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Monte Carlo Modeling of Transactions

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$$\beta = \left(\mathbf{X}^T\mathbf{X} + \lambda\mathbf{I}\right)^{-1}\mathbf{X}^T\mathbf{y}$$

2.3   Lasso

$$\beta = \operatorname{argmin}_\beta \left\{ \sum_{i=1}^{N}\left(y_i - \beta_0 - \sum_{j=1}^{p}x_{ij}\beta_j\right)^2 + \lambda\sum_{j=1}^{p}|\beta_j|^q \right\}$$

3   Method

3.1   Standard

$$\beta = \left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\mathbf{y}$$

3.2   Ridge

$$\beta = \left(\mathbf{X}^T\mathbf{X} + \lambda\mathbf{I}\right)^{-1}\mathbf{X}^T\mathbf{y}$$

3.3   Lasso

$$\beta = \operatorname{argmin}_\beta \left\{ \sum_{i=1}^{N}\left(y_i - \beta_0 - \sum_{j=1}^{p}x_{ij}\beta_j\right)^2 + \lambda\sum_{j=1}^{p}|\beta_j|^q \right\}$$

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References

[1]   Morten Hjorth-Jensen. *Computational Physics*. Lecture notes. 2015. URL: https://github.com/
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6   Appendix