

# Exploring NYC's Trash Collection Tonnage: DSNY Data

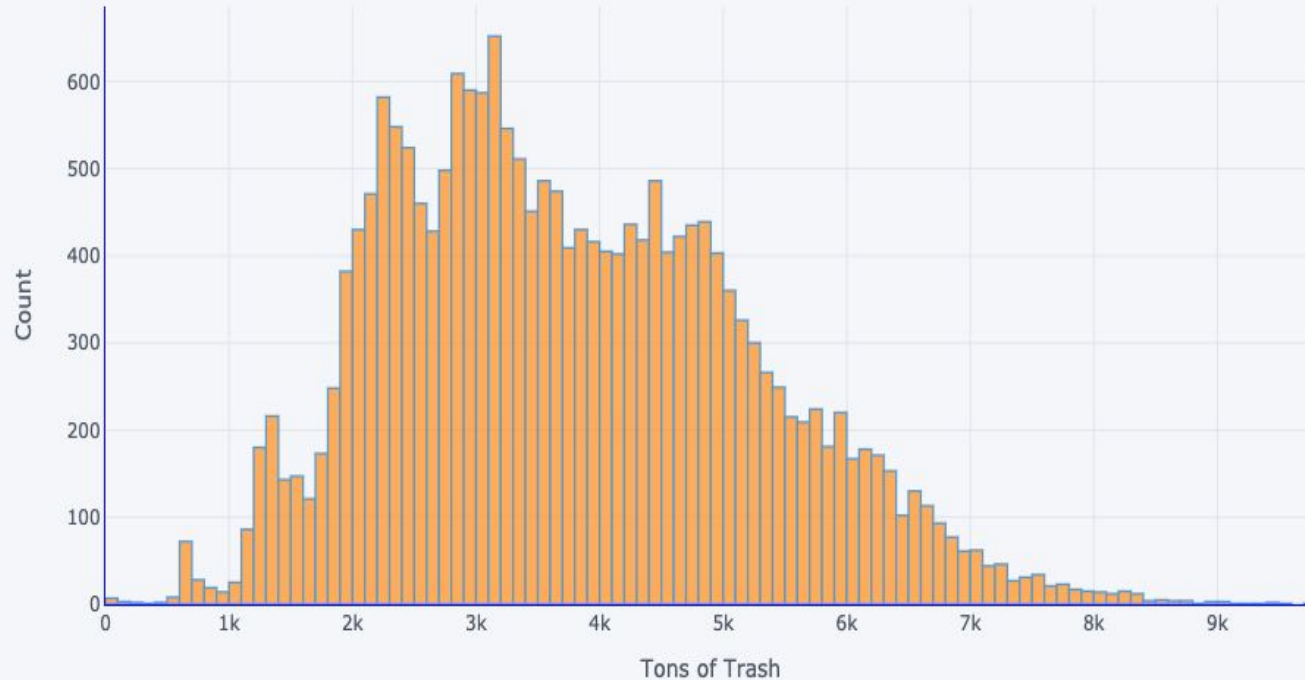


An analysis summary by Jen Arriaza

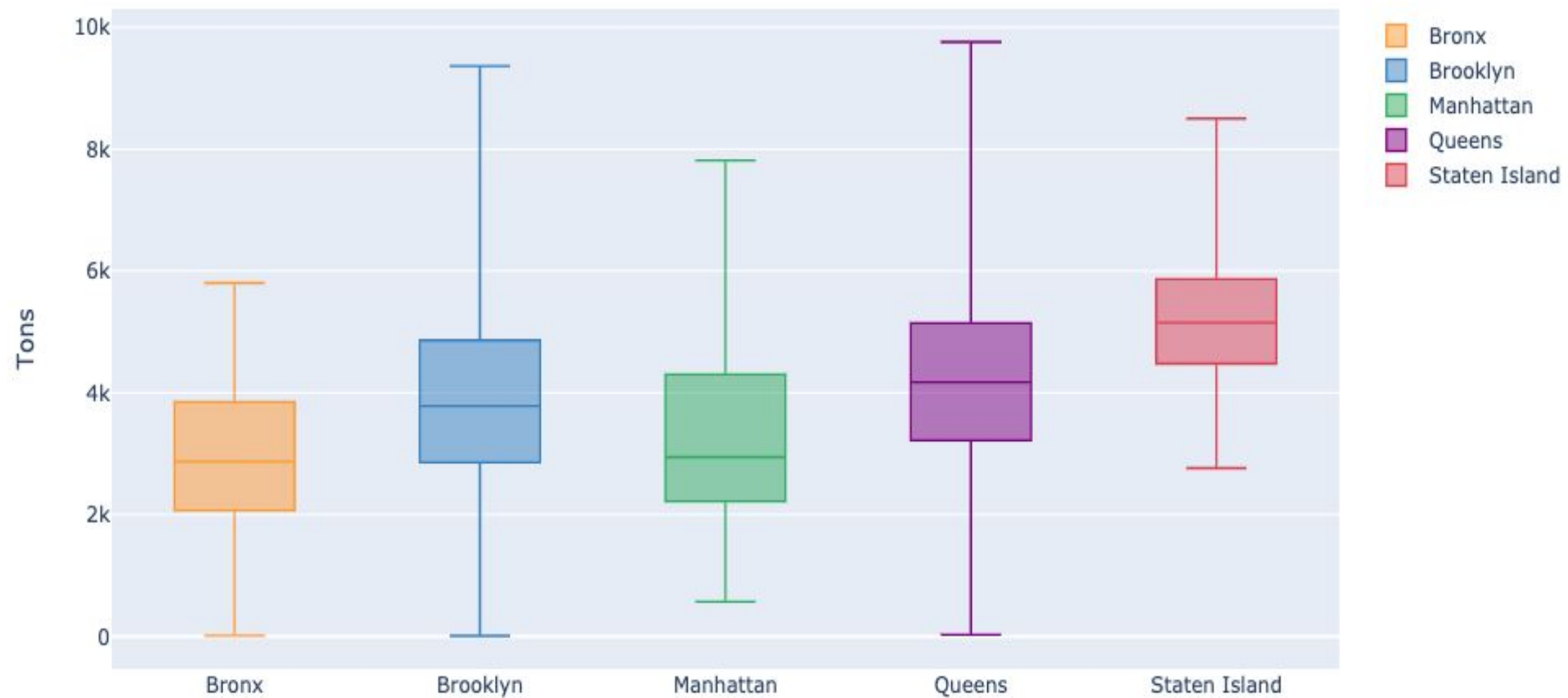
# About the Data

- Provided by Dept. of Sanitation 20k records of monthly tonnage data
- ***Global & localized assessment of the dataset's quality:***
  - Spans 1990-2020, data was pre-processed (Python/pandas) to include data from 1991 to 2019 for completeness
  - Re-encode date format to **month** and **year** for better analysis
  - Visualization highlighted some significant outliers contributing to negative kurtosis

