

Monte Carlo Modeling of Transactions

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Abstract

[1]

1 Introduction

- 2 Theory
- 2.1 Standard

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

2.2 Ridge

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

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

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

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3.4 k-fold and bootstrap

4 Result & Discussion

5 Conclusion

References

[1] Morten Hjorth-Jensen. Computational Physics. Lecture notes. 2015. URL: https://github.com/CompPhysics/ComputationalPhysics/blob/master/doc/Lectures/lectures2015.pdf.

6 Appendix

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