Arrests and Strip Searches
Data Analysis Report

INF 2178 Final Project

Group 46

Gary Bhanot (999669327)
Ruiying Xu (1003786593)
Zidong Zhou (1008517758)

TABLE OF CONTENTS

Part 1: Introduction

Racial and gender discrimination have long been a social concern and raised intense debates these years. Back in 2014, a 43-year-old black man, Eric Garner, was chokehold by a white police officer to death in New York only in accuse of selling untaxed cigarettes. Ever since Garner's death, 11 more black families have been reported to lose their beloved ones in police custody in only 6 years' time, victims of which include those of Sandra Bland, Freddie Gray, and George Floyd. These events have sparked massive protests in the public (Hutchinson and DiMartino, 2020). Similarly, evidence of racial profiling exists in Canada, where black people are more likely to be stopped, searched, arrested, charged, and killed by police, but tend to have a higher charge withdrawal rate and lower conviction rate, suggesting the possibility of racial prejudice (Andrew, 2020). In addition to racial bias, sex disparity exists in police encounters as well, where females are more likely to be considered victims and have a lower arrest rate and shorter sentences than male suspects. In the meantime, another issue that has garnered significant social attention is the practice of strip searching. This involves a police officer requiring the suspect to take off some or all of their clothing and undergo a visual examination of their body (Toronto Police Service). While some argue that strip search may be crucial in identifying contrabands and increasing citizens' level of confidence in national security, others argue that this practice is unnecessary and ineffective, representing a violation of basic human rights while exhibiting clear discrimination against certain genders and races (Lemke, 2022). The data set in this study includes demographic information of suspects (including gender, race, and age), the occurrence categories, the arrest times (can be derived), and whether or not the suspect is stripped searched. Therefore, our group is interested in whether the findings from the data set can act as proof of racial and gender disparity in police arrests, specifically in the likelihood of being arrested and stripped searched.

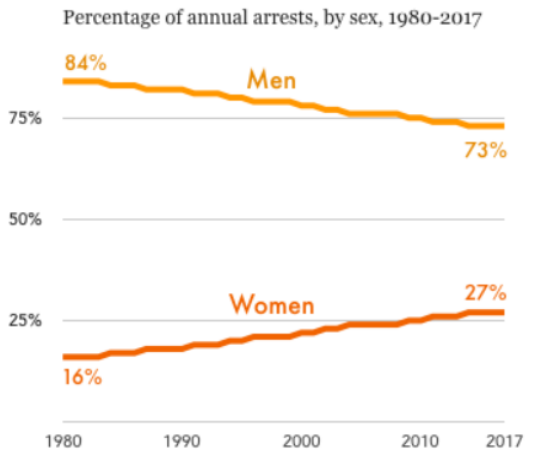
1.1 Literature Reviews

In Toronto, only less than 9% of the population is black; however, black people accounted for more than 32% of the charges from 2013 to 2017, encompassing a wide range of offenses such as possession of cannabis, trespassing, and driving violations, that are often based on the discretion of the police officers. Research shows that black people are four times more likely to be charged than White people and 20 times more likely to be fatally shot by police in Toronto. However, although representing a high percentage of charges, black people's

charges are less likely to lead to a real conviction than white suspects, indicating a high rate of over-charge towards the black due to their race (Andrew, 2020). As a result, black tend to face more stereotype threats when encountering police, making them look nervous, which leads to a higher rate of miscarriages of justice and forms a vicious cycle (Najdowski, 2016).

In addition to racial bias, gender disparity is also common in police encounters. Research reveals significant gender gaps that are in favor of women, with a substantially higher rate to escape arrests and charges and twice more likely to avoid imprisonment if convicted (Starr, 2012). However, in recent years, the proportion of women being arrested has increased significantly, from 16% percent in 1980 to 27% in 2017, as shown in **Figure 1**. Nevertheless, the rate is still far lower than males, suggesting a potential sex disparity in police arrests (Prison Policy Initiative, 2019).

Figure 1. Percentage of Annual Arrests, by Sex, 1980-2017



Sources: Bureau of Justice Statistics, U.S. Arrests Estimates, 1980-2014 generated using the Arrest Data Analysis Tool (May 2019). 2015-2017 data from the FBI *Crime in the United States* series.

Another topic that has raised intensive social debates is the strip search. According to the current law, police officers are authorized to conduct a search for weapons, evidence, or any item that could potentially cause harm to others or help suspects to escape the arrests. However, items were rarely found in strip searches (with only a 2% chance), among which only a small portion may impose risks to society. Furthermore, most people regard strip searches as a violation of human rights and for women and racialized groups, being subjected to a strip search can be traumatic and considered sexual assault. The Supreme Court also recognized that black and Indigenous people, especially black women are more likely to be strip-searched by police, which reveals the potential racial and gender disparity (Lemke, 2022).

1.2 Research Objectives and Questions

The research objective of our group is to examine whether gender disparity and racial discrimination exist in police arrests. Typically, we wish to examine whether gender has a direct effect on the times being arrested while controlling their cooperation levels at arrest, police's perception of the need to strip search, and whether or not an item is found during the search. Additionally, we wish to further discuss the sexual bias and racial disparity in strip searches by examing the relation between a suspect's gender, race, occurrence categories, total police encounters, and whether or not he or she is strip-searched by the police. Based on our research objective, literature reviews, and EDA findings, we generated two research questions as follows.

