The Experiment Report of Machine Learning



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**SUBJECT:**SOFTWARE ENGINEERING

**SCHOOL:** SCHOOL OF SOFTWARE ENGINEERING

[[1]](#footnote-1)Logistic Regression, Linear Classification and Stochastic Gradient Descent

Abstract—

* Compare and understand the difference between gradient descent and stochastic gradient descent.
* Compare and understand the differences and relationships between Logistic regression and linear classification.
* Further understand the principles of SVM and practice on larger data.

# INTRODUCTION

Experiment uses a9a of LIBSVM Data, including 32561/16281(testing) samples and each sample has 123/123 (testing) features.

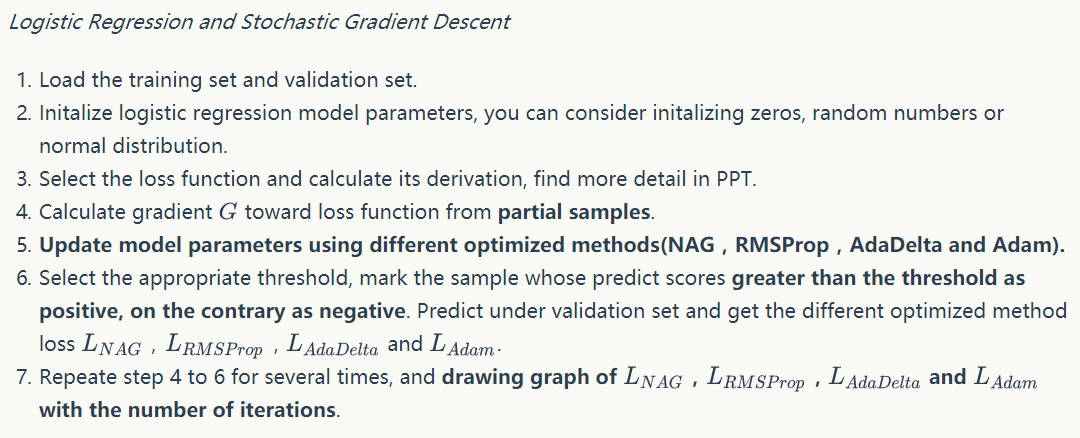
# METHODS AND THEORY

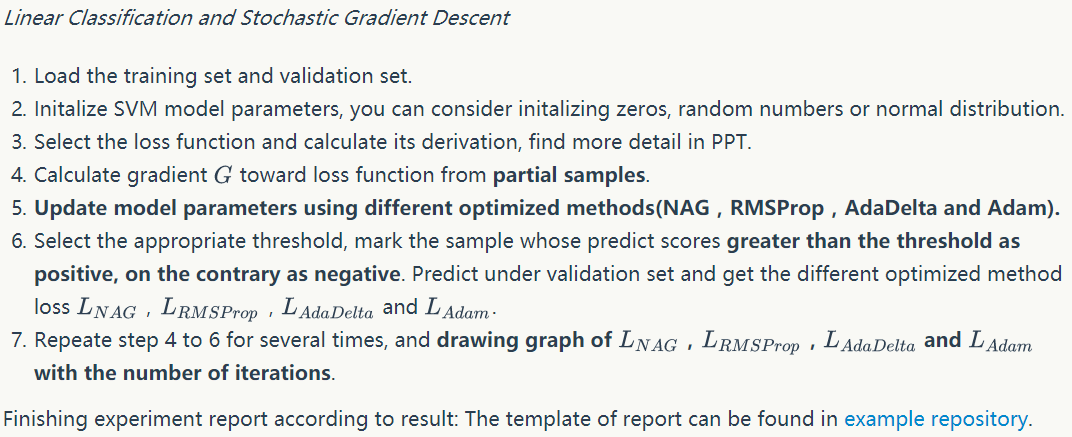
Logistic Regression and Stochastic Gradient Descent

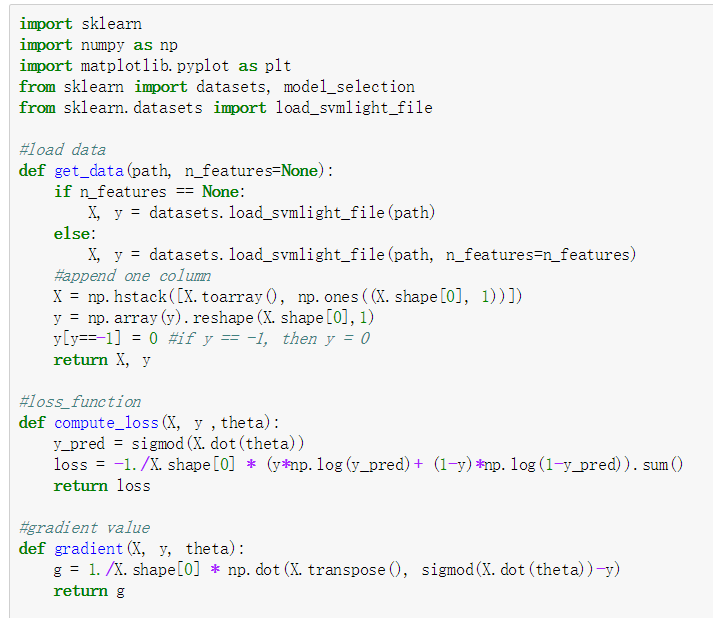
Linear Classification and Stochastic Gradient Descent

