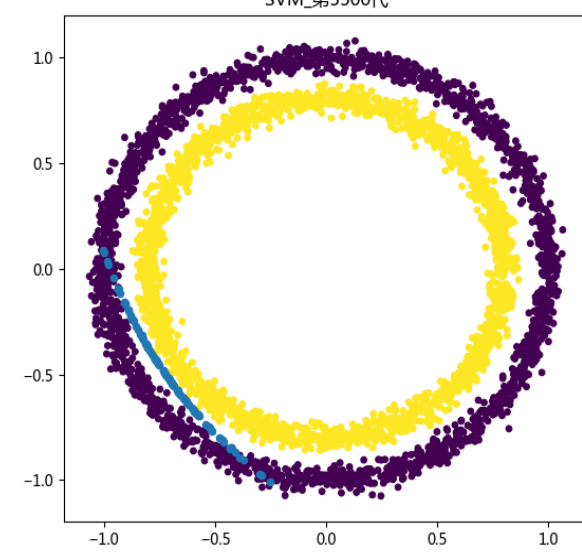
SVM_第500代



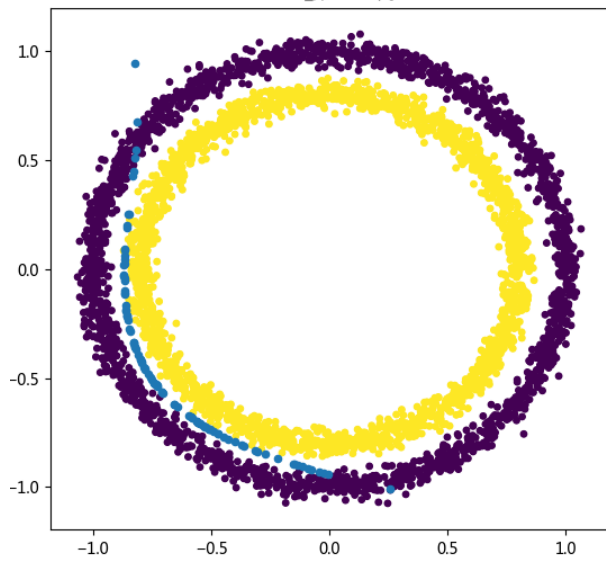
SVM_第3000代



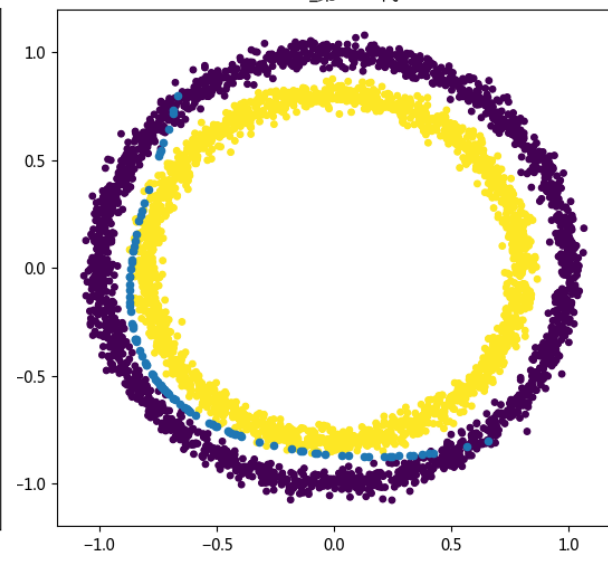
SVM_第5500代



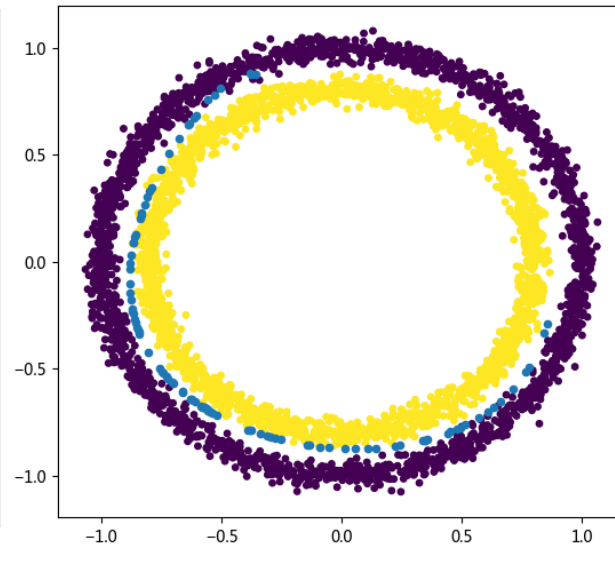
SVM_第6500代



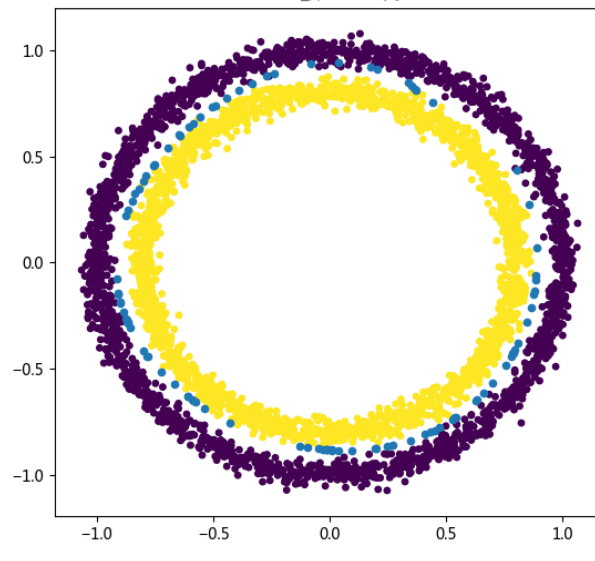
SVM_第8000代



SVM_第9000代



SVM_第11000代



epsilon



Features:2000

Train:400000 Test:100000

准确率: 0.89---0.9

From: Pascal Large Scale Learning Challenge(2008) [page not found](#)

