# Project Title

Subtitle

Author
Author Details

Date

**Abstract**

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**Keywords**: *Constraint programming, Combinatorial optimisation, Inventory, Scheduling*

# 1 Introduction

An in-sentence citation can be cited with *citet*, e.g. this is found in a study by Ferreira et al. [2013]. A bracketed citation can be done with *citep*, e.g. Uu cursus magna vel neque egestas, nec lobortis nibh lacinia [Pepić, 2018].

Bullet points can be written with enumerate. This is an example:

1. Item A
2. Item B
3. Item C

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# 2 Figures

References to previous sections can be done by using *ref* followed by the label, e.g. as concluded in Section 1. Use a tilde "~" to prevent line breaks between the elements. This is an example of inserting a footnote[1].

## 2.1 Inserting Single Figures Relative to Page Width

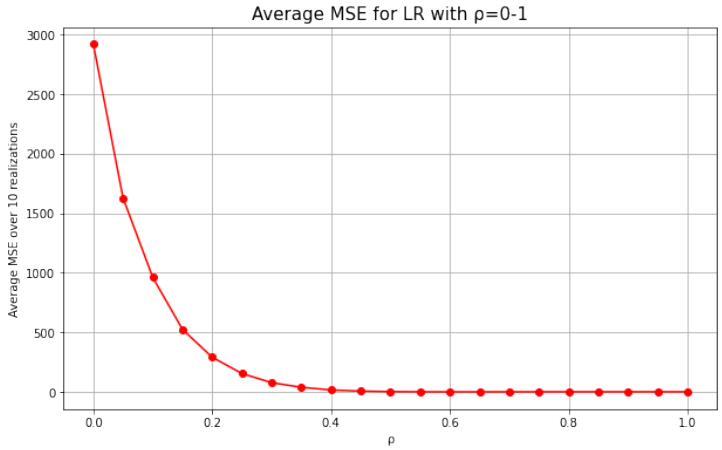


Figure 1: Caption for Big Plot.

Quisque ornare metus sit amet turpis accumsan aliquam. Duis condimentum sollicitudin ornare. Integer eu sodales orci. Quisque quis purus et ligula pretium posuere id eu eros, as seen in Figure 1.

[1]Data A retrieved from Kaggle, accessed on August 5, 2021.

## 2.2 Inserting Two Figures Side-By-Side

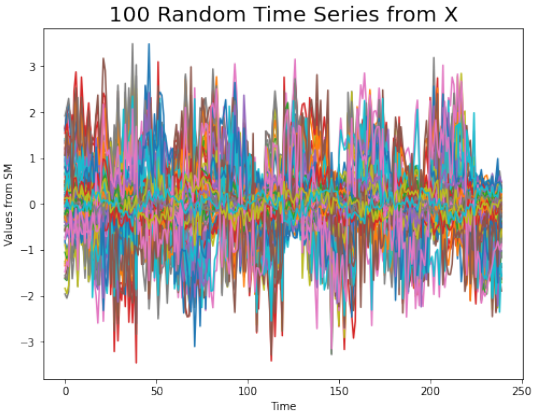


Figure 2: Caption for subplot1.

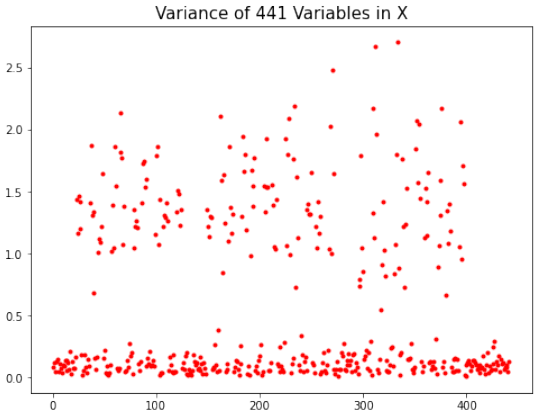


Figure 3: Caption for subplot2.

Data A can be seen in Figure 2, and Data B in Figure 2

## 2.3 Four figures, 2 rows, 2 column

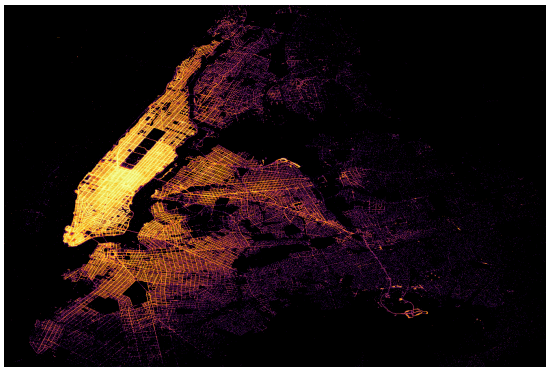

Figure 4: Caption for subplot 1-1.

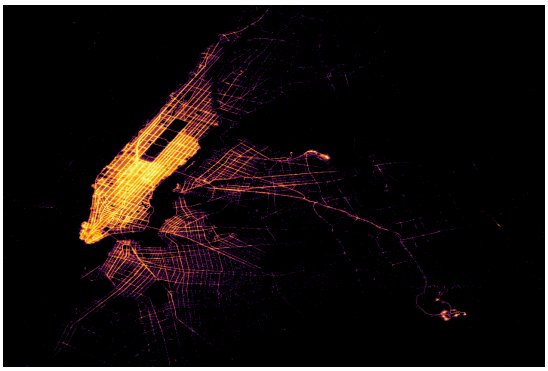

Figure 5: Caption for subplot 1-2.