NAG，RMSProp，AdaDelta and Adam

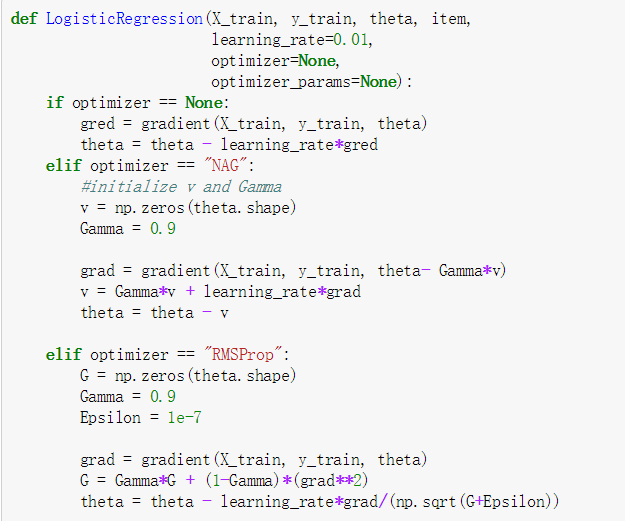
# Experiment

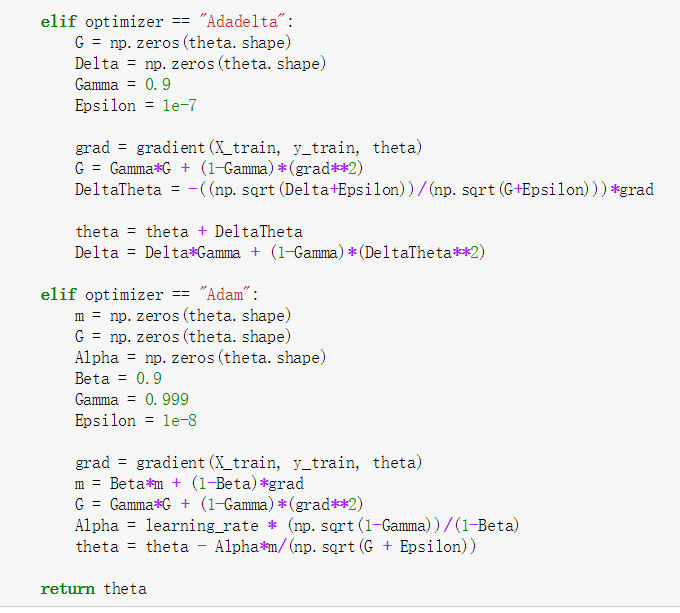




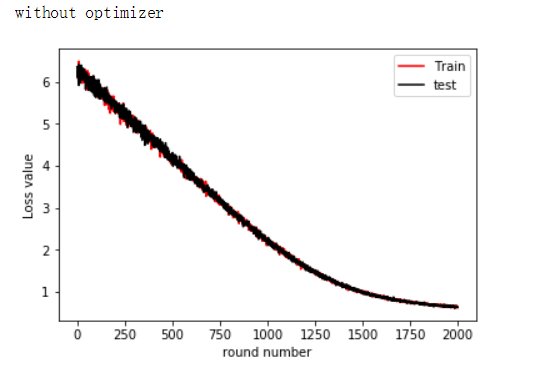


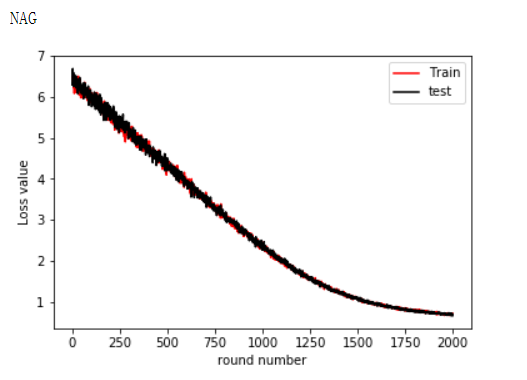


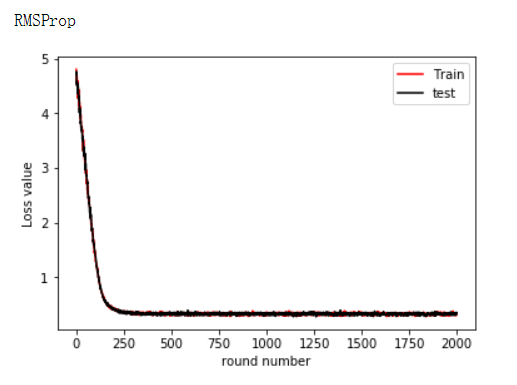


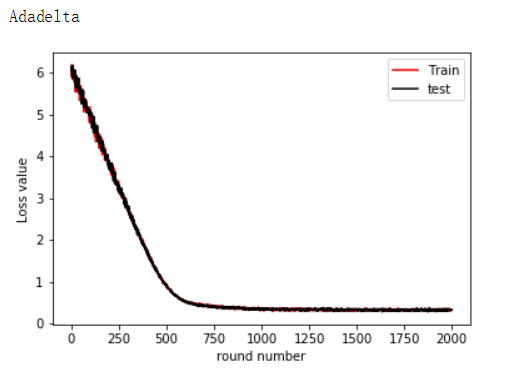


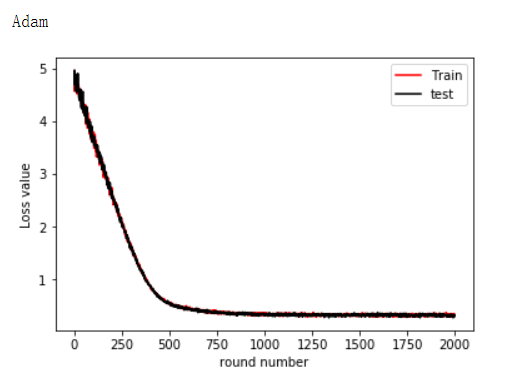
# conclusion











1. [↑](#footnote-ref-1)