Tons Distribution



- Histogram shows monthly counts of trash tons form a ***multimodal distribution***
- **Exploratory data analysis** reveals that counts widely vary, confirmed by std. deviation & variance statistics

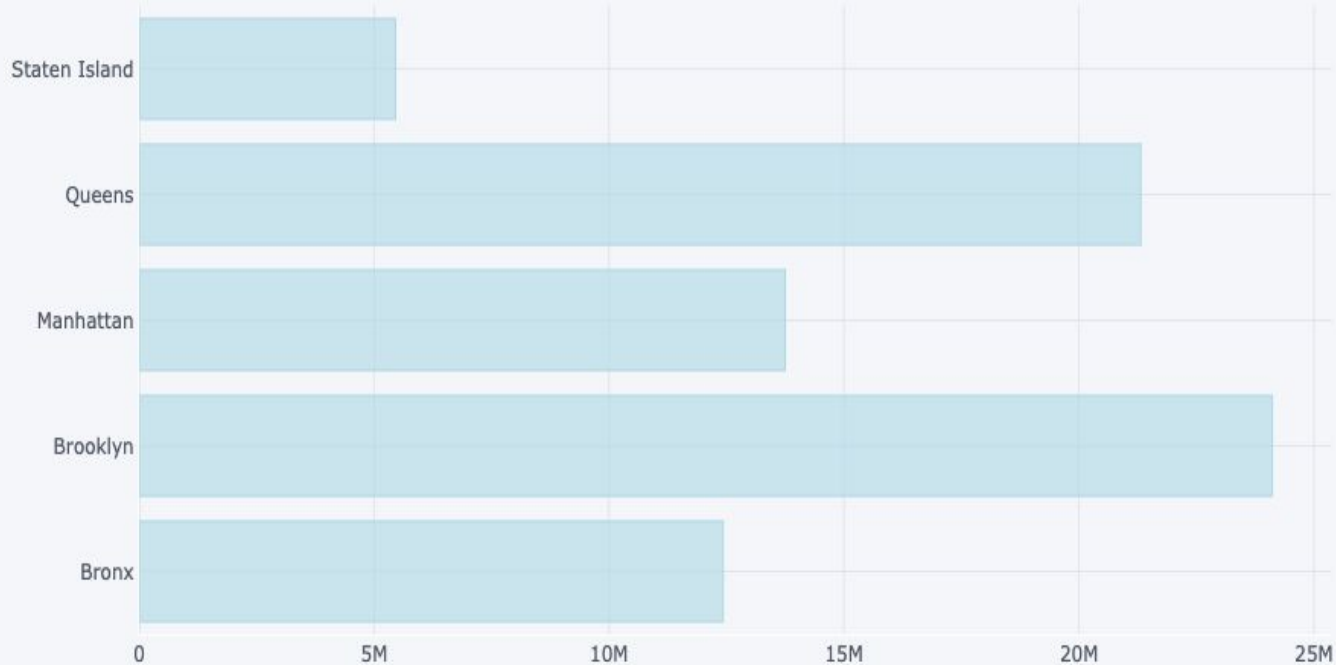


# What can DSNY's Trash Tonnage data tell us?

- Has there been **progress** towards NYC's goal of reducing waste sent to landfills?
- Which boroughs have the **highest** historical trash collection amounts?
- Can we anticipate (and prepare for) any **seasonal trends** from this data?

