

Wheels of Misfortune: Exploring Auto Theft Trends in Ottawa*

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The surge in auto theft rates across Canada has prompted car owners to become more vigilant regarding their vehicle's security. This paper gives a thorough examination of auto theft occurrences within Canada's capital, Ottawa. Focusing on the years 2018-2022, the paper provides a deep dive into the types of vehicles brands, model, and color targeted and offers insights into the neighborhoods within Ottawa exhibiting elevated rates of auto theft. Additionally, the study assesses factors such as the recovery rate of stolen cars, and provides solutions to improve vehicle security by understanding auto theft dynamics in the region.

Table of contents

1	Introduction	2
2	Data	2
3	Results	2
4	Discussion	2
4.1	Possible Reasons for Increasing Auto Theft Rates	2
4.2	Methods to Increase Vehicle Security	2
4.3	Auto Theft Rates Projection	2
4.4	Weaknesses and next steps	2
	Appendix	7
A	Additional data details	7

*Code and data are available at: https://github.com/catherinee1216/AutoTheft_Ottawa.git.

B Model details	7
References	8

1 Introduction

In recent years, there is a significant increase of auto theft rates across various cities in Canada. The country’s capital, Ottawa has reported 221 stolen vehicles cases since January 1, 2024 (**citeCTV?**). This escalating trend in auto theft poses a considerable risk to public safety. Although Ottawa police have made efforts to mitigate such reports as well as educate the public, the number of reported cases continues to rise steadily, specifically from the years 2018-2023. However, questions regarding potential patterns in the types of cars targeted and the proportion of vehicles successfully recovered following theft have increased.

[TO BE EDITED]

This paper aims to identify the gravity of auto theft as a pressing concern, particularly in Canada, in the (**Introduction?**). Subsequently, the (**Data?**) section focuses on the methodology for data collection and data cleaning. The (**Results?**) section delves into a comprehensive analysis of auto theft patterns in Ottawa from the years 2018-2022. Finally, in the (**Discussion?**) section, the paper explores potential drivers behind the escalation in auto theft rates, strategies for enhancing vehicle security, and prospective trends in auto theft.

2 Data

The data was cleaned by using the open source statistical programming language R (R Core Team 2023)....[TO UPDATE]

