Bike Sharing Demand: Prediction of Bike Share Counts by Hour

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Abstract

[The abstract should be one paragraph of between 150 and 250 words. It is not indented. Section titles, such as the word Abstract above, are not considered headings so they don’t use bold heading format. Instead, use the Section Title style. This style automatically starts your section on a new page, so you don’t have to add page breaks. Note that all of the styles for this template are available on the Home tab of the ribbon, in the Styles gallery.]

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Bike Sharing Demand: Prediction of Bike Share Counts by Hour

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# [Heading 1]: Sample

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Bike Sharing Demand: Prediction of Bike Share Counts by Hour1

Bike sharing systems enable renting bicycles where the process of obtaining membership, rental, and bike return is automated via a network of kiosk locations throughout a city. Using these systems, people are able rent a bike from a one location and return it to a different place on an as-needed basis.

The data generated by these systems makes them attractive for researchers because the duration of travel, departure location, arrival location, and time elapsed is explicitly recorded. Bike sharing systems therefore function as a sensor network, which can be used for studying mobility in a city.

For this study, we attempted to predict the count of bike rentals using statistical inference methods. We began with creating a linear model, given that this is a standard basic model. From there we used validation techniques in order to determine the strength of the model. We then used ANOVA to understand the variability of the counts to the different predictors. Next, we used the Mann-Whitney-Wicoxon Test to understand the independence of the response against the predictors. From all the findings, we created the optimized model.

# Capital Bike Share Data: Observations

xxx

## [Heading 2]

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[Heading 5]. Xxx

# Creating the Linear Model

xxx

# Validating the Linear Model

# ANOVA

# Mann-Whitney-Wilcox

# The Optimized Model

References

Last Name, F. M. (Year). Article Title. *Journal Title*, Pages From - To.

Last Name, F. M. (Year). *Book Title.* City Name: Publisher Name.

Footnotes

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Tables

Table 1

[Table Title]

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| Row Head | 123 | 123 | 123 | 123 |
| Row Head | 456 | 456 | 456 | 456 |
| Row Head | 789 | 789 | 789 | 789 |

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