

Some Writeup of Something

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Abstract. Rewrite proof for SGD, clarifying the role of $R := \max_i \|\mathbf{x}_i\|$.

1 Introduction

We prove some results

$$L_i := \ell(\langle \mathbf{x}_i, \mathbf{w} \rangle, y_i). \tag{1}$$

where (1) is mainly a placeholder.

$$\begin{aligned} & (x_1, \dots, x_d) \\ & \left(x_1, \dots, x_d, \sqrt{1 - \|x\|_2^2} \right) \end{aligned}$$

2 Frank-Wolfe Algorithm

Algorithm 1: Frank-Wolfe Algorithm
Let $\mathbf{x}^{(0)} \in \mathcal{D}$ for $t = 0 \dots T$ do Compute $\mathbf{s} := \arg \min_{\mathbf{s} \in \mathcal{D}} \langle \mathbf{s}, \nabla f(\mathbf{x}^{(t)}) \rangle$ Let $\gamma := \frac{2}{t+2}$ Update $\mathbf{x}^{(t+1)} := (1 - \gamma)\mathbf{x}^{(t)} + \gamma\mathbf{s}$ end