Analysis of Toronto's Red Light Cameras

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Red light Cameras serve a number of uses for the municple government of Toronto. Firstly, they police the roads, creating a safer city. Secondly, they generate revenue for the city. In this paper I analyze the data red light camera data provided by opendatatoronto to determine if red light cameras are effective at either of the reasons listed above.

1 Introduction

In Toronto the the fine for entering an intersection during a red light, and being caught by a red light camera is 325CAD ("Red Light Cameras" 2024). This is a very large fine which most would like to avoid however, since 2007 the, red light cameras across the city have issued thousands of tickets (Gelfand 2022). The total number of tickets issued in 2022 was 129900. This would imply the red light cameras generated over 42 million CAD worth of revenue for the city of Toronto. This may seem like a large amount however compared to the city of Toronto has an operating budget of 17 billion CAD("2024 City Budget" 2024). This means relative to the cities budget, the revenue is negligible.

Red light cameras are not only designed to increase revenue for the city, however make the roads safer for pedestrians, cyclist and vehicle operators. This is very difficult to measure as you would need to analyze the data for accidents at a given intersection

You can and should cross-reference sections and sub-sections.

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

2 Data

```
#kable(head(cleaned_data[1:5]), "simple", caption = "Sample of the data set, showing 6 dif
```

3 Discussion

3.1 First discussion point

If my paper were 10 pages, then should 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** Model details
- **B.1** Posterior predictive check

References

- "2024 City Budget." 2024. City of Toronto. https://www.toronto.ca/city-government/budget-finances/city-budget/.
- Gelfand, Sharla. 2022. "Opendatatoronto: Access the City of Toronto Open Data Portal." https://sharlagelfand.github.io/opendatatoronto/.
- "Red Light Cameras." 2024. City of Toronto. https://www.toronto.ca/services-payments/streets-parking-transportation/traffic-management/pavement-markings/red-light-cameras/.