

# Unveiling Demographic Trends: An Analysis of the Arrested and Charged Person Dataset in Toronto

Muhammad Aaraiz

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From the beginning of 2014 to the present year of 2022, there has been a noticeable decrease in the overall number of crimes committed. Among all age groups, young adults commit the greatest amount of crimes.

## Introduction

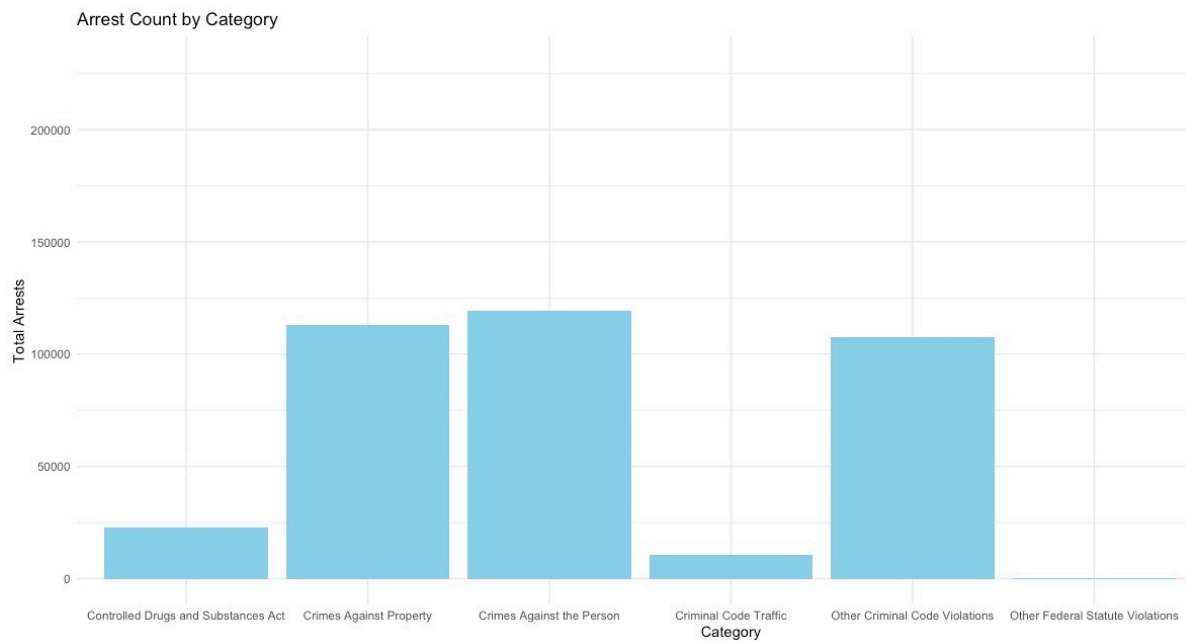
A complex story emerges when one examines the dynamics of criminal activity in Toronto using the given dataset. This compilation of arrest and charge logs provides a clear picture of the huge range of crimes that are committed in various parts of the city. We can observe patterns and use them to increase our understanding of why these crimes occur by looking into the details of each case and getting insight into the motivation behind them. There is a huge rise in assault cases, and people of all age groups are being affected by it regardless of their own unique situations. The data tells us that both adult and minor offenders are at risk, highlighting the need for specific interventions that account for the differences in each neighbourhood.

There's also been a large growth in crimes against property, such as break-ins, theft, etc., which leads to a greater concern for security in such parts of Toronto.

The possession of controlled substances and guns shows us the complex nature of criminological activity. This encourages communities to work towards crime prevention and helps identify patterns that will help crack them down.