3 Results

4 Discussion

4.1 Possible Reasons for Increasing Auto Theft Rates

4.2 Methods to Increase Vehicle Security

4.3 Auto Theft Rates Projection

4.4 Weaknesses and next steps

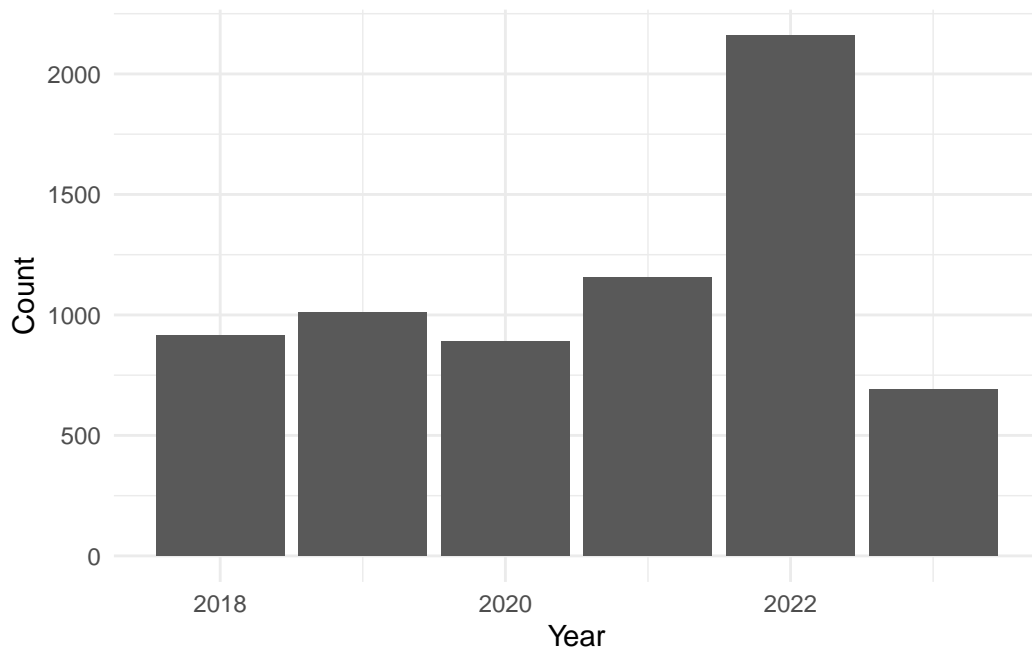


Figure 1: Average Auto Theft Crime Reported in Ottawa from 2018-2023