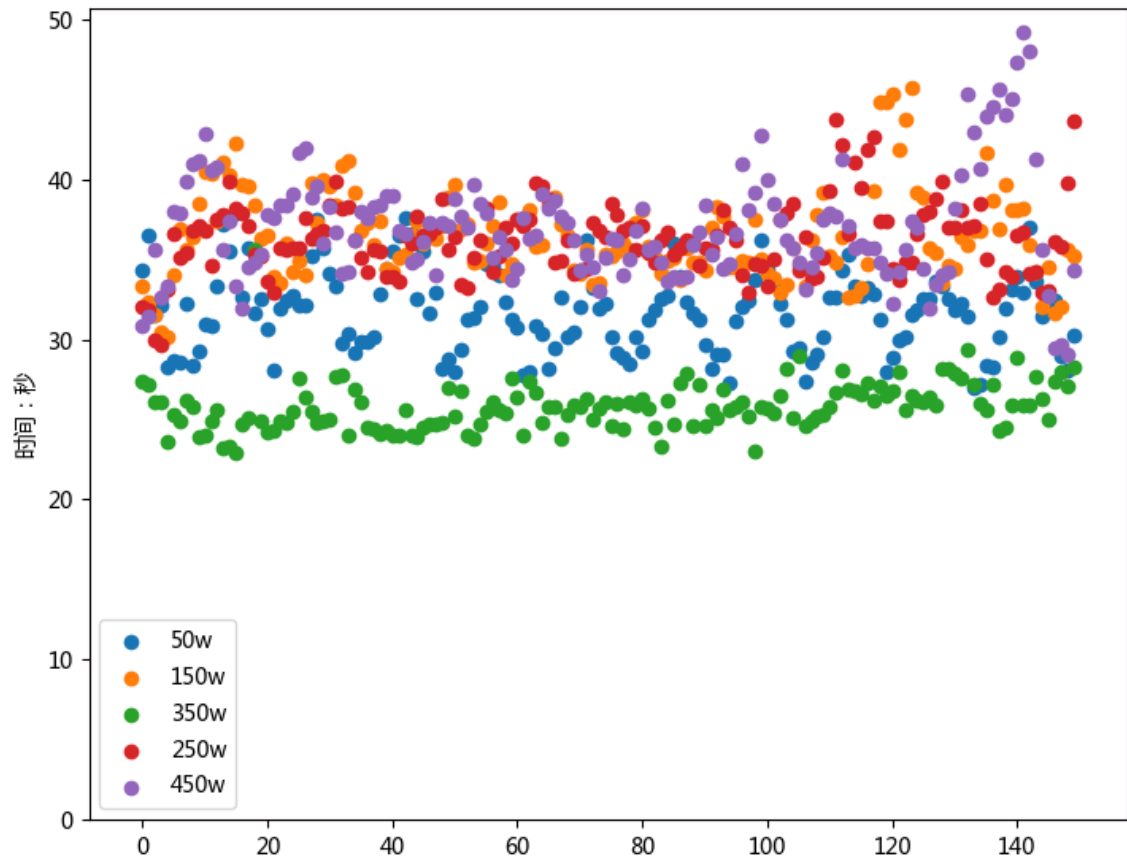
平均查询时间 (LR) : 0.013s 20s

准确率变化: 略

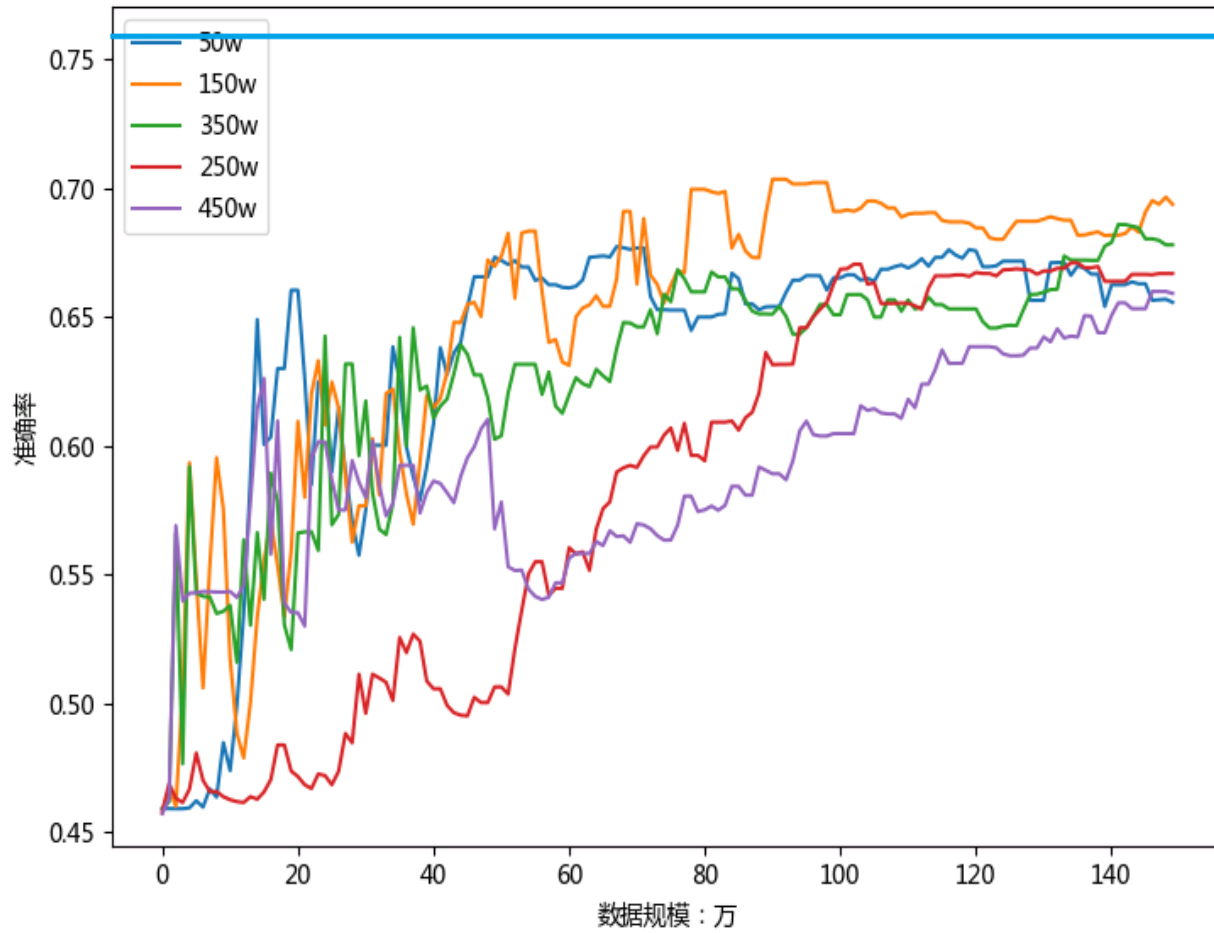


Susy数据集SVM(rbf)