- Research Question 1: How do gender and total event number indicating non-compliance and potential for future crime (which is represented by the sum of numbers of non-cooperation actions during arrests, numbers of police's perceived reasons for strip-searching, and numbers of times items being found in a strip search) affect suspects' times of arrest in Toronto?
- Research Question 2: How do gender, race, crime type, and total previous police encounters impact the decision of police officers to conduct a strip search on a suspect in Toronto?

We hope that by exploring these questions, we can gain a better understanding of whether or not gender bias and racial discrimination exist in police arrests in Toronto. Additionally, we hope to provide practical suggestions to assist in enhancing the effectiveness of Toronto police through reducing the number of unnecessary arrests and strip searches. By doing so, we hope to decrease the level of disparity and potential harm experienced by marginalized communities.

Part 2: Exploratory Data Analysis (EDA)

2.1 Brief Dataset Description

The data set "Arrest and Strip Search" contains 65276 records of arrests in Toronto from 2020 to 2021, providing information about 24 different attributes, among which includes Sex, Perceived Race, StripSearch, Booked, Occurrence Category, 6 different actions at arrests

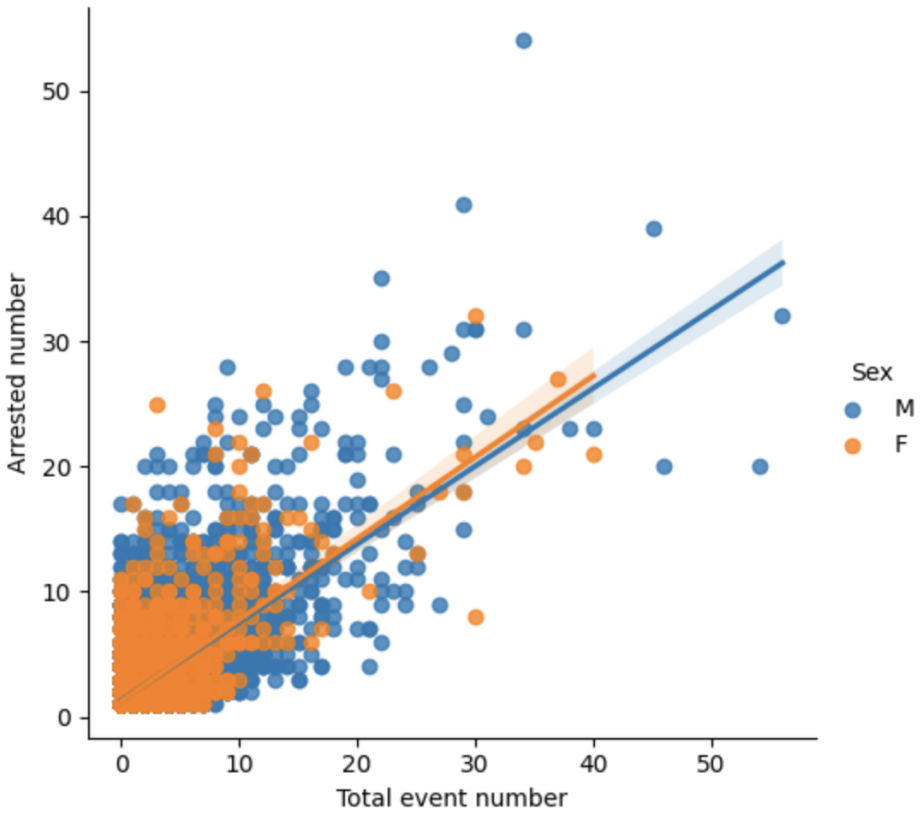
(Concealed Items, Combative, violent or spitter/biter, Resisted, defensive or escape risk, Mental instability or possibly suicidal, Assaulted officer, and Cooperative), 4 search reasons (CauseInjury, AssistEscape, PossessWeapons, and PossessEvidence), and ItemsFound, which are highly related to our research questions. Data are mainly in integer forms, binary forms, and text forms.

2.2 Descriptive Statistics

To obtain a brief overview of the data set and to better understand the current information related to arrest times and strip searches, we create a scatter plot, a boxplot, and a barplot to visualize the data.