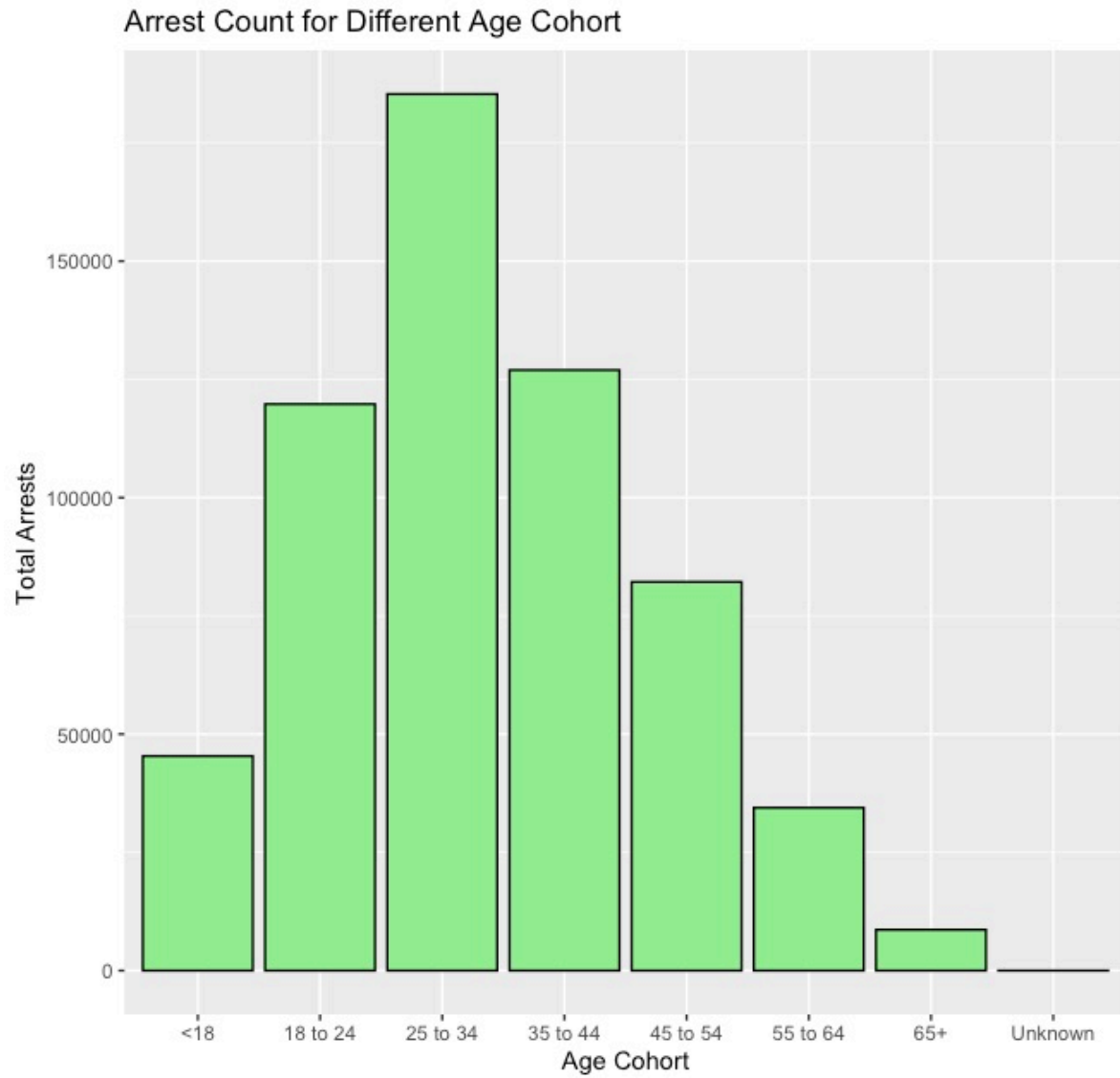
## Data

bibliography: references.bib

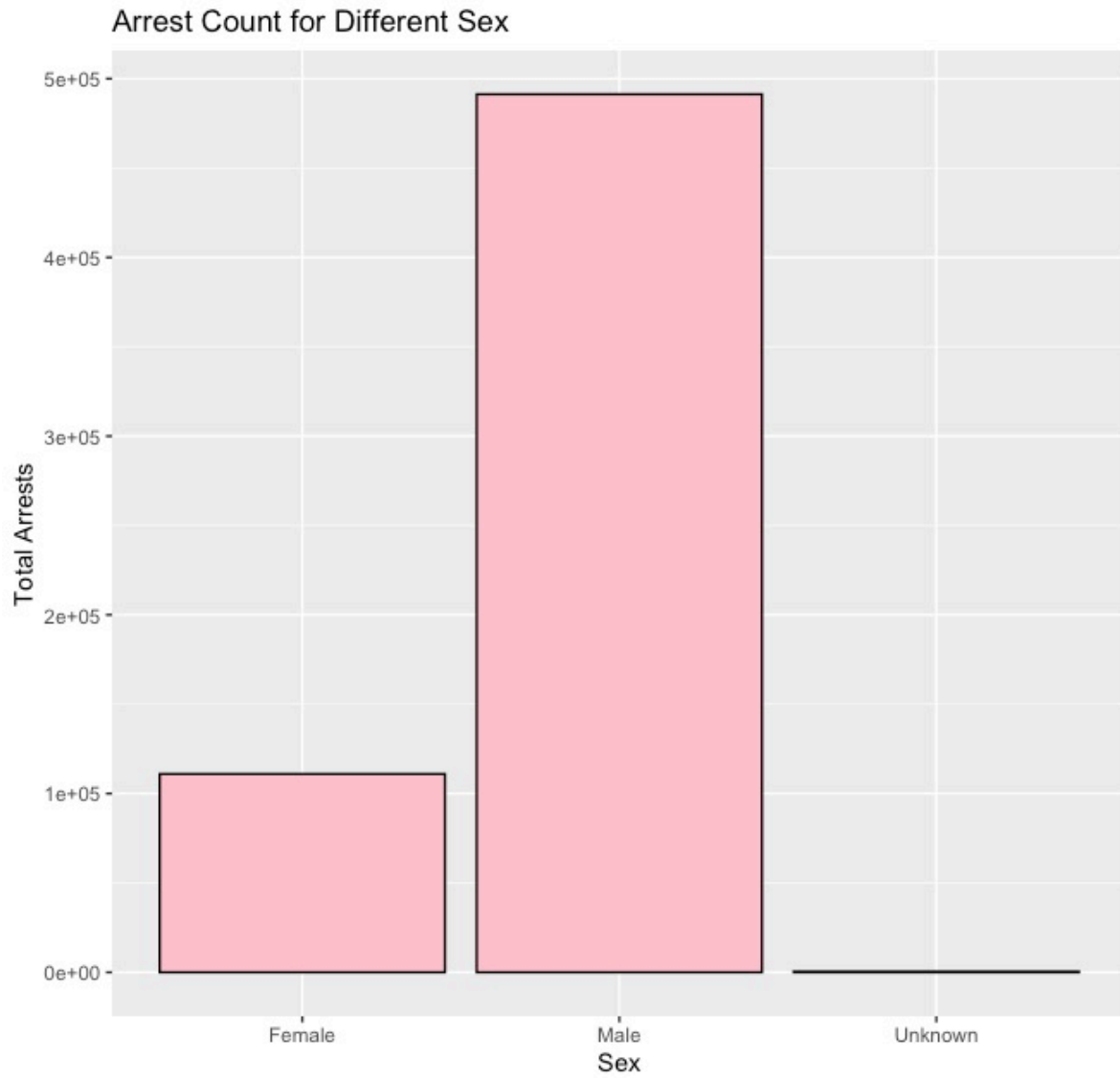


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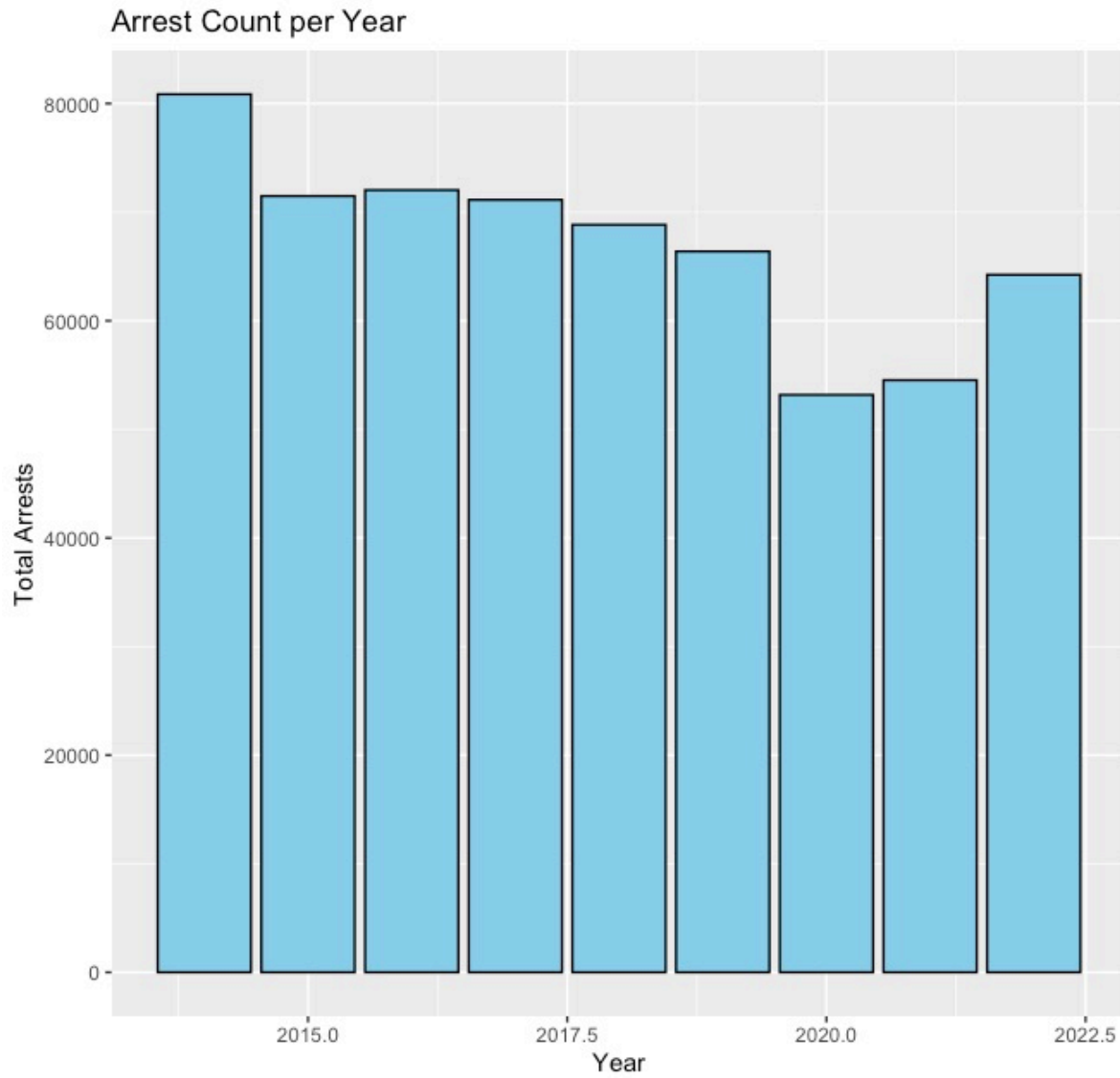
As we spoke in the intro, crimes against people are at large; almost 125,000 arrest counts were made for such a felony, followed closely by crimes against property, which is closer to 111,000 arrest counts were made against. While in comparison, controlled substances and trafficking are both less than 25,000 arrest counts.