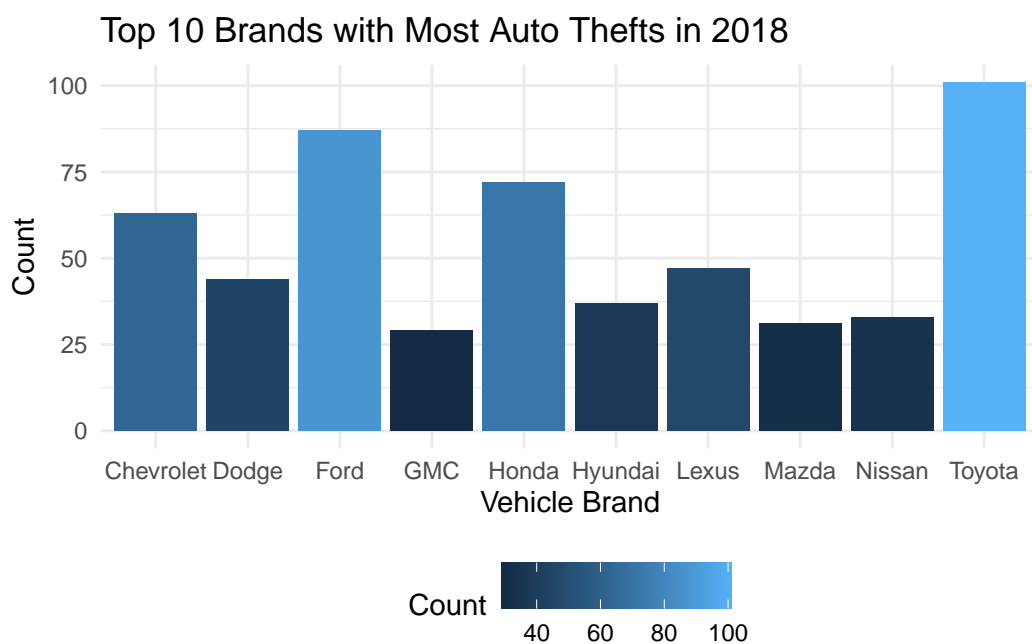


Figure 2: Number of Cars Stolen by Car Brand in 2018

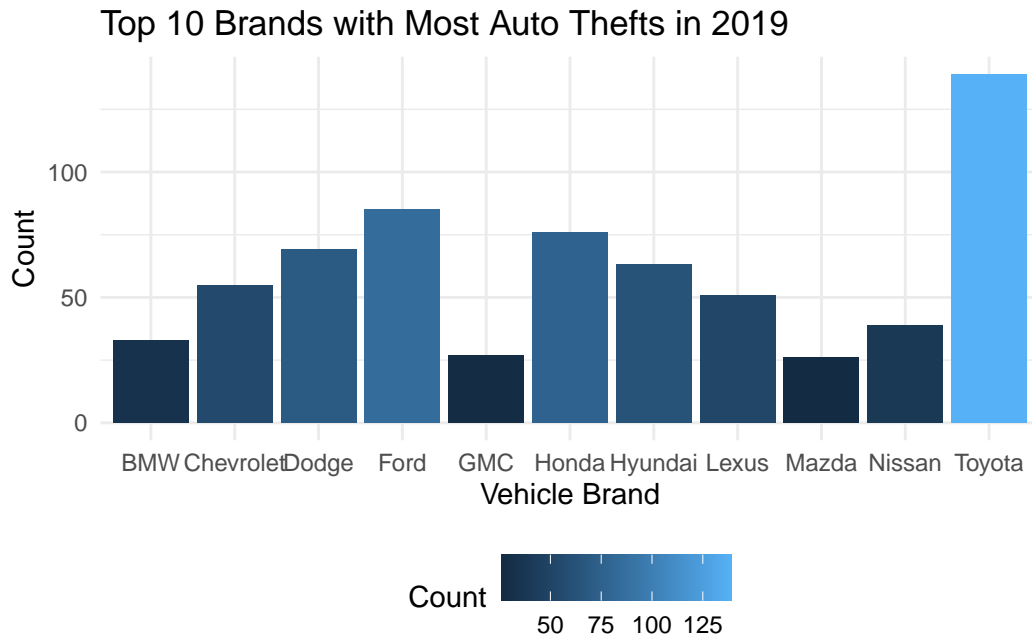


Figure 3: Number of Cars Stolen by Car Brand in 2018

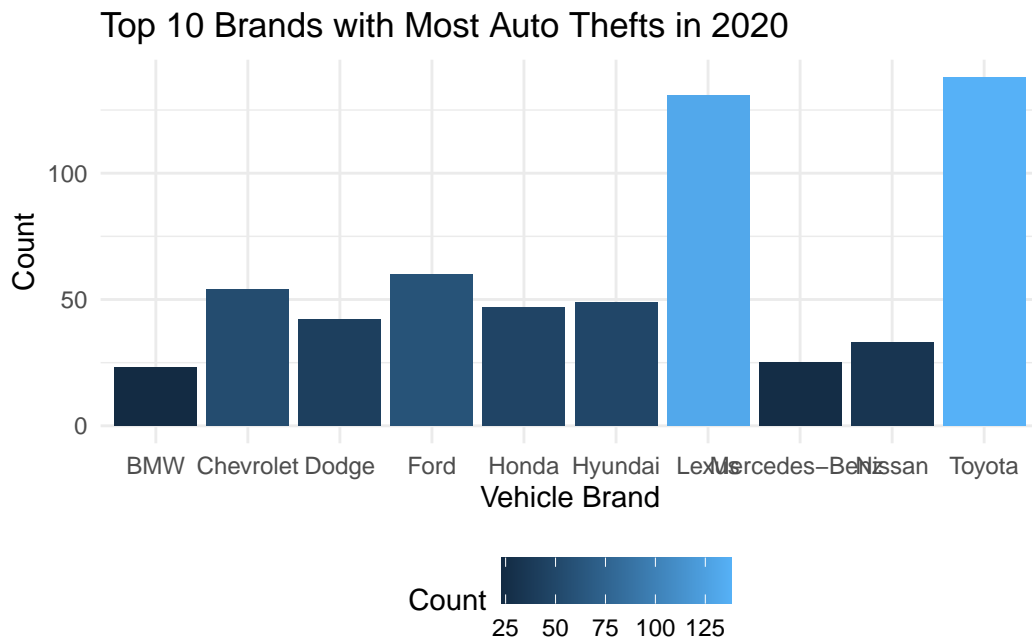


Figure 4: Number of Cars Stolen by Car Brand in 2018