查询时间

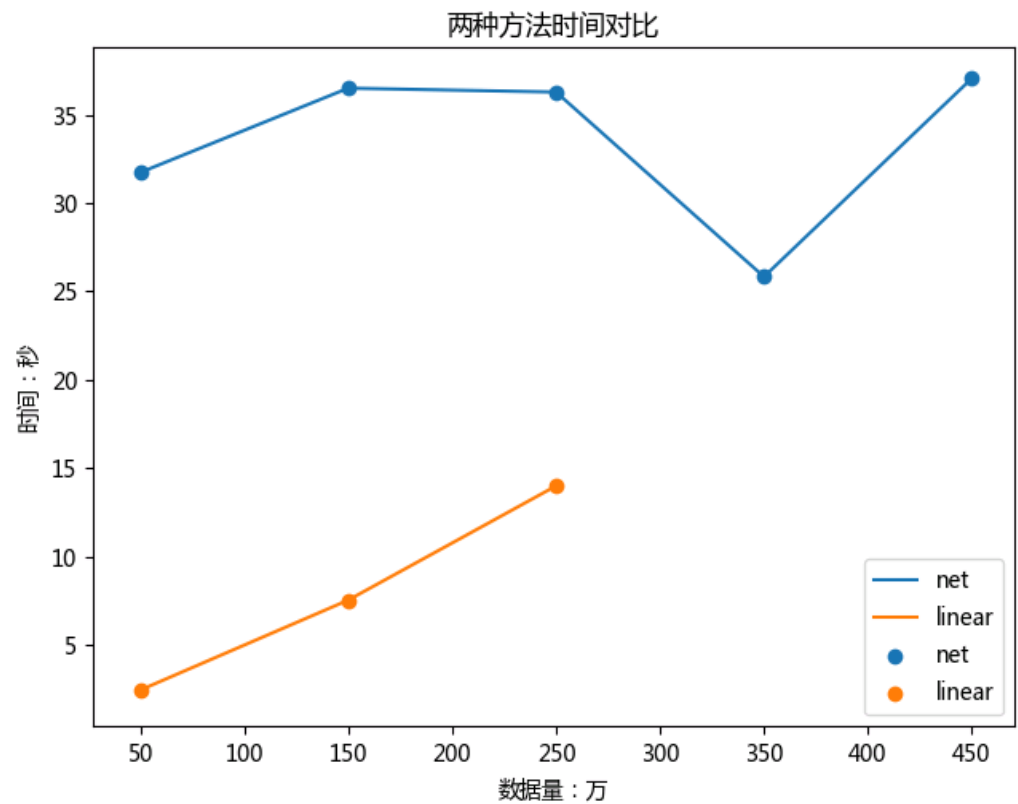
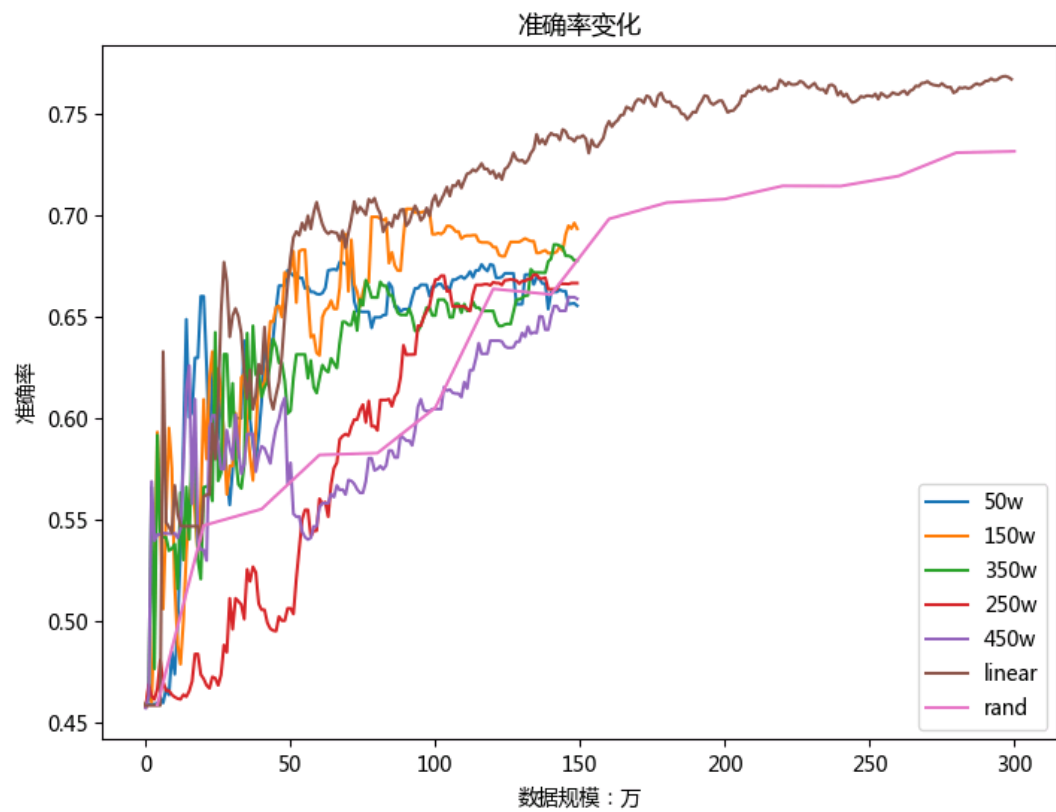


