



Correction to: Learning to bid and rank together in recommendation systems

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Correction to: Machine Learning

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1. The right hand side of Eq. (2) should have been

$$r_{lose_bid} \cdot \mathbb{1}\{lose_bid\} + (r_{engage} \cdot \Delta_{metric} - b(\mathbf{x})) \cdot (1 - \mathbb{1}\{lose_bid\}).$$

2. In the line below Eq. (5), the expression after “in which” should have been

$$\mathbf{s}^{(n)} \sim p(\mathbf{s}), \mathbf{a}^{(n)} \sim \pi_b(\mathbf{a} \mid \mathbf{s}^{(n)})$$

3. In the line below Eq. (8), the expression after “using data samples” should have been

$$\mathbf{s}^{(n)} \sim p(\mathbf{s}), \mathbf{a}^{(n)} \sim \pi_{\phi^*}(\mathbf{a} \mid \mathbf{s}^{(n)})$$

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