

Total Public Complaints Filed with The Independent Police Review Director (O.I.P.R.D.)*

Broken Down by Complaints that were Investigated and Not Investigated

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This paper examines the different types of public complaints filed with the police, the dataset is obtained from Open Data Toronto (Services (2024)), which includes total number of complaints from 2014 to 2023. The complaints are categorized into different types and whether if they are investigated by the police. The paper aims to explore the type of complaint that is most responded by the police, drawing conclusions that complaints about less serious conducts are investigated the most, and complaints that are not in public interest are not investigated the most.

1 Introduction

You can and should cross-reference sections and sub-sections. We use R Core Team (2023) The remainder of this paper is structured as follows. Section 2....

2 Data

We first graph the mean of the total number of complaints for each subtype (Figure 1) throughout the years.

Talk way more about it...

*Code and data are available at: https://github.com/sarahdingg/sta_analysis.

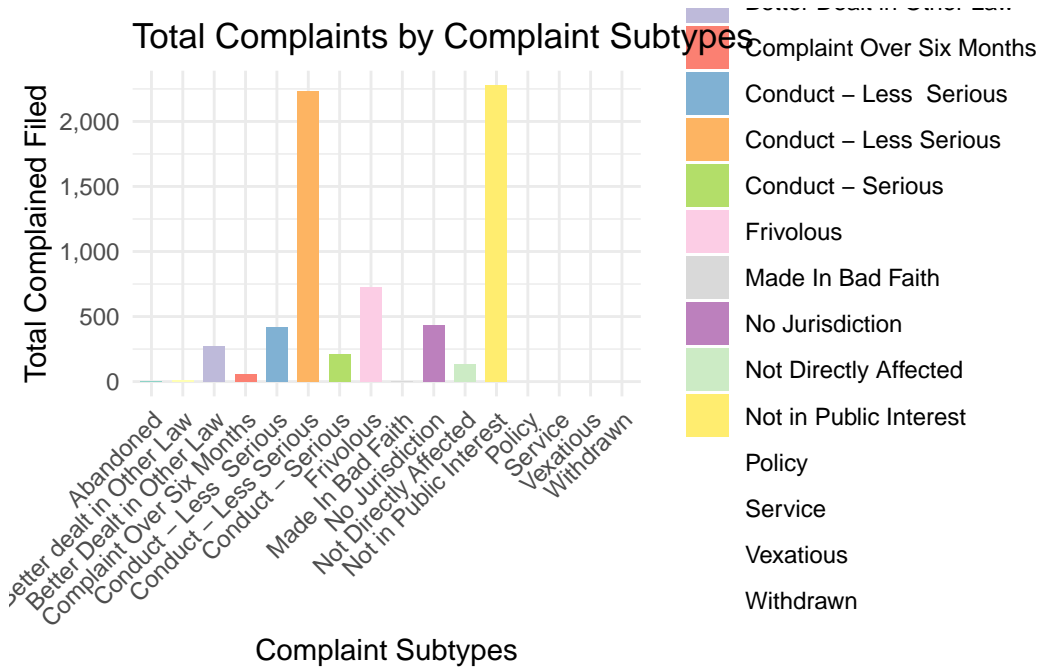


Figure 1: Number of Complaints filed under Different Subtypes

3 Model

The goal of our modelling strategy is twofold. Firstly,...

Here we briefly describe the Bayesian analysis model used to investigate... Background details and diagnostics are included in Appendix B.

3.1 Model set-up

Define y_i as the number of seconds that the plane remained aloft. Then β_i is the wing width and γ_i is the wing length, both measured in millimeters.

$$y_i | \mu_i, \sigma \sim \text{Normal}(\mu_i, \sigma) \quad (1)$$

$$\mu_i = \alpha + \beta_i + \gamma_i \quad (2)$$

$$\alpha \sim \text{Normal}(0, 2.5) \quad (3)$$

$$\beta \sim \text{Normal}(0, 2.5) \quad (4)$$

$$\gamma \sim \text{Normal}(0, 2.5) \quad (5)$$

$$\sigma \sim \text{Exponential}(1) \quad (6)$$

We run the model in R (R Core Team 2023)

3.1.1 Model justification

We expect a positive relationship between the size of the wings and time spent aloft. In particular...

We can use maths by including latex between dollar signs, for instance θ .

4 Results

Our results are summarized in

5 Discussion

5.1 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.

5.2 Second discussion point

5.3 Third discussion point

5.4 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

we implement a posterior predictive check. This shows...

we compare the posterior with the prior. This shows...

B.2 Diagnostics

References

- R Core Team. 2023. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Services, Toronto Police. 2024. *Opendatatoronto: Access the City of Toronto Open Data Portal*. <https://open.toronto.ca/dataset/police-annual-statistical-report-total-public-complaints/>.