准确率变化

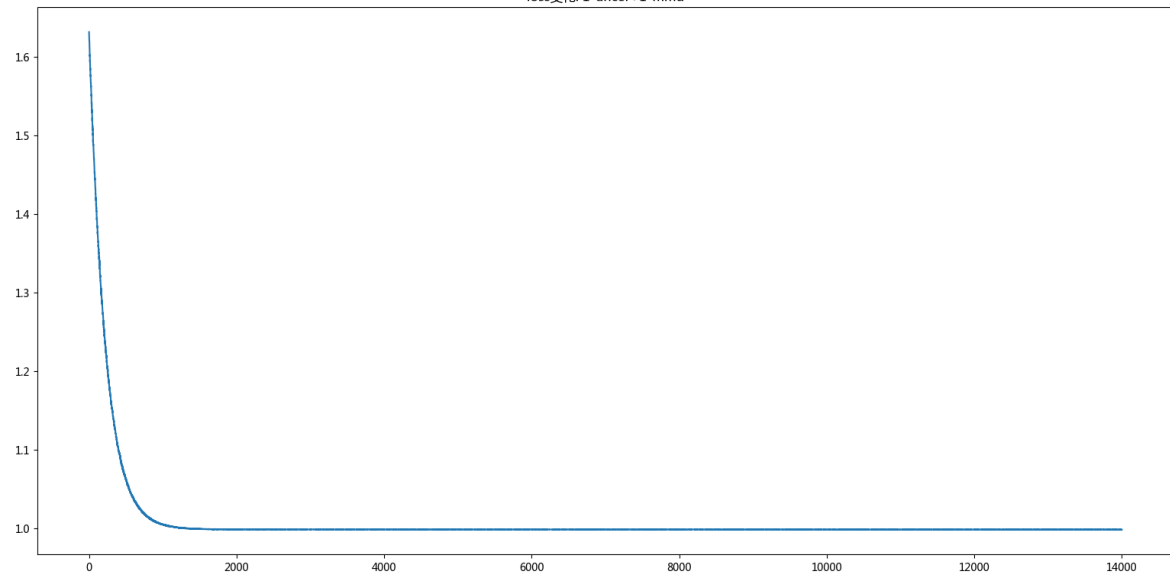




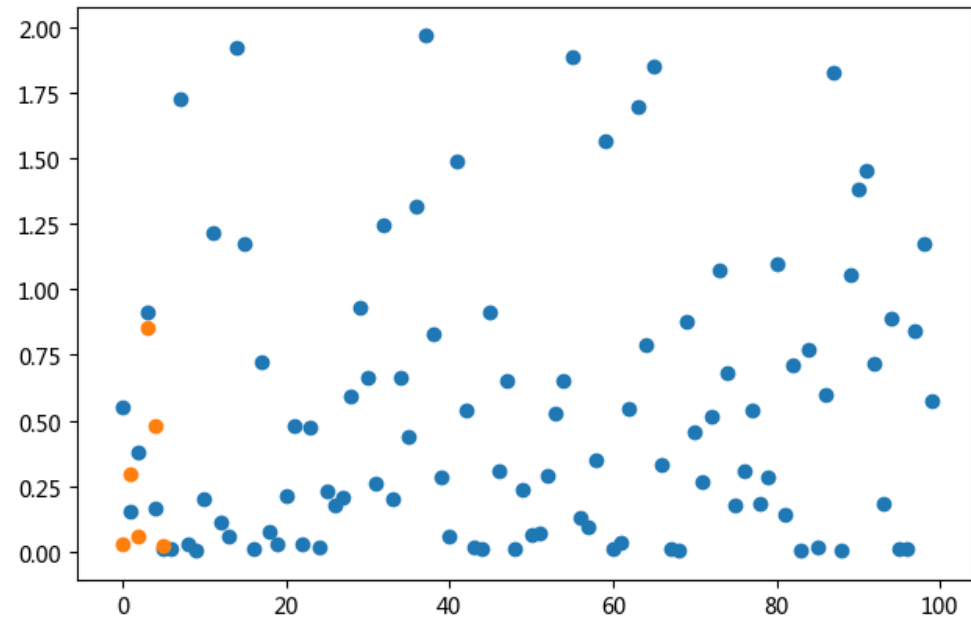
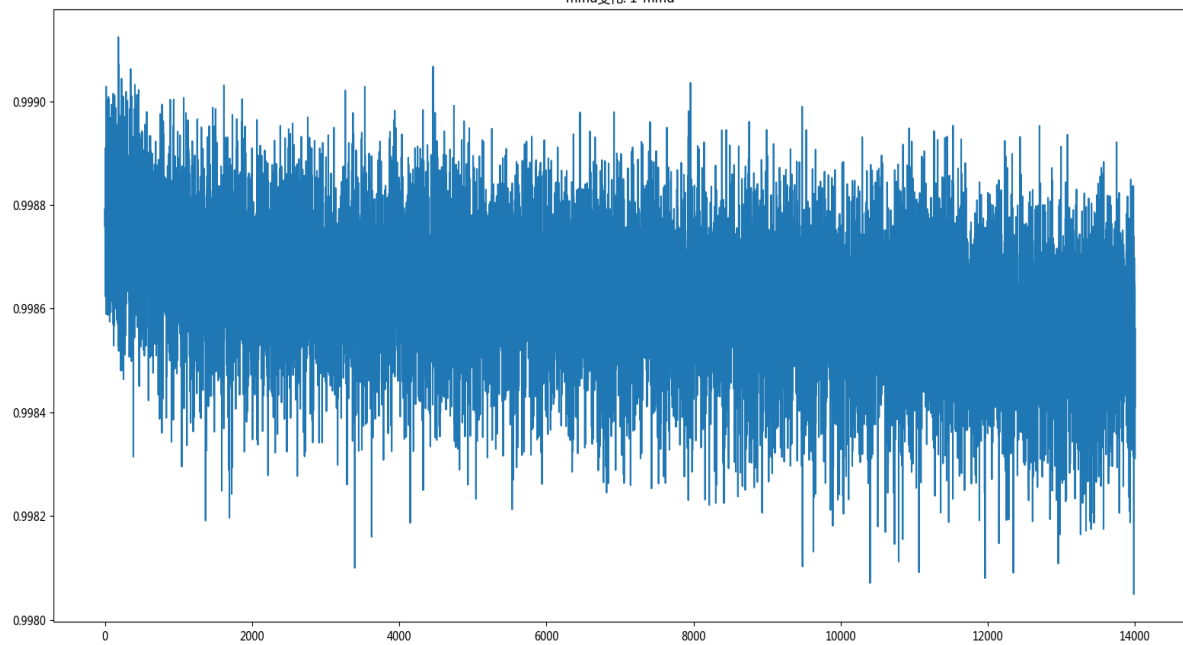
注：linear方法调用了clf.predict_prob()函数



