**Rhode Island Police and local Weather data**

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# Summary

**Rhode Island Police data** are a very important and distinct segment of the Research analysis. They are varying in sizes, and general structure. This report uses a collection of state, stop date, stop time, county name, driver gender, driver race, violation raw, violation, search conducted, search type, stop outcome, is arrested, stop duration, drugs\_related\_stop, district.

# Section 1. Introduction

To utilize the Rhode Island police data set to analyzing the effect of weather on policing and Topmost reason for violation and Comparing violations by gender and Comparing stop outcomes by gender.

91,741 records from Rhode Island Police Department’s traffic stops between January 4th, 2005 and December 31st, 2015.

The analysis assumed that all the data is gathered with the same method and naming is consistent.

Read data into Data Frame and separated records based on gender, and then used to create visuals to better analyze the data. Reviewed data in .csv file, used Python to import into Data Frame, and worked with Data Frame to answer questions.

After error handling, no notable errors were encountered.

The conclusion I reached was that Topmost reason for violation is Speeding and least reason is Seat Belt. Citation has high value. and There's no bias here for pulling over non-white driver’s vs white drivers but other race is less stopped by. Male is stopped than Female.

In the remainder of the report, final conclusions reached. Section 2 outlines the data we gathered. Section 3 provides information about the police and weather that were developed. The results of the report, as well as possible limitations and improvements, can be found in Section 4.

# Section 2. Data characteristics

In order to get a data, read file for police and weather CSV. we can see that we have 91741 rows and 15 columns for police and [ 4017 rows x 27 columns] for weather. Topmost reason for violation is Speeding and least reason is Seat Belt. Citation has high value. and There's no bias here for pulling over non-white driver’s vs white drivers but other race is less stopped by. Male is stopped than Female.

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# Section 3. Weather and Police

We can see TMIN TAVG and TMAX. Create a 'TDIFF' column that represents temperature difference weather ['TDIFF'] = weather.TMAX - weather.TMIN

# Describe the 'TDIFF' column using print method

print(weather.TDIFF.describe())

# Create a histogram with 20 bins to visualize 'TDIFF'

weather.TDIFF.plot(kind = 'hist', bins = 25)

# Create a box plot of the temperature columns

weather[['TDIFF']].plot(kind = 'box')

# Display the plot using show method

plt.show()

A picture containing table

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# Section 4. Summary and concluding remarks

 I came into this blind, but I assumed that both Genders would have roughly the same chance at getting cited.

# Across the sample data, the most-common types of traffic violation were speeding violations, moving violations, and equipment violations. we found that males are the drivers in about 72.5270% of the sampled traffic stops; and that the Rhode Island Police Department Districts ranked by total sample traffic stops are the “Zone X4” district, the “Zone K3” district, the “Zone K2” district, the “Zone X3” district, the “Zone K1” district, and the “Zone X1” district.

# Appendix

# A.1 References

# police.csv Weather.csv

# A.2 summary data about police and weather

**police.csv**

summary(data)

|  |
| --- |
| **Weather csv** |

**Data columns (total 15 columns):**

**# Column Non-Null Count Dtype**

**--- ------ -------------- -----**

**0 state 91741 non-null object**

**1 stop\_date 91741 non-null object**

**2 stop\_time 91741 non-null object**

**3 county\_name 0 non-null float64**

**4 driver\_gender 86536 non-null object**

**5 driver\_race 86539 non-null object**

**6 violation\_raw 86539 non-null object**

**7 violation 86539 non-null object**

**8 search\_conducted 91741 non-null bool**

**9 search\_type 3307 non-null object**

**10 stop\_outcome 86539 non-null object**

**11 is\_arrested 86539 non-null object**

**12 stop\_duration 86539 non-null object**

**13 drugs\_related\_stop 91741 non-null bool**

**14 district 91741 non-null object**

\  **A.3 screenshot and diagnostics**

**Common search types with Four races**

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