

ETW3420

Principles of Forecasting and Applications

Topic 5 Post-Tutorial Activity

Instructions

- Perform and complete the following tasks before answering the Quiz questions on Moodle.
- In this activity, you will examine Malaysia's number of newly registered motorcycles.
- Download and import into R, the Excel file which contains the monthly number of newly registered motorcycles in Malaysia from Jan 2004 to March 2016. When importing the data into R, please also add the following argument `header = FALSE` in the `read.csv()` function. In this way, the first row of the data set will NOT be regarded as headings/labels.

<https://powcoder.com>

Question 1

- (a) Produce a plot of the data.
- (b) Divide the data set into a training set (Jan 2004 to Dec 2014) and test set (Jan 2015 to March 2016).
- (c) Using the training set data, produce forecasts for the test-set period using (i) the Holt-Winters' method with additive seasonality and (ii) the Holt-Winters' method with multiplicative seasonality.
- (d) Using a suitable metric, determine which of the two forecasting methods from Part (c) you would use to forecast this data set.
- (e) Plot the full data set along with the test-set forecasts produced by the 2 Holt-Winters methods from Part (c). Omit the plotting of the prediction intervals by setting the argument `PI = F`.