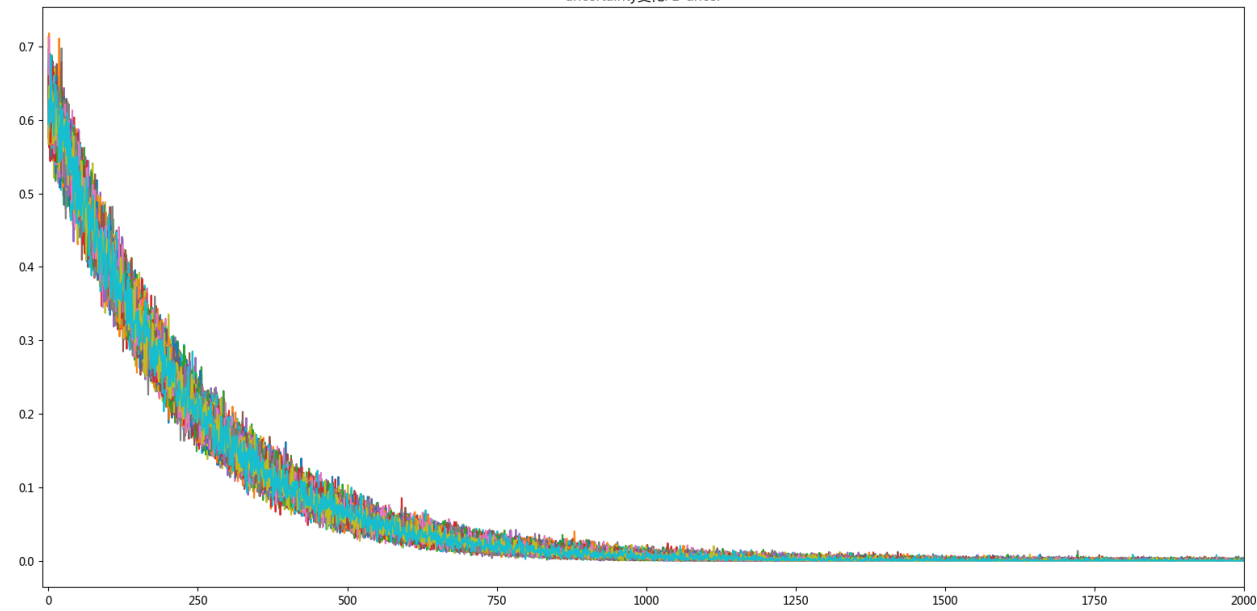
loss变化: 1*uncer+1*mmd



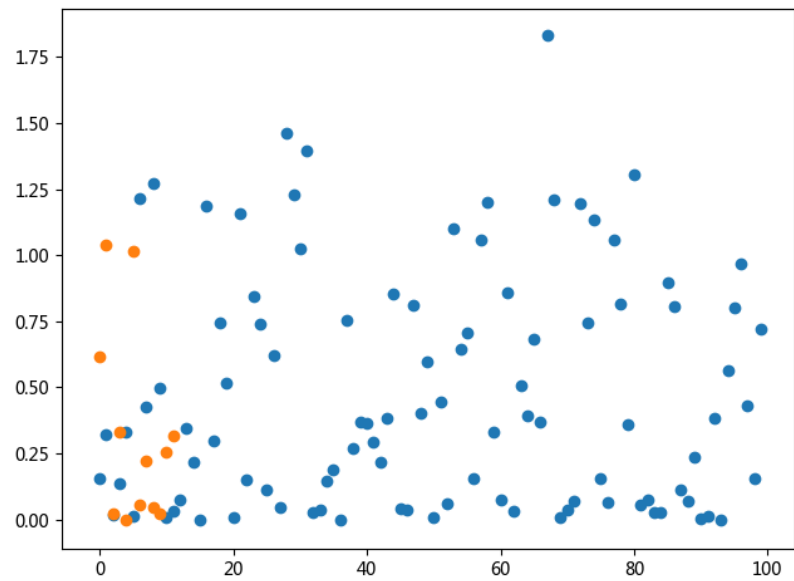
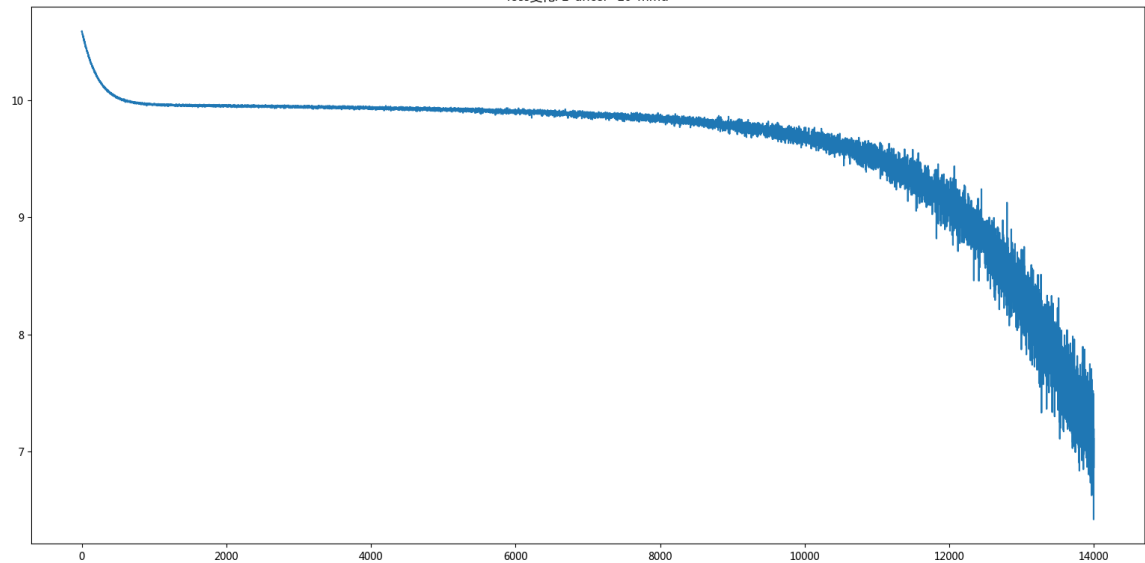
mmd变化: 1*mmd



