# Week 3\*

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First sentence. Second sentence. Third sentence. Fourth sentence.

#### 1 Introduction

You can and should cross-reference sections and sub-sections. We use R Core Team (2023), Gelfand (2022), and Wickham et al. (2019).

The remainder of this paper is structured as follows. Section 2

#### 2 Data

Some of our data is of penguins (Figure 1), from Horst, Hill, and Gorman (2020).

Talk more about it.

The scatter plot will allow us to identify any noticeable trends or patterns in the issuance of marriage licenses. For instance, we might observe peaks during specific seasons, indicating breeding periods when penguin pairs are more likely to bond. Understanding when these licenses are issued can provide insights into penguin social structures and mating behaviors. This could lead to hypotheses about factors influencing bonding, such as environmental conditions or population dynamics. The initial visualization can be a springboard for deeper statistical analyses, such as investigating correlations with other variables (e.g., species differences, habitat conditions) or applying time series analysis to predict future trends.

And also planes (?@fig-planes). (You can change the height and width, but don't worry about doing that until you have finished every other aspect of the paper - Quarto will try to make it look nice and the defaults usually work well once you have enough text.)

<sup>\*</sup>Code and data are available at: LINK.

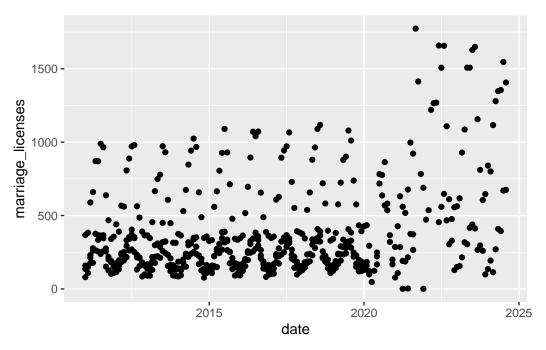


Figure 1: Bills of penguins

## 3 Discussion

## 3.1 First discussion point

If my paper were 10 pages, then should be be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

## 3.2 Second discussion point

## 3.3 Third discussion point

## 3.4 Weaknesses and next steps

Weaknesses and next steps should also be included.

# **Appendix**

# A Additional data details

### **B** References

- R Core Team (2023), Gelfand (2022)
- Gelfand, Sharla. 2022. Opendatatoronto: Access the City of Toronto Open Data Portal. https://CRAN.R-project.org/package=opendatatoronto.
- Horst, Allison Marie, Alison Presmanes Hill, and Kristen B Gorman. 2020. *Palmerpenguins:* Palmer Archipelago (Antarctica) Penguin Data. https://doi.org/10.5281/zenodo.39602 18.
- R Core Team. 2023. R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.