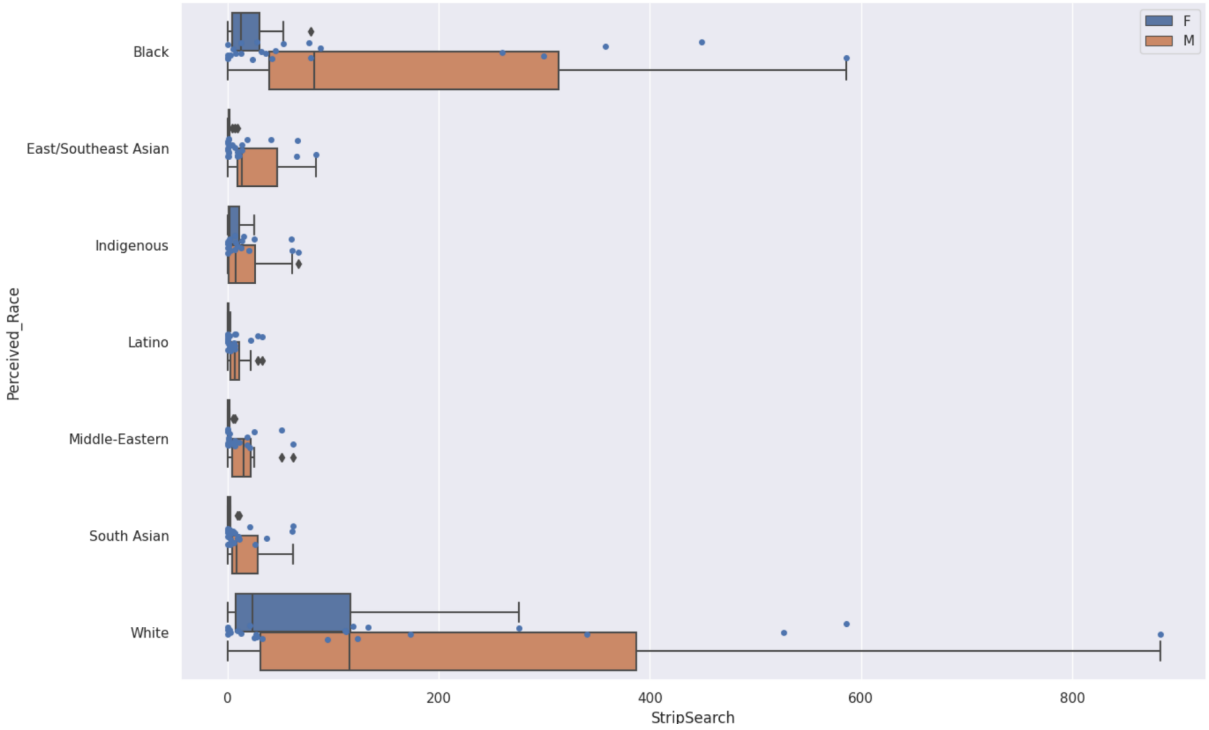
From **Figure 2.1**, we can see that the total arrest times and the total event number of female suspects are on average lower than those of male suspects, which partially aligns with the findings in our literature reviews. However, the trendlines show that if the total event number is the same, female suspects may experience higher arrest times than male suspects as the total event number increases. Therefore, to explore whether these relations are significant enough, we will conduct further research in later sections.

Figure 2.1. Scatter plot for Total arrests versus total events



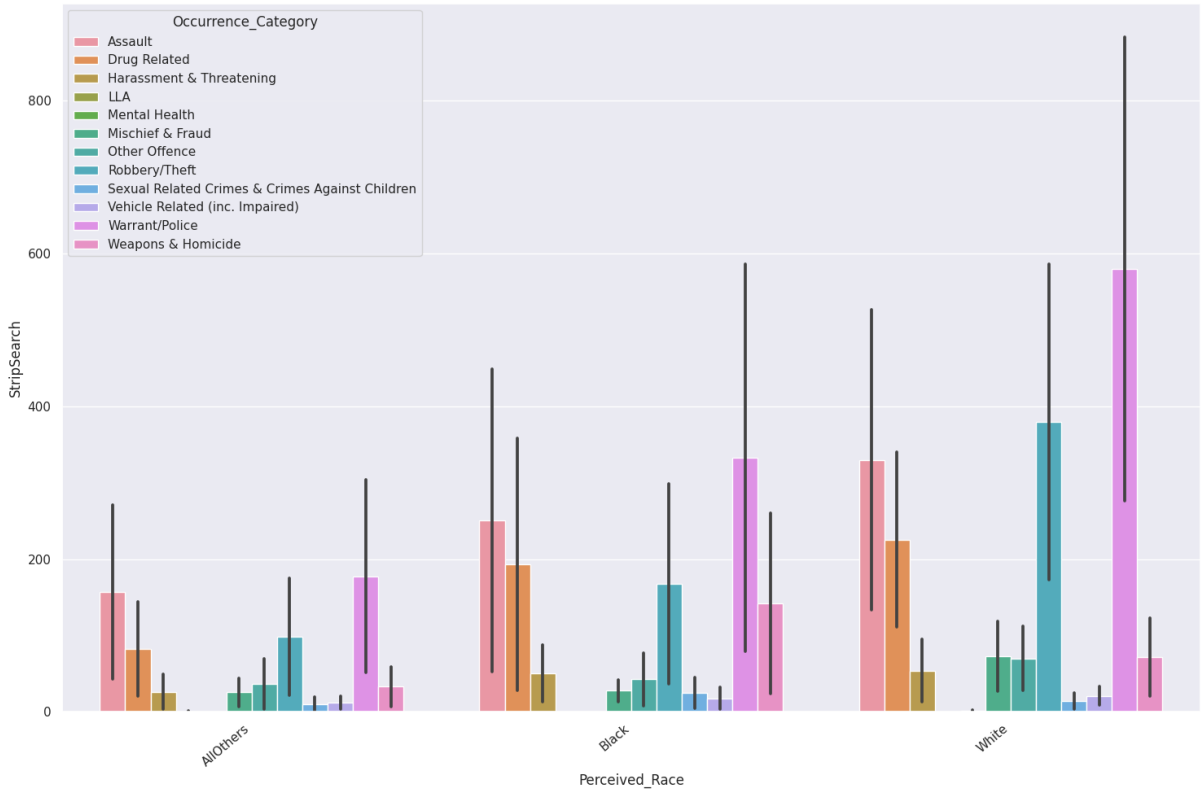
From **Figure 2.2**, we can see that the number of strip searches performed for all races is fairly consistent within the range between 0 to 120 except for White and Black. Moreover, male suspects seem to be strip-searched more than female suspects. Furthermore, black suspects and white suspects seem to suffer from a higher strip-search rate, and most surprisingly, white female suspects seem to be the most strip-searched across all racial and gender groups. Based on the boxplot, we assume that gender and race may affect the police's decision on strip-searching and we will see whether this is true based on later studies.

