

MIS40970 Assignment 3: Bicycle Counter Data

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1 Assignment

You are provided with bicycle counter data as an Excel spreadsheet for Dún Laoghaire-Rathdown County Council in Dublin for the years 2012-2015. The file contains data relating to the location of and numbers of cyclists recorded at key locations within the Dún-Laoghaire Rathdown area. Your task is to analyse the cycle counter data using either R or Enterprise Miner to address the following:

1. Calculate monthly summaries at each location for the years 2012, 2013 and 2014.
 - (a) Describe the steps undertaken to achieve this task.
 - (b) Present the results in both tabular form and as histograms.
 - (c) Describe any trends observed in the monthly data.
 - (d) Attempt to explain any trends observed.

2. Predict the number of cyclists each month at each counter site using the data from 2012, 2013 and 2014 as training data, and 2015 as a test set.
 - (a) Describe the steps undertaken to achieve this task.
 - (b) Present an analysis of the results highlighting any limitations or weaknesses.
 - (c) Would you use your best predictive model? Discuss your answer.

2 Submission Details & Deadline

Please submit a report (pdf) through Blackboard by 17h00 Wednesday 27 April. This assignment is worth 10% of the total credit for MIS40970. **In your submission, please make sure that in each case you include any code or images of screenshots which were used to address each item below. Also, include the output (if any) generated, i.e., Show Your Work!**