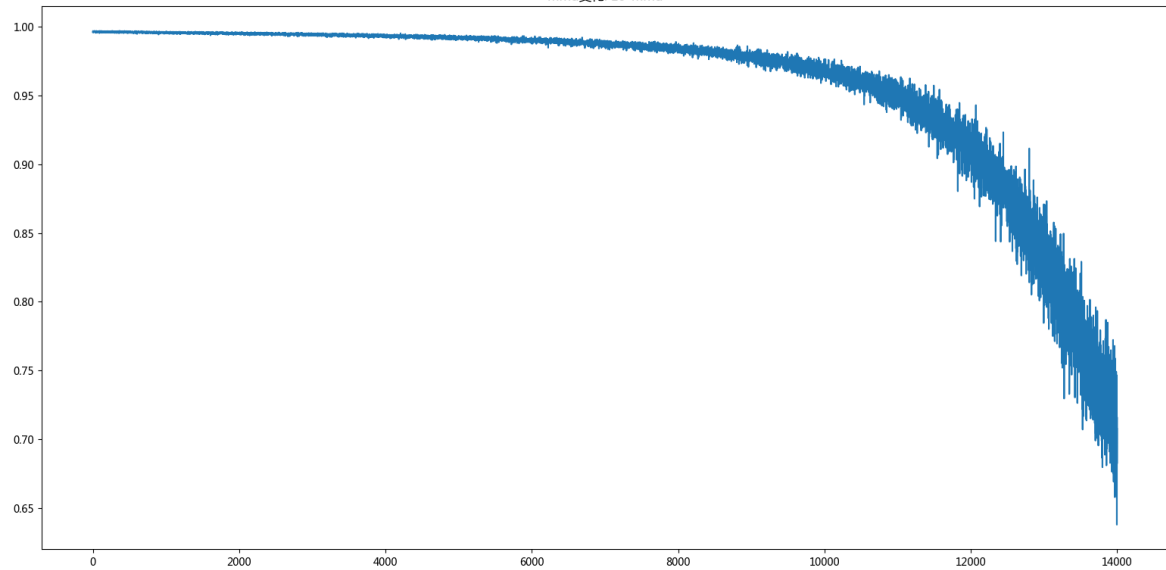
uncertainty变化: 1*uncer



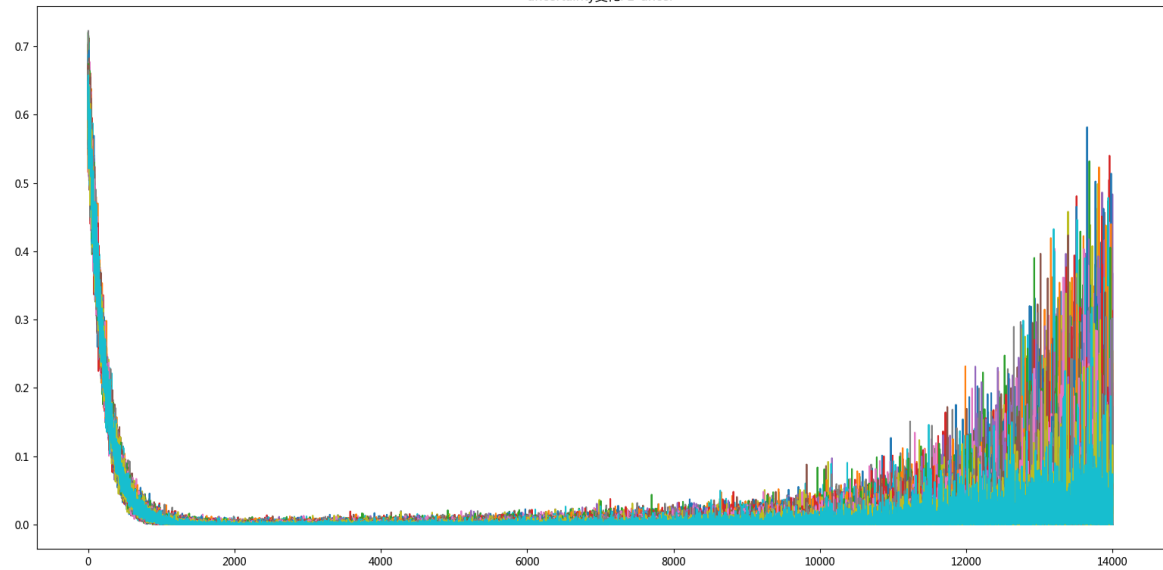
loss变化: 1*uncer+10*mmd



mmd变化: 10*mmd

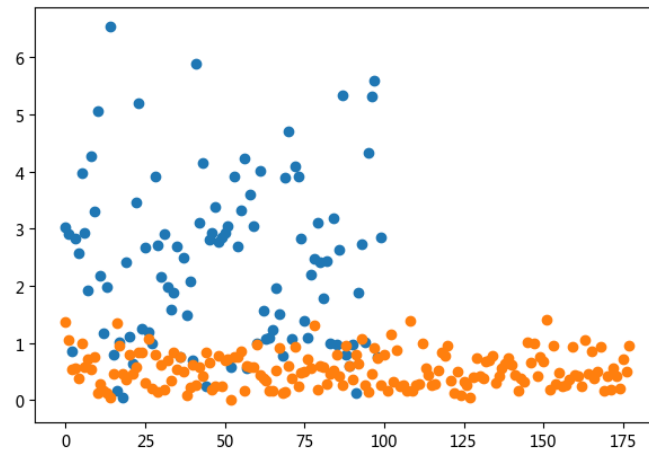
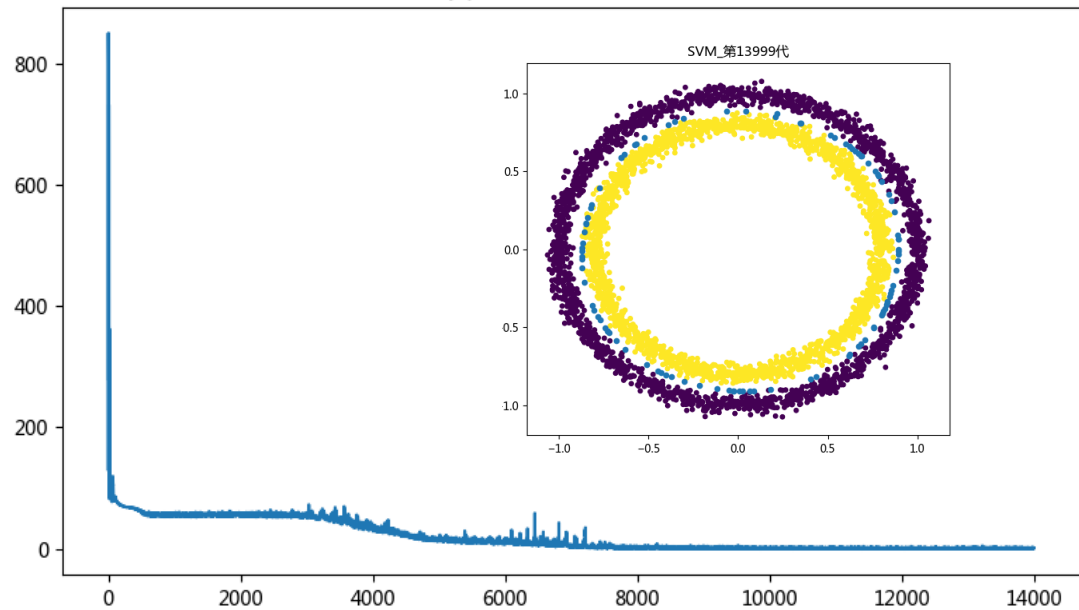