Figure 2.2. Boxplot showing strip searches for all races for males and females



If we aggregate the races and strip searches across White, Black, and all other races **(Figure 2.3)**, we can see similar trends for different racial groups as seen in **Figure 2.2**. Additionally, Drug-related, Warrant/police, and Weapons/Homicide interactions tend to have a higher strip-search rate as compared to other occurrence categories, indicating that occurrence categories may have an impact on whether or not being strip-searched.

Figure 2.3. Barplot of strip searches for different crime categories for White, Black, and other perceived races



2.3 T-test 1: testing whether the mean arrest times of both genders are equal

For the first research question, to get a brief understanding of the relation between arrest times and gender, we conducted a t-test to check whether differences exist in the mean arrest times for the two different gender groups. The hypotheses we tested are as follows.

H_0 (Null Hypothesis): the population means of the arrest times between male suspects and female suspects are equal.
H_a (Alternative Hypothesis): the population means of the arrest times between male suspects and female suspects are different.

The result of the t-test shows a t-statistic value of -5.35 and a P-value of 9.02e-08. We set the significant level to 0.05. Therefore, the p-value we obtain is far smaller than the significant level. We then reject the H_0 and conclude that there is a significant difference in the mean arrest times between men and women.

To check the robustness of the t-test, we performed an assumption check. First, we have two different gender groups, which satisfies the assumption of having at least 2 levels of categorical explanatory variables. Second, “arrest times” is a quantitative variable that satisfies the assumption of the quantitative dependent variable. Third, errors are independent, which is well satisfied. The last assumption is the normality in the distribution of the groups. However, the data is not normally distributed and thus violates the last assumption.

2.4 T-test 2: testing whether the mean event numbers of both genders are equal

We also wish to check whether gender and event number interact with each other. To get a brief understanding of the relationship between event number and gender, we conducted a t-test to check whether differences exist in the mean event numbers for the two different gender groups. The hypotheses we tested are as follows.

H_0 (Null Hypothesis): the population means of the event number between male suspects and female suspects are equal.
H_a (Alternative Hypothesis): the population mean of the event number between male suspects and female suspects are different.

The result of the t-test shows a t-statistic value of -5.61 and a P-value of 1.99e-08. Therefore, the p-value we obtain is far smaller than the significant level of 0.05. We then reject the H_0 and conclude that there is a significant difference in the mean event number between men and women.

Similarly, we conducted assumption checks for the t-test to check the robustness. We found that all assumptions are met except for the assumption of normality.

Part 3: Research Design and Methods

3.1 Research Question 1

Our first research question aims to examine the relationship between the times of arrests, the total event number, and gender. In this study, we define the total event number of an arrestee as the sum of resistive actions during arrest, reasons for conducting a strip search, and

whether an item was found in order to measure non-compliance and the potential for future arrests. The experiment consists of three main components: 1) **data cleaning** and transformation to prepare for analysis; 2) a **power analysis** to determine whether the experiment had sufficient power given the data was split into two gender groups; and 3) an **ANCOVA** to investigate the relationships between sex, the number of arrests, and the number of events. We utilized functions from various libraries, including pandas, numpy, seaborn, pingouin, statsmodel, and matplotlib in this experiment. We tested the following hypothesis:

H_0 (Null Hypothesis): the mean numbers of arrests for different genders are equal when the number of events is controlled.
H_a (Alternative Hypothesis): gender does have an impact on the mean times of arrests, even when the number of events is constant.

Data Cleaning

To explore our first research question, we began by transforming the dataset. We assigned 0s to the null values in the 10 columns related to actions at arrest, search reasons, and items found ('Actions_at_arrest___Combative__', 'Actions_at_arrest___Assaulted_o', 'Actions_at_arrest___Concealed_i', 'Actions_at_arrest___Resisted__d', 'Actions_at_arrest___Mental_inst', 'SearchReason_CauseInjury', 'SearchReason_AssistEscape', 'SearchReason_PossessWeapons', 'SearchReason_PossessEvidence', 'ItemsFound'), and calculated the sum of these columns. Null values in these columns indicated that the corresponding event did not occur in that case, and replacing them with 0s allowed us to perform calculations. Using numpy functions, we counted the times of arrests and summed the event numbers for each Person ID. We also removed rows with the same Person ID but different genders, as this was not logically feasible. To simplify the dataset, we kept only the necessary columns ('PersonID', 'Sex', 'Arrested number', and 'Total event number') and removed the rest. This data transformation provided the foundation for further analysis. We plotted the arrest number with the total event number for both genders to see if they have a linear relationship **(Figure 2.1)**.

