HSE and University of London Double Degree Programme in Data Science and Business Analytics

Statistical Methods for Market Researh, 2023-2024

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Class 3: Bootstrap

Task 1

Compare the performance of percentile bootstrap, empirical bootstrap and t-bootstrap. Consider symmetric vs asymmetric distributions, large sample vs small sample, outliers vs no outliers.

Task 2

Construct the confidence interval for Sharpe Ratio.

Task 3

Construct the confidence interval for max value in the sample.

Task 4

Compare parametric bootstrap, non-parametric bootstrap and jackknife.

Task 5

Compare pair bootstrap, wild bootstrap and jackknife.

Task 6

Compare wild bootstrap and wild bootstrap robust to heteroscedasticity.