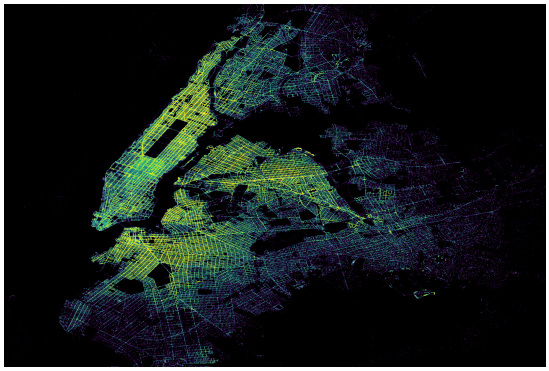

Figure 6: Caption for subplot 2-1.

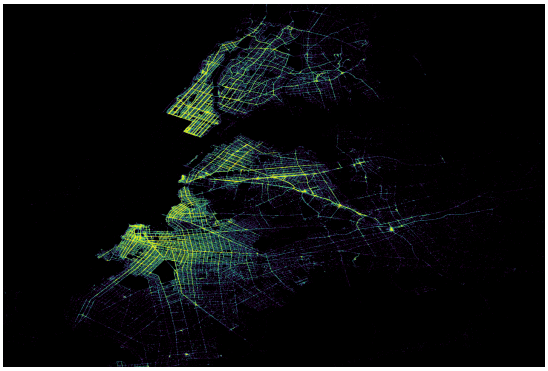

Figure 7: Caption for subplot 2-2.

Figure 8: Caption for all four figures.

### 2.4 Inserting Table Example

| pickup_datetime | tempm | tempi | conds | hum | vism | wspdm | precipm | rain | fog |
|---|---|---|---|---|---|---|---|---|---|
| 2015-12-31 00:15:00 | 7.8 | 46.0 | Light Rain | 89.0 | 4.0 | 7.4 | 0.500000 | 1 | 0 |
| 2015-12-31 00:42:00 | 7.8 | 46.0 | Overcast | 89.0 | 6.4 | 7.4 | 0.800000 | 0 | 0 |
| 2015-12-31 00:51:00 | 7.8 | 46.0 | Overcast | 89.0 | 8.0 | 5.6 | 0.800000 | 0 | 0 |
| 2015-12-31 01:51:00 | 7.2 | 45.0 | Overcast | 90.0 | 12.9 | 7.4 | 0.300000 | 0 | 0 |
| 2015-12-31 02:51:00 | 7.2 | 45.0 | Overcast | 90.0 | 12.9 | 0.0 | 0.295455 | 0 | 0 |

Table 1: Caption of table.

## 3 Math Equations

This is an example of a newline equation. The Ordinary Least Squares (OLS) for this problem can be expressed as:

$$y(\mathbf{x}, \mathbf{w}) = w_0 + \sum_{j=1}^{m} w_j x_j = \mathbf{w} \cdot \mathbf{x}$$

1. $y$ is the trip demand, the target variable to be predicted;
2. $\mathbf{x} = [x_0, x_1, \ldots, x_m]$ is a vector of trips and weather features (where $x_0 = 1$ which is the bias); and
3. $\mathbf{w} = [w_0, \ldots, w_m]$ are the weights for every feature.

This is an example of an in-line equation. The Ridge Regression (RR) parameters are estimated by:

1. $\mathbf{A}_{RR} = (\mathbf{D}^\top \mathbf{D} + \tilde{\lambda}\mathbf{I})^{-1}\mathbf{D}^\top \mathbf{X}$, where $\mathbf{D} = \mathbf{TC}$ and $\tilde{\lambda} = \lambda V$.
2. $\mathbf{D}_{RR} = \mathbf{X}\mathbf{A}_{RR}^\top$.

## 4 Methodology

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Sed congue orci vel dolor blandit consequat. Phasellus non urna vel tellus rhoncus volutpat a et dui. Pellentesque at massa nunc. Aliquam tincidunt dapibus finibus. Pellentesque sed ante fringilla, hendrerit orci vitae, congue magna. Suspendisse tellus purus, condimentum vel venenatis ac, efficitur in sapien. Nunc interdum, purus nec tincidunt rhoncus, ante ante feugiat leo, consequat tempor nisl enim non ipsum. Donec luctus tristique lectus. Phasellus a bibendum ipsum. Fusce malesuada orci metus, eget mattis libero tincidunt quis. Aliquam in blandit felis. Curabitur ornare turpis sit amet est faucibus egestas.

## 5 Results and Discussion

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# 6 Conclusions

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# REFERENCES

Ferreira, N., J. Poco, H. T. Vo, J. Freire, and C. T. Silva (2013). Visual exploration of big spatio-temporal urban data: A study of new york city taxi trips. *IEEE Transactions on Visualization and Computer Graphics 19*(12), 2149–2158.

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