Power Analysis

To perform the power analysis, we developed two functions to calculate the pooled standard deviations and Cohen's d for independent samples. Next, we split the dataset into two groups based on the gender of the arrestees and conducted a power analysis to determine the effect size and the required sample sizes for both groups to achieve a power of 0.8 at a significance

level of 0.05. Additionally, we evaluated the power of the actual sample size to examine the research question from a different perspective. Finally, we generated power curves for various effect sizes (0.069, 0.2, and 0.5) to identify the number of observations needed to achieve adequate power.

ANCOVA

Once we confirmed that the power of our experiment was sufficient, we proceeded to conduct an ANCOVA using a function from the Pingouin library to investigate the relationship between the number of arrests, the event number, and the gender of the arrestees. However, we had to make certain assumptions during the ANCOVA process. Firstly, we assumed that the number of arrests was normally distributed within each gender and event number category. Secondly, we assumed that the variance in the times of arrests was equal across all groups. Thirdly, we assumed that there was a roughly linear relationship between the number of arrests and the event number. Fourthly, we assumed that the observations were independent of each other. Finally, we assumed that the event number and gender do not interact with each other.

3.2 Research Question 2

The second research question focuses on examining the relationship between strip searches, gender, race, type of crime, and total interactions the individual has had with law enforcement before. We chose to conduct a **logistic regression** to explore this research question and calculate the **odds ratios**. However, prior to the logistic regression, to make the data set better serve our analysis, we conducted data pre-processing.

For the purpose of this study, we created a new attribute called “TotalInteractions” which refers to the times a person (identified by a given PersonID) has had interaction with the police. For the “Perceived Race”, we saw patterns that the law enforcement bodies only record the race the first time they have an interaction with the individual, and for all other subsequent interactions, they are tagged as “Unkown/Legacy”. We went ahead and looked up the Race based on the original interaction and summed all prior interactions to calculate the “Total Interactions”. The “Occurrence Category” is also not consistently recorded so we did some cleanup and merged a few categories that were similar to each other. Furthermore, from the initial EDA, we realized that the major difference in strip searches is between the White

and Black races and hence we merged all other races and marked them as “All Others” to focus on the two races that had the most amount of strip searches.

Then, we conducted logistic regression and calculated the odds ratio. The hypothesis we tested is as follows:

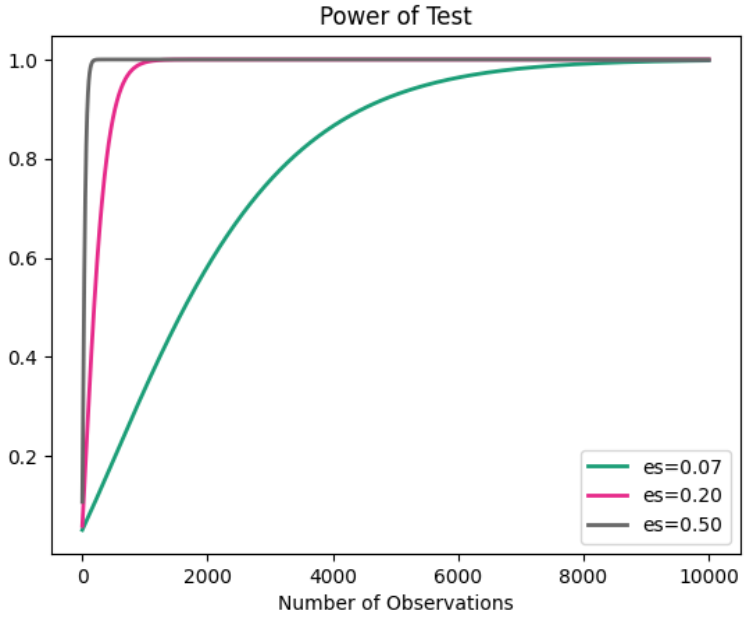
H_0 (Null Hypothesis): No relationship exists. Gender types, race, crime category, and previous encounters all have no effect on whether or not being strip-searched.
H_a (Alternative Hypothesis): there exists at least one factor from gender type, race, crime category, and previous encounters that affect whether or not being strip-searched.

Part 4: Results/ Findings

4.1 Research Question 1

The effect size of the two-level explanatory variable (sex) was calculated using Cohen's D metric, which was found to be 0.069 for the power analysis. Based on this value, we determined the sample sizes required for each gender group at a significance level of 0.05. The female group required a sample size of 2103, while the male group required a sample size of 8142. Therefore, our sample sizes of 29648 and 7659 for men and women, respectively, are sufficiently large, resulting in a power greater than 0.8. Furthermore, we tested the power of the actual sample size, and the results indicated a power of 1, which is consistent with the calculations above. As depicted in the power curve below **(Figure 4.1)**, the power reaches 0.8 at approximately 3300 observations for an effect size of 0.069. To achieve a power close to 1, a sample size greater than 8000 is necessary for this scenario.