uncertainty变化: 1*uncer

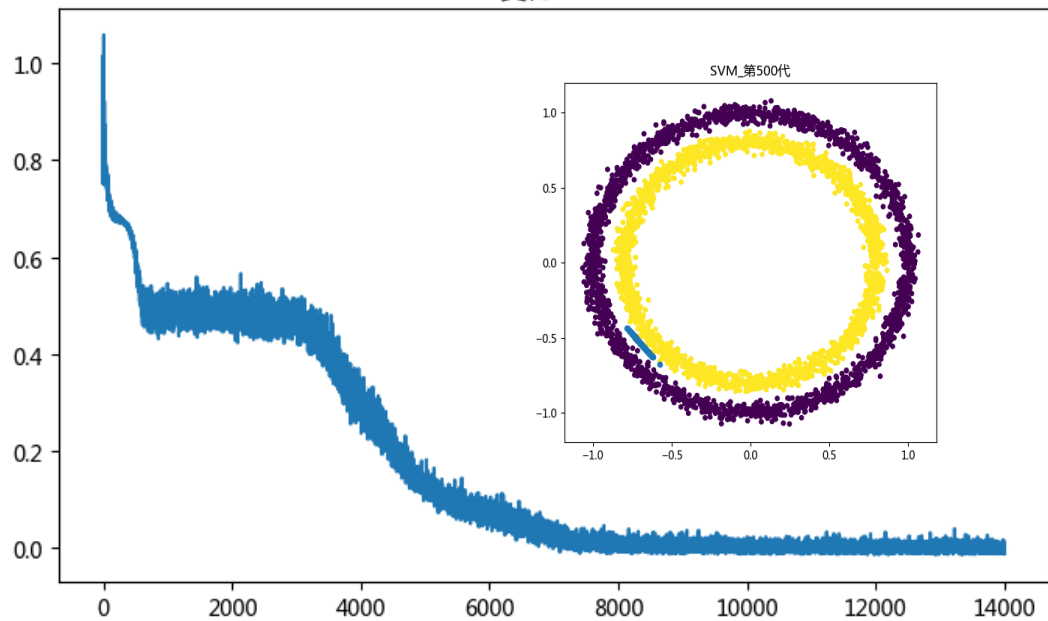




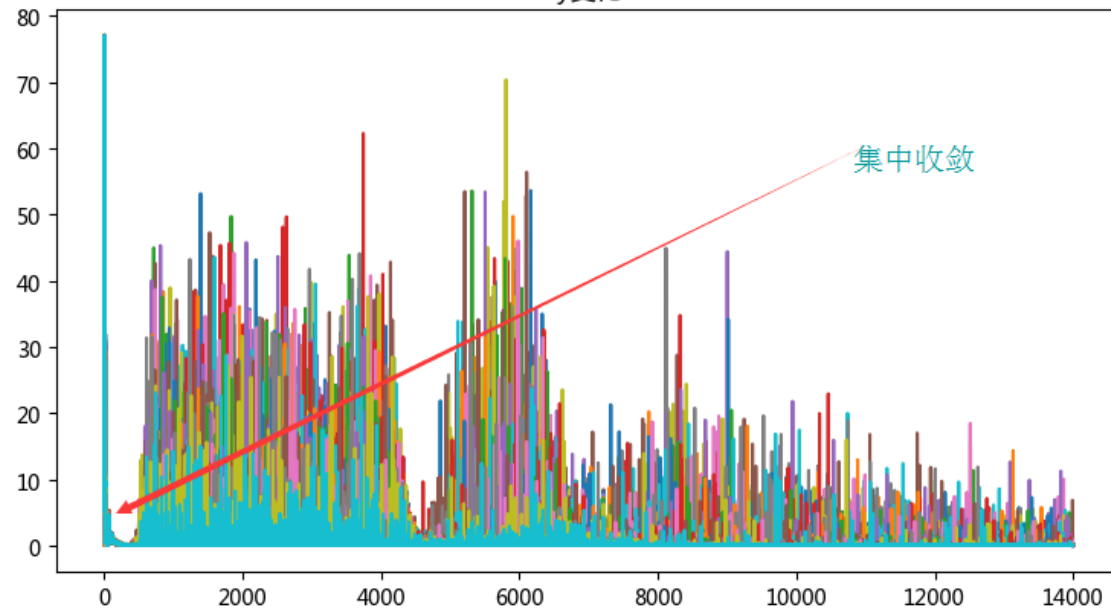
loss变化: $10 \times \text{uncer} + 100 \times \text{mmd}$