The leading age group for committing crimes was 25–34, followed closely by age groups 35–44 and 18–24.



As seen in the graph, men commit almost five times more crimes than women, while unknown sections are pretty insignificant in comparison.



Overall, the total arrest count per year has fallen with a late resurgence in 2022; other than that, there has been a relatively steady decline overall.

References:

@Manual{, title = {R: A Language and Environment for Statistical Computing}, author = {{R Core Team}}, organization = {R Foundation for Statistical Computing}, address = {Vienna, Austria}, year = {2023}, url = {<https://www.R-project.org/%7D>, }

@Manual{, title = {tibble: Simple Data Frames}, author = {Kirill Müller and Hadley Wickham}, year = {2023}, note = {R package version 3.2.1}, url = {<https://CRAN.R-project.org/package=tibble%7D>, }

@Manual{, title = {readr: Read Rectangular Text Data}, author = {Hadley Wickham and Jim Hester and Jennifer Bryan}, year = {2024}, note = {R package version 2.1.5}, url = {<https://CRAN.R-project.org/package=readr%7D>, }

@Manual{, title = {httr: Tools for Working with URLs and HTTP}, author = {Hadley Wickham}, year = {2023}, note = {R package version 1.4.7}, url = {<https://CRAN.R-project.org/package=httr%7D>, }

@Manual{, title = {janitor: Simple Tools for Examining and Cleaning Dirty Data}, author = {Sam Firke}, year = {2023}, note = {R package version 2.2.0}, url = {<https://CRAN.R-project.org/package=janitor%7D>, }

@Article{, title = {Welcome to the {tidyverse}}, author = {Hadley Wickham and Mara Averick and Jennifer Bryan and Winston Chang and Lucy D'Agostino McGowan and Romain François and Garrett Grolemund and Alex Hayes and Lionel Henry and Jim Hester and Max Kuhn and Thomas Lin Pedersen and Evan Miller and Stephan Milton Bache and Kirill Müller and Jeroen Ooms and David Robinson and Dana Paige Seidel and Vitalie Spinu and Kohske Takahashi and Davis Vaughan and Claus Wilke and Kara Woo and Hiroaki Yutani}, year = {2019}, journal = {Journal of Open Source Software}, volume = {4}, number = {43}, pages = {1686}, doi = {10.21105/joss.01686}, }

@Article{, author = {Hadley Wickham}, title = {testthat: Get Started with Testing}, journal = {The R Journal}, year = {2011}, volume = {3}, pages = {5–10}, url = {[https://journal.r-project.org/archive/2011-1/RJournal\\_2011-1\\_Wickham.pdf%7D](https://journal.r-project.org/archive/2011-1/RJournal_2011-1_Wickham.pdf%7D),

@Book{, author = {Hadley Wickham}, title = {ggplot2: Elegant Graphics for Data Analysis}, publisher = {Springer-Verlag New York}, year = {2016}, isbn = {978-3-319-24277-4}, url = {<https://ggplot2.tidyverse.org%7D>, }

@Manual{, title = {dplyr: A Grammar of Data Manipulation}, author = {Hadley Wickham and Romain François and Lionel Henry and Kirill Müller and Davis Vaughan}, year = {2023}, note = {R package version 1.1.4}, url = {<https://CRAN.R-project.org/package=dplyr%7D>, }