Figure 4.1. Power Curves for Different Effect Sizes



As the sex variable has two levels, its degree of freedom is 1, which is equal to the number of levels minus 1. The continuous explanatory variable (total event number in this experiment) always has a degree of freedom of 1. The sum of the degrees of freedom should be the sample size (37307) minus 1, so the residual has a degree of freedom of 37304. The p-value for the sex variable is 0.035, which is less than the significance level of 0.05. Please refer to **Table 4.2** for more detailed results. Thus, we can reject the null hypothesis that both genders have the same mean number of arrests, even after controlling for the total event number of the arrestee, and conclude that gender has an impact on the mean times of arrests, even when the number of events is constant.

Table 4.2. ANCOVA Results

Source	Sums of Square	Degrees of Freedom	F-values	Uncorrected P-values	Partial eta-squared
Sex	9.743	1	4.424	0.035441	0.000119
Total Event Number	69179.973	1	31412.426	0	0.457131
Residual	82155.058	37304	NaN	NaN	NaN

4.2 Research Question 2

After splitting our dataset into test and train and fitting our logistic regression model, we discovered that for certain crime categories such as Drug Related, Mental Health, Mischief, etc as well as Total Interactions, White and Black race as well as Male Gender have p-values of less than 0.05 and are statistically significant (Highlighted rows in **Table 4.3**). Therefore, we can reject our null hypothesis and conclude that gender type, race, crime category, and previous encounters may affect whether or not being strip-searched.

Table 4.3. Logistic Regression Results

Variables	coef	P>|z|
Intercept	-2.8413	0.0000
Occurrence_Category[Drug Related]	1.6401	0.0000
Occurrence_Category[Harassment & Threatening]	0.0212	0.7970
Occurrence_Category[LLA]	-16.8689	0.9740
Occurrence_Category[Mental Health]	-3.1575	0.0020
Occurrence_Category[Mischief & Fraud]	-0.3824	0.0000
Occurrence_Category[Other Offence]	-0.7634	0.0000
Occurrence_Category[Robbery/Theft]	0.1164	0.0160
Occurrence_Category[Sexual Related Crimes & Crimes Against Children]	-0.4538	0.0000
Occurrence_Category[Vehicle Related (inc. Impaired)]	-1.2295	0.0000
Occurrence_Category[Warrant/Police]	0.1136	0.0070
Occurrence_Category[Weapons & Homicide]	0.9775	0.0000
TotalInteractions	0.0586	0.0000
Perceived_Race_Black	0.423	0.0000
Perceived_Race_White	0.3911	0.0000
Sex_M	0.2224	0.0000

Moreover, we calculated the odds ratio to compare the relative importance of our explanatory variables on whether or not being strip-searched based on their effects on the outcome variable. The results are stated below in **Table 4.4**. From the results, we can see that all odds ratios are positive, which serves as proof of our previous results. Additionally, we can see that the odds of the black suspects and the white suspects being strip-searched are about 1.53 and 1.48 times higher than any other race correspondingly. Furthermore, the odds ratio for males is 1,2, indicating that male suspects are 1.2 times more likely to be strip-searched than female suspects. Also, the odds ratio for Total Interactions is 1.06, showing that if we increase the Total Interactions for an individual, they are 1.06 times more likely to be strip searched. Finally, for different types of crimes, people who committed crimes within the categories of "Drug Related", "Homicide/Weapons", and "Warrants/Police" are 5.16, 2.66, and 1.12 times more likely to be strip-searched than people who have been involved with other crimes.

Table 4.4. Odds Ratio of Cofficients

Intercept	5.83E-02
Occurrence_Category - Drug Related	5.16E+00
Occurrence_Category - Mental Health	4.25E-02
Occurrence_Category - Mischief & Fraud	6.82E-01
Occurrence_Category - Other Offence	4.66E-01
Occurrence_Category - Robbery/Theft	1.12E+00
Occurrence_Category - Sexual Related Crimes & Crimes Against Children	6.35E-01
Occurrence_Category - Vehicle Related (inc. Impaired)	2.92E-01
Occurrence_Category - Warrant/Police	1.12E+00
Occurrence_Category - Weapons & Homicide	2.66E+00
TotalInteractions	1.06E+00
Perceived_Race_Black	1.53E+00
Perceived_Race_White	1.48E+00
Sex_M	1.25E+00

Part 5: Discussion

5.1 Research Question 1

As discussed in the previous section, our experimental results support our hypothesis that an individual's sex plays a role in their likelihood of being arrested. Specifically, they suggest that there is a statistically significant relationship between sex and arrest frequency when controlling for the total number of events. Our power analysis results indicate that the sample sizes of both gender groups are sufficiently large, resulting in a power of 1, which means that it is highly unlikely to incorrectly reject the alternative hypothesis if it is true. In other words, if there is a true difference in mean arrest times between individuals of different sexes with the same event number, we would be able to correctly conclude it from our experiment.