mmd变化: $10 \times \text{mmd}$



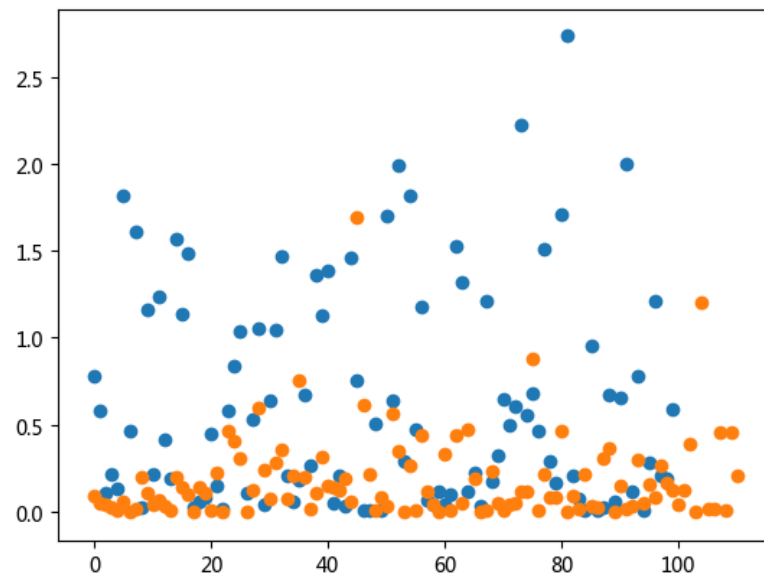
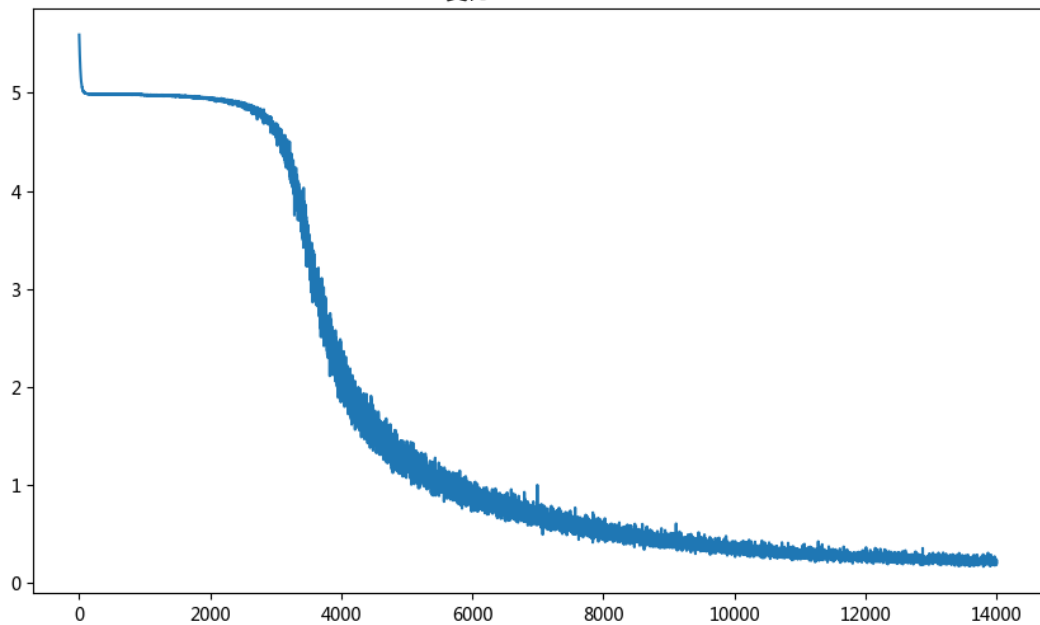
uncertainty变化: $10 \times \text{uncer}$



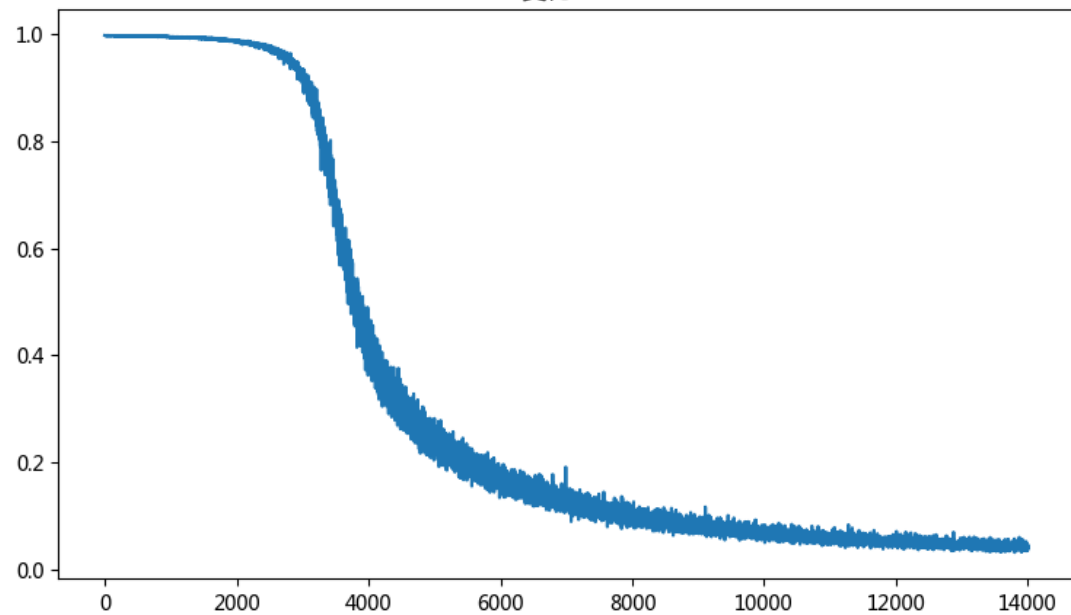


learning_rate
=0.002

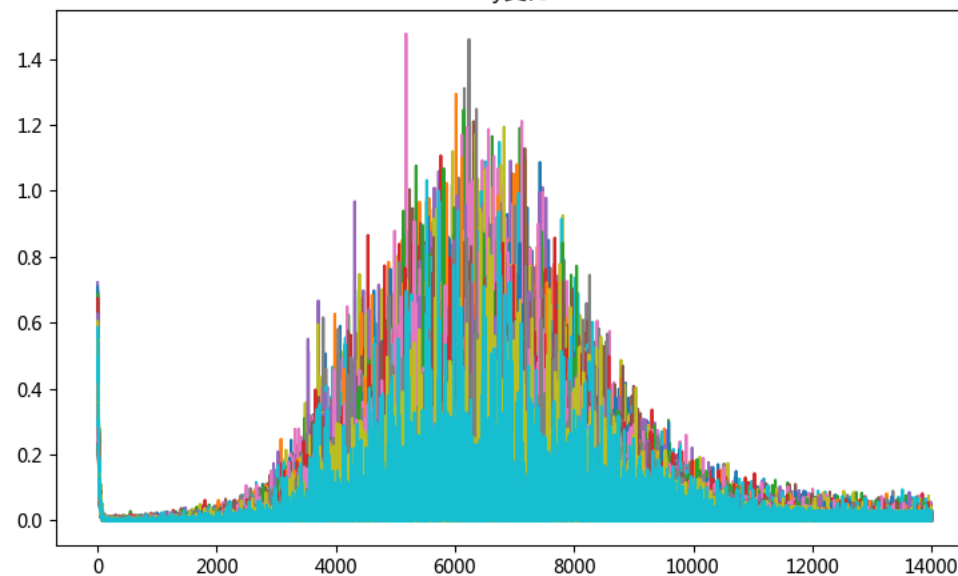
loss变化: 1*uncer+5*mmd



mmd变化: 5*mmd



uncertainty变化: 1*uncer



next



higgs susy

图：准确率变化曲线,三线(随机,net, linear)
时间随规模变化曲线, 两线(net,linear)



LR SVM MLP

线性核SVM(LR) 对比实验采用自定义预测decision_function



准确率曲线不高, 耗时大(MMD收敛慢)

