5 Regression with more than one predictor: Assignment

Instructions

Submit your answers to the 5 first exercises through Aula Global (quiz section in your seminar's moodle). Round your answers to the second decimal after the comma.

Regression

Fit a linear model predicting pitch based on context and gender on the data from Franke & Roettger (2019).

```
df <- read.csv("https://tinyurl.com/polite-data") #download data
```

1. What is the estimated effect on `pitch` in a polite context for a female speaker?
2. What is the estimated effect on `pitch` in an informal context for a male speaker?
3. How many parameters does this model have?
4. Is a male speaker in an informal context predicted to have a higher pitch than a female speaker in a polite context? If so, by how much?
5. How much of the variance in `pitch` does this model explain? Use the "adjusted" metric for this answer

Self study

If you didn't do so last week, read Winter (2013), pages 1-10: https://arxiv.org/ftp/arxiv/papers/1308/1308.5499.pdf. If you find this interesting, read on until page 21. Pages 10-21 cover topics we will briefly touch on but will not be able to discuss in detail. If you're still interested, read the entire tutorial. The second part of the tutorial touches on a very powerful and useful extension of regression models that we won't cover in this class.

Use your remaining time to work on your final report

References

Franke, Michael, and Timo Benjamin Roettger. 2019. "Bayesian Regression Modeling (for Factorial Designs): A Tutorial," July. https://doi.org/10.31234/osf.io/cdxv3.

Winter, Bodo. 2013. "Linear Models and Linear Mixed Effects Models in R with Linguistic Applications." *CoRR* abs/1308.5499. http://arxiv.org/abs/1308.5499.