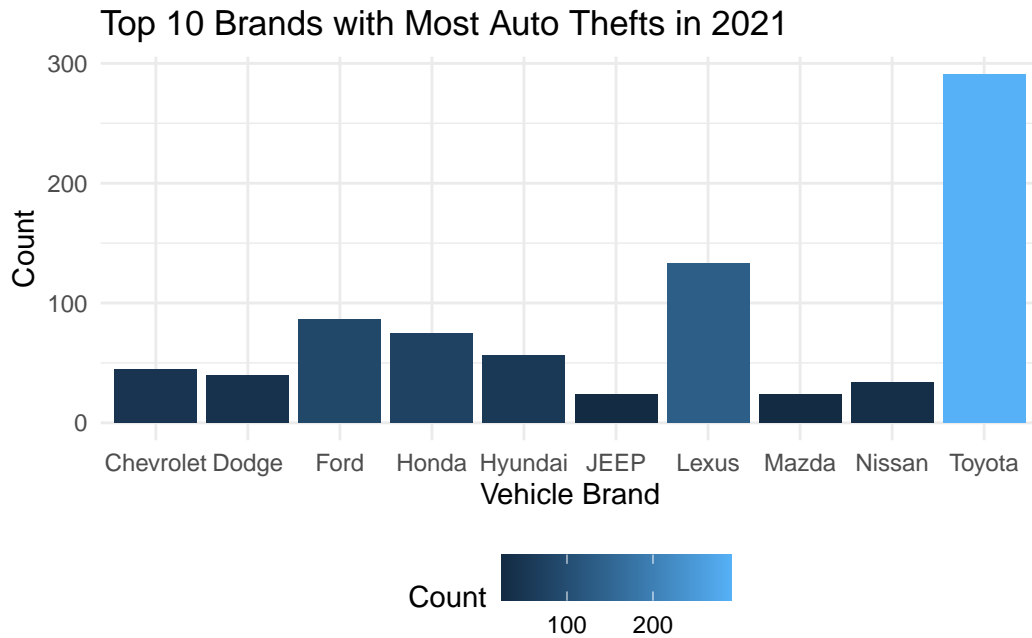


Figure 5: Number of Cars Stolen by Car Brand in 2018

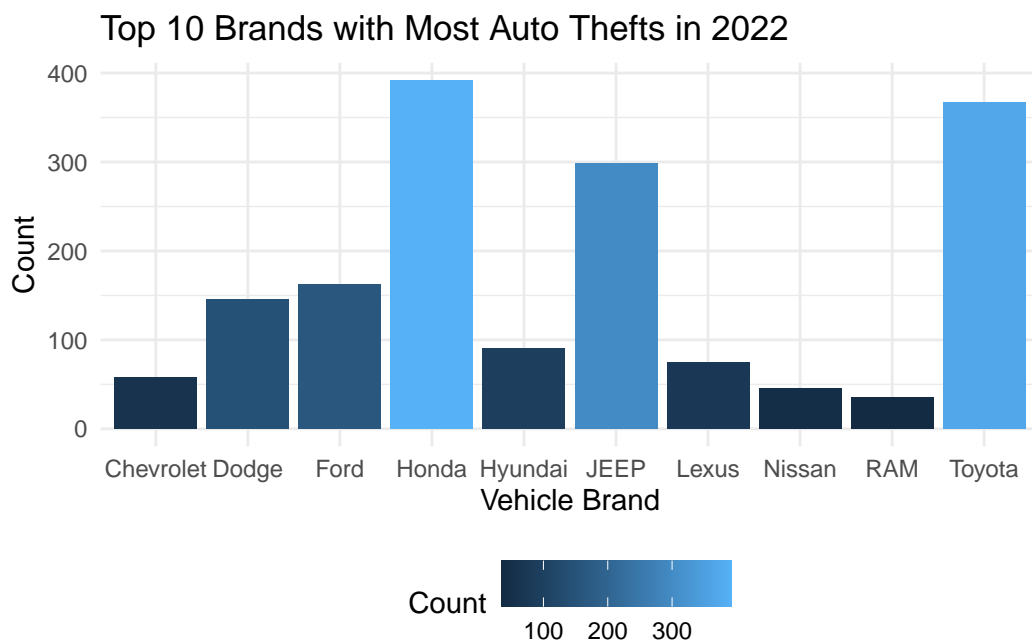


Figure 6: Number of Cars Stolen by Car Brand in 2018

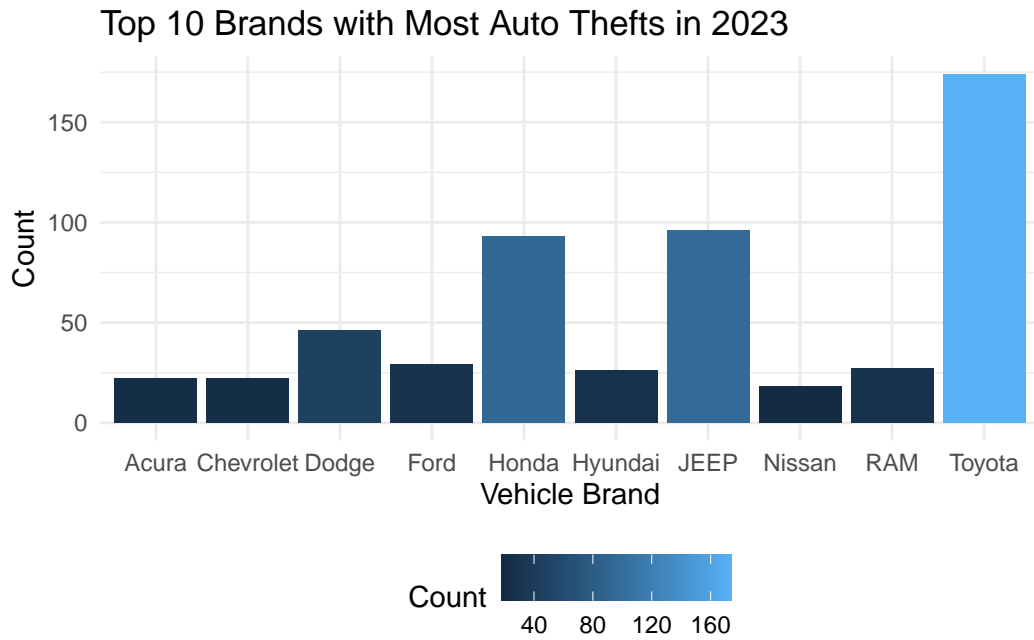


Figure 7: Number of Cars Stolen by Car Brand in 2018