However, there are several factors that may affect the accuracy of our findings. For instance, some of the **assumptions** made in our experiment may not hold true. Specifically, we assumed that the arrest numbers in all categories are normally distributed and have equal variance. Since our covariate is continuous, it is difficult to validate these assumptions for a large number of subpopulations. However, we were able to validate other assumptions through a plot of arrest times against the total event number as shown in **Figure 2.1**, which indicated that there is a linear relationship between arrest times and event number. Additionally, the plotted graphs for the two genders are almost parallel, suggesting that there is no interaction between sex and the total event number. Moreover, as most of the subjects were arrested separately, it is unlikely that the observations are dependent on each other. Nevertheless, since we could not validate two of our assumptions, it is possible that our results may be affected to some extent.

Another potential source of inaccuracy in our experiment is the subjective nature of the variables we created. For example, we combined various non-compliant actions at the time of arrest, reasons for strip searches, and items found into a single variable, the total event number. However, this variable may not be the best indicator for accurately measuring the likelihood of future arrests. To improve the accuracy of our experiment, it would be beneficial to find a more comprehensive and objective measure that is also normally distributed.

5.2 Research Question 2

Based on our research findings for logistic regression, we can conclude that gender, race, type of crime, and total interactions an individual has had with law enforcement have impacts on

the likelihood of being strip-searched. However, to ensure the accuracy of our result and the robustness of our model, we then conducted assumption checks for logistic regression.

The assumptions of logistic regressions include 1. a binary dependent variable for a binary logistic regression; 2. the independency of the observations; 3. the linearity between the log odds and the independent variables; 4. no strongly influential outliers; 5. little or no multicollinearity among the explanatory variables; and 6. large sample size.

Our dependent variable is whether or not being strip-searched, which satisfies the binary assumption (Assumption 1). Also, based on the feature of the data set, our data set clearly meets the assumption of independence of observations (Assumption 2). Besides, to examine whether the assumption of the linearity of the logits is met, we created a scatter plot between the predictor variables and their logit outcomes. Here we take the predictor variable, total interactions as an example. See **Figure 5.1**. We can tell that there is no linear relation. Thus, the third assumption is not satisfied. Moreover, from the boxplot we created showing strip searches for all races for males and females in our EDA (**Figure 2.2**), we see that there exist outliers and extreme outliers, indicating a violation of Assumption 4. Furthermore, our independent variables are not too highly correlated with one another, which satisfies the fifth assumption. Finally, the assumption of a large data set is satisfied with more than 15000 records of our data set. To conclude, all assumptions are satisfied except for the linearity of log odds and independent variables and the absence of influential outliers. Therefore, our model may not be robust.

Additionally, we also created a Confusion Matrix heatmap **(Table 5.2)** to test the model accuracy. Our logistic regression model has an accuracy score of 88%. According to the Confusion Matrix heatmap **(Table 5.2)**, out of 15,542 tests, the model was able to correctly predict 13,482 tests that were not strip-searched and 17 people that were actually strip-searched. However, the model was not able to catch 1,810 people that were incorrectly predicted as not strip-searched, and in fact, there were as well as 35 people that were falsely predicted as strip-searched where they were not actually strip-searched. Therefore, despite some minor inaccuracies, our model can be considered robust and our results and findings can be regarded as trustworthy.

Figure 5.1 Scatter Plot (Total Interactions versus its Log Odds)

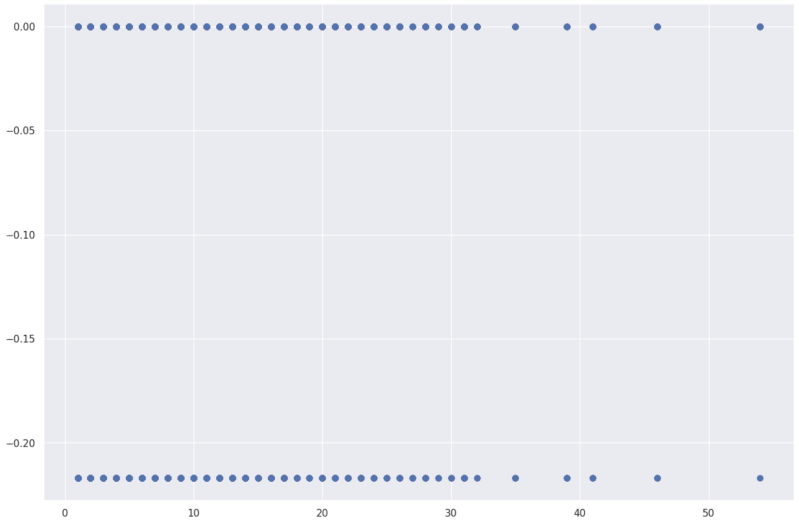
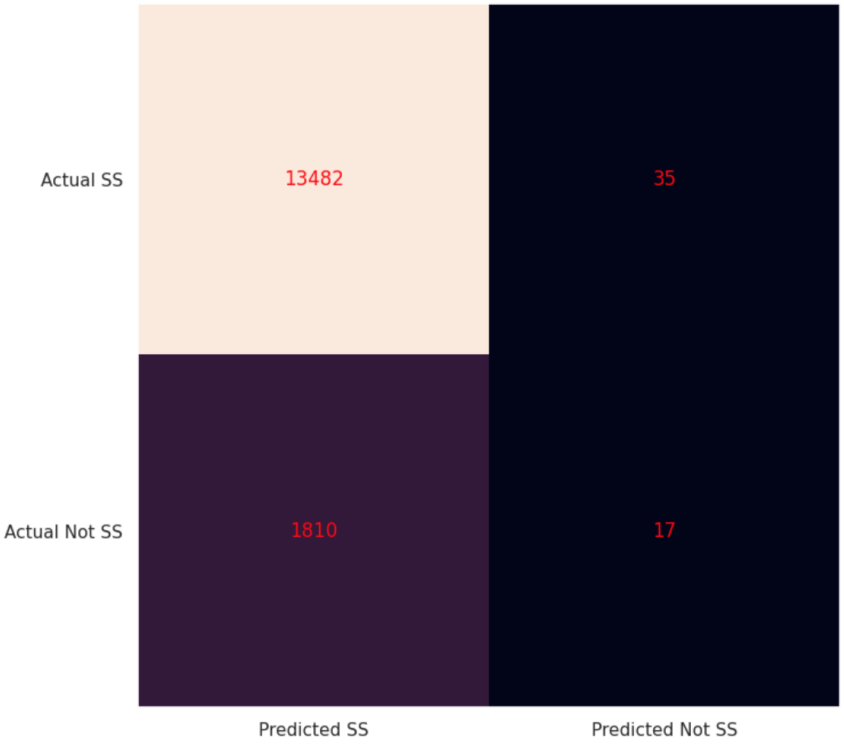


