Group assignment: Is High-Dimensional Analysis Worth it?

Carlos Perengano Erika Mustermann Jan Kowalski

Abstract

You can write the abstract at the end. Do it approximately like this and you have a nice flow: one sentence about data context. One sentence about research problem. One sentence about research question. One sentence about methods compared. One sentence about results. One sentence about conclusion.

1 Introduction

i Note

Max 700 words $% \left({{\rm{Max}}} \right) = {{\rm{Max}}} \left({{\rm{Max}}} \right) = {{{\rm{Max}}} \left($

Provide a description of your data and relevant context on the research problem it might have been designed to solve in 2 to 3 paragraphs. Maybe referring to a figure in a manner such as Figure 1.

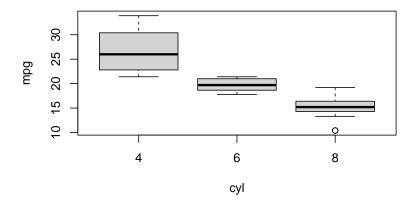


Figure 1: A boxplot comparing the mpg of cars for different numbers of cylinders.

Write max 2 paragraphs describing the research problem and leading to the methodological research question. The question should revolve around comparing high-dimensional vs not high-dimensional methods.

2 Methods



 $500\text{-}600~\mathrm{words}$

Description of methods you use in maximum 3 paragraphs. You might want to refer to literature which you can find in the file bibliography.bib e.g., Hastie, Tibshirani, and Wainwright (2015) or James et al. (2013). Use bibtex notation in the .bib file.

Also describe your comparison or validation strategy in 1 or 2 paragraphs. Answer the question: how are you going to compare your chosen methods against each other? How are you going to conclude which is better for this dataset / research purpose?

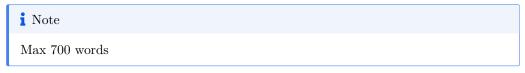
3 Results



Max 500 words $% \left({{\rm{Max}}} \right) = {{\rm{Max}}} \left({{\rm{Max}}} \right) = {{{\rm{Max}}} \left($

Here, provide a description of **relevant** results in 2 to 3 paragraphs. You are invited to use images / plots to help communicate your results, but keep this section legible and stick to the main points! In your results section, you should refrain from giving too much discussion / explanation; be quite factual.

4 Conclusion



Start with a short summary of what you have done in 1 paragraph ("in this report, we have...").

Then, write your conclusion in which you answer your research question in 1 paragraph ("For this dataset, we have found that the high-dimensional analysis improved / did not improve over ...")

Then, contextualize your conclusion by providing some discussion additional interpretation in approx. 3 paragraphs. Feel free to refer to additional literature if you like. Suggestions for future research might be nice to add.

5 References

Hastie, Trevor, Robert Tibshirani, and Martin Wainwright. 2015. "Statistical Learning with Sparsity." Monographs on Statistics and Applied Probability 143 (143): 8.

James, Gareth, Daniela Witten, Trevor Hastie, Robert Tibshirani, et al. 2013. An Introduction to Statistical Learning. Vol. 112. Springer.