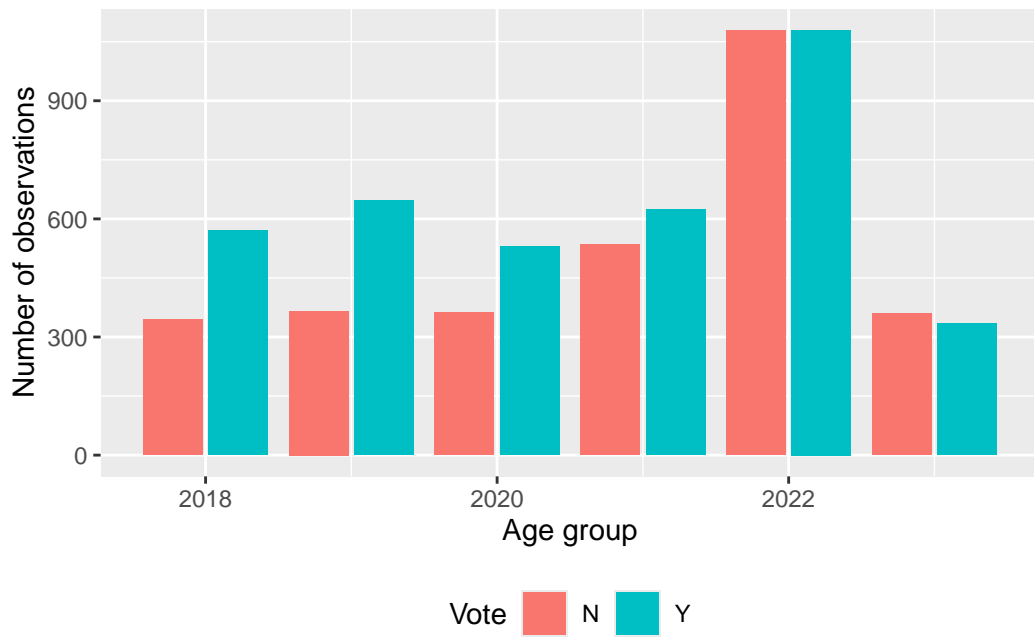


Figure 8: Recovery Rates from 2018 - 2023

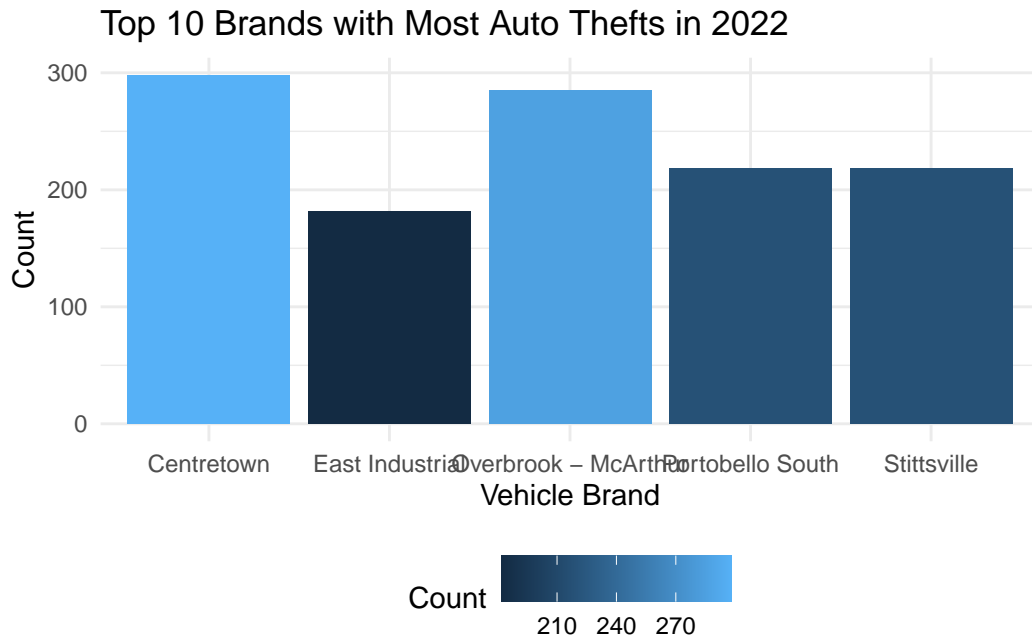


Figure 9: Recovery Rates from 2018 - 2023

Appendix

A Additional data details

B Model details

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/>.