Table 5.2. Confusion Matrix



Part 6: Conclusion

To conclude, based on our research, we found that gender disparity and racial discrimination indeed exist in police arrests, influencing the number of times a suspect may be arrested as well as the police's decision on whether or not to strip search the suspect. Specifically, from the ANCOVA test, we found that gender has a strong effect on the times of arrests even after controlling for the influence of the total number of non-compliant events and the possibility of future crime, which aligns with our findings in the literature. Furthermore, based on the logistic regression, we can tell that gender, race, crime type, and previous encounters indeed affect police's decision on strip-searching. We found that the black suspects and the white suspects have a higher strip-search rate, with the black suspects suffering a relatively higher rate than the white. We also found that male suspects are more likely to be strip-searched. Both provide proof of gender bias and racial bias in strip-searching, which is consistent with our literature review and EDA. Therefore, we recommend that Toronto police should consider reducing the level of gender and racial discrimination in police arrests and strip searches so as to increase efficiency by avoiding unnecessary arrests and searches and at the same time protect marginalized communities from potential harm caused by disparities. We argue that education and training on fairness may be needed. Last but not least, we agree that second thoughts shall be made on the practice of strip-searching considering its ethical dilemma between ensuring national security versus its potential violation of human rights. In addition to gender and racial disparities, whether or not a strip search is useful and necessary and how a strip search may be better performed to avoid ethical issues remain to be a question for the current Toronto police system.

References

Andrew, S. (2020). Black People are More Likely to be Arrested, Charged and Killed by Police in Toronto, New Report Finds. CNN. https://www.cnn.com/2020/08/12/world/toronto-police-racism-trnd/index.html

Hutchinson, B., & DiMartino, J. (2020). From Eric Garner to George Floyd, 12 Black Lives Lost in Police Encounters that Stoked Mass Protests. ABC News. https://abcnews.go.com/US/eric-garner-george-floyd-12-black-lives-lost/story?id=70999321

Lemke, M. (2022). Strip Searches are Ineffective, Unnecessary and Target Racialized Canadians. The Conversation. https://theconversation.com/strip-searches-are-ineffective-unnecessary-and-target-racialized-canadians-185187

Nesterak, E. (2016). Stereotype Threat in Police Encounters: Implications for Miscarriages of Justice - Behavioral Scientist. Behavioral Scientist. https://behavioralscientist.org/stereotype-threat-in-police-encounters-implications-for-miscarriages-of-justice/

Prison Policy Initiative. (2019). Policing Women: Race and Gender Disparities in Police Stops, Searches, and Use of Force

Starr, Sonja B., Estimating Gender Disparities in Federal Criminal Cases (August 29, 2012). University of Michigan Law and Economics Research Paper, No. 12-018, Available at SSRN: https://ssrn.com/abstract=2144002 or http://dx.doi.org/10.2139/ssrn.2144002

Toronto Police Service. (n.d.). Arrests and Strip Searches (RBDC-ARR-TBL-001). https://data.torontopolice.on.ca/datasets/TorontoPS::arrests-and-strip-searches-rbdc-arr-tbl-001/about

Appendix

The data set was provided by Toronto Police Service and the CSV file version was accessible on Public Safety Data Portal. To access the data set, please use the link as follows: https://data.torontopolice.on.ca/datasets/TorontoPS::arrests-and-strip-searches-rbdc-arr-tbl-001/about

The link to our coding is as follows: https://colab.research.google.com/drive/1nCyKN-g5geuiKhwkWnO9ICqizDBuCxUT#scrollTo=BF0xtX580qTe