Errata of Alternating Direction Method of Multipliers for Machine Learning

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ABSTRACT

The corrections for the book Alternating Direction Method of Multipliers for Machine Learning are listed below. Fortunately, they are all non-critical. They are all corrected in the Chinese version of the book. If you detect other errors, please send your correction information to: zclin2000@hotmail.com.

Keywords: None

1. Page 72, line 17, "
$$\eta_K \mathbf{s}^{k+1} + (1-\eta_K)\mathbf{s}^K.$$
" should be "
$$\eta_K \mathbf{s}^{K+1} + (1-\eta_K)\mathbf{s}^K.$$
".
2. Page 83, last line, "$2D_\psi(\mathbf{y}^*, y^0)$" should be "$2D_\psi(\mathbf{y}^*, \mathbf{y}^0)$".
3. Page 93, line 14, add "We present the above iterations in Algorithm 3.10." after "$\boldsymbol{\xi} = \left(\boldsymbol{\xi}_1^T, \boldsymbol{\xi}_2^T, \cdots, \boldsymbol{\xi}_m^T\right)^T$."
4. Page 98, line 2,"
$$L(\mathbf{x}^*, \mathbf{y}^*, \boldsymbol{\lambda}) \leq L(\mathbf{x}^*, \mathbf{y}^*, \boldsymbol{\lambda}^*) \leq L(\mathbf{x}, \mathbf{y}, \boldsymbol{\lambda}^*), \forall \mathbf{x}, \mathbf{y}, \boldsymbol{\lambda}.$$
" should be "
$$L(\mathbf{x}^*, \mathbf{y}^*, \boldsymbol{\lambda}) \leq L(\mathbf{x}^*, \mathbf{y}^*, \boldsymbol{\lambda}^*) \leq L(\mathbf{x}, \mathbf{y}, \boldsymbol{\lambda}^*), \quad \forall \mathbf{x}, \mathbf{y}, \boldsymbol{\lambda}.$$
"
5. Page 167, line 2-3,"the convexity of $J_1(\cdot)$" should be "and the convexity of $h_1(\cdot)$ and $f_1(\cdot)$".
6. Page 168, line 16-17,"and the convexity of $J_2(\cdot)$" should be "and the convexity of $h_2(\cdot)$ and $f_2(\cdot)$.
7. Page 223, line 11, "
$$\ell_{k+1} \leq O\left(1 - \sqrt{\frac{\mu\sigma_{\mathbf{L}}}{2Ld_{\max}}}\right)\ell_k.$$
" should be "
$$\ell_{k+1} \leq \left(1 - \sqrt{\frac{\mu\sigma_{\mathbf{L}}}{2Ld_{\max}}}\right)\ell_k.$$
"
8. Page 256, line 11, "where C is the intersection of the domains of f and g." should be "where C is the intersection of the domains of f and $\mathbf{g}$."