Increasing Trend in Marriage Licenses Issued Over Time (2011–2025)*

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Illustrate the trend in marriage licenses issued between 2011 and 2025. Get the evidence that there are some fluctuations throughout the period, the smoothed curve indicates a relatively stable trend until around 2020, followed by a noticeable increase in the number of licenses issued.

1 Introduction

We use Gelfand (2022), and Wickham et al. (2019).

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

2 Data

```
`geom_smooth()` using formula = 'y ~ x'
```

Figure 1 graph represents the trend of marriage licenses issued over time, with **date** on the x-axis and the **number of marriage licenses** on the y-axis. I use both points and a smoothed curve. The light blue dots represent individual data points for marriage licenses at different times, providing a scatterplot view of the raw data. The dark blue line represents a **smoothed trend** of the marriage licenses over time. The shaded area around the smoothed line represents the **confidence interval** of the trend. It shows the level of uncertainty or variability in the trend estimate. The wider the shaded area, the more uncertain the trend in that part of the graph. Between 2010 and around 2020, the number of marriage licenses remains relatively stable or slightly declining.After 2020, there is a notable increase in the number of marriage

*Code and data are available at: LINK.

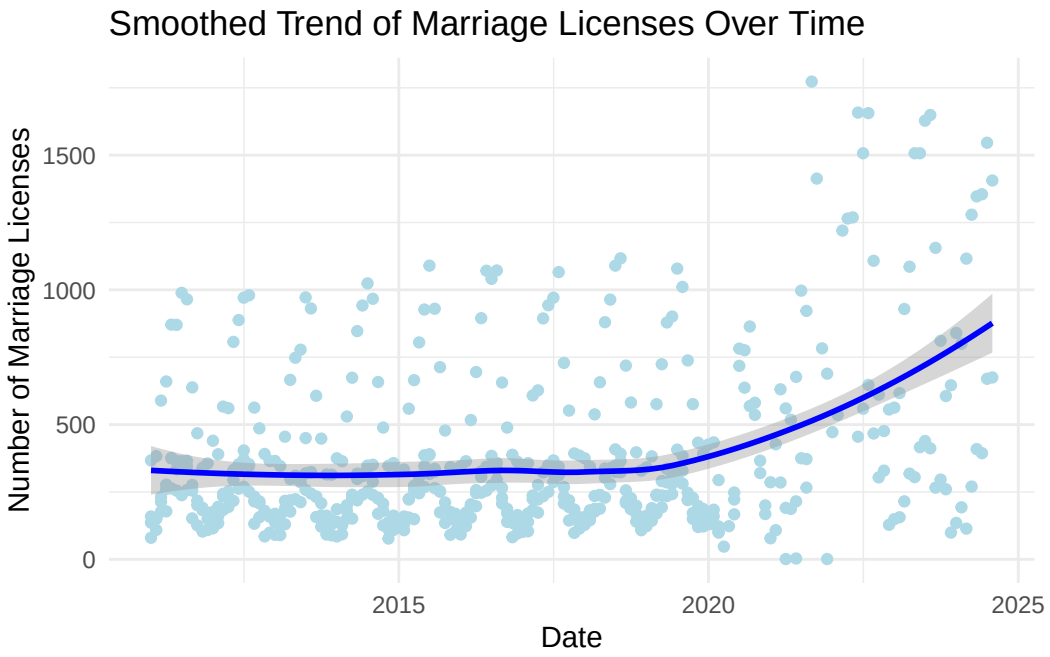

Figure 1: Smoothed Trend of Marriage Licenses Over Time

licenses, which is reflected in the upward curve at the far right of the graph. The graph provides a clear visual of both individual data points and an overall upward trend in marriage licenses issued in the more recent years, with a degree of uncertainty as shown by the confidence interval shading.

3 Discussion

3.1 First discussion point

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

References

Gelfand, Sharla. 2022. *Opendatatoronto: Access the City of Toronto Open Data Portal*. https://CRAN.R-project.org/package=opendatatoronto.

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.