Stochastic Optimization and Automatic Differentiation for Machine Learning

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Abstract

We consider in this project a method for controlling variance of gradient-based estimators, using control variates as the well-known algorithms SVRG or SAGA. In the considered article, the control variates are designed to track these gradients through an approximation of the Hessian.

Introduction

Hello world - that's great ain't it? I love it

1 Control variates methods

<TODO>

2 Hessian matrix for better tracking

<TODO>

3 Implementation

<TODO>

4 Results

<TODO>

Conclusion

Well, that was refreshing!