

ETW3420

Principles of Forecasting and Applications

Topic 4 Pre-tutorial Activity

In this pre-tutorial activity, you will:

- (i) Understand how moving averages are calculated using Excel
- (ii) Use Excel Solver to estimate weights for a weighted moving average

Before attempting the following question, please watch the following video to learn how to calculate Simple Moving Averages in Excel: <http://www.youtube.com/watch?v=-LLpQcVSeoQ>

Assignment Project Exam Help

Question 1

<https://powcoder.com>

Use the data in the worksheet “Retail” in the Excel file for this question.

- (a) Plot a time series of the data.
- (b) Do you observe any trend, cyclical or seasonal component in the data?
- (c) Produce one-step-ahead forecasts for the data using a k-SMA, with $k = 1, 4$ and 6 .
- (d) Calculate and report the RMSE for each value of k .
- (e) Determine the optimal value of k . (i.e. the value of k that returns the lowest RMSE).
- (f) Using the optimal value of k chosen from (e), modify the method by using a weighted moving average and use Solver to estimate the weights. Comment on the magnitude of the weights. What is the in-sample RMSE?

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