Marriage Licence Analysis*

STA304 In-class 3

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Data analysis for marrige licence statistics. Graphs and text produced in quarto

1 Introduction

This is a analysis about Marriage Licence in different district in Canada, 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).

3 Discussion

3.1 First discussion point

This is the scatterplot generated by the random sample we selected, this shows an ocsilating trend for marriage licneces $[0, 500]_{marraigelicence} \wedge [2010, 2020]_{date}$ and during 2020 and 2025, there is an increasing number of marraige licences and the scatterplots did not clustered in $[0, 500]_{marraigelicence}$.

*Code and data are available at: https://github.com/aj3616/STA304IC3

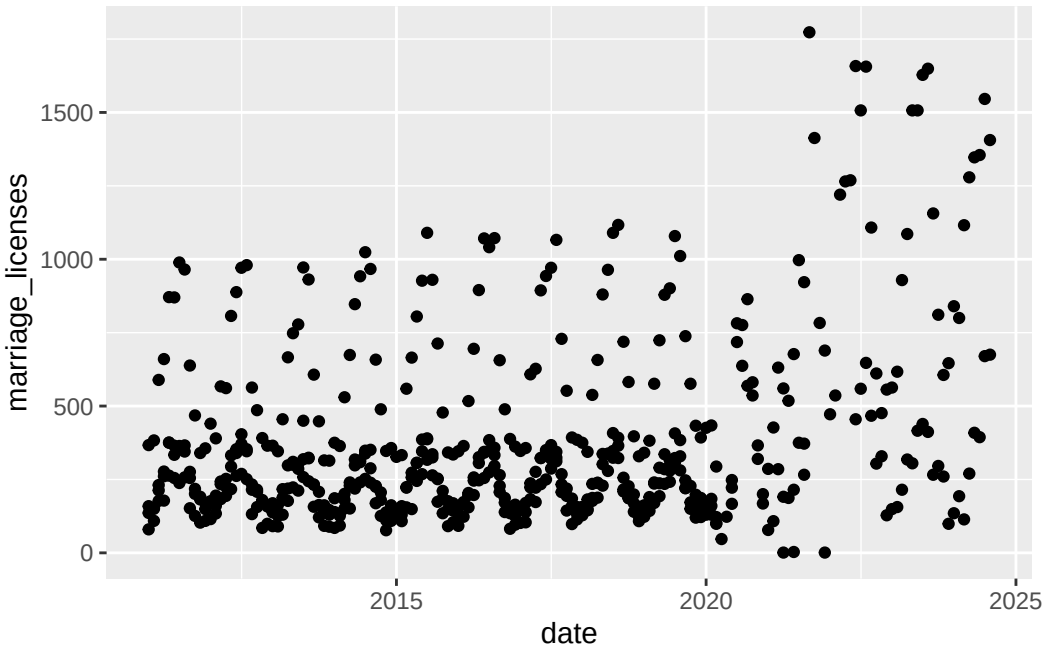

Figure 1: Bills of penguins

3.2 Second discussion point

It is safe to assume that the total number of marriages did not vary much, but the average number of licence did increase.

3.3 Third discussion point

It is arguable that less people are getting married in the contemporary time.

3.4 Weaknesses and next steps

We need to perform more statistics analysis to make a more valid conclusion, some next steps can be Times Series analysis, regression estimates and visual representations.

Appendix

A Additional data details

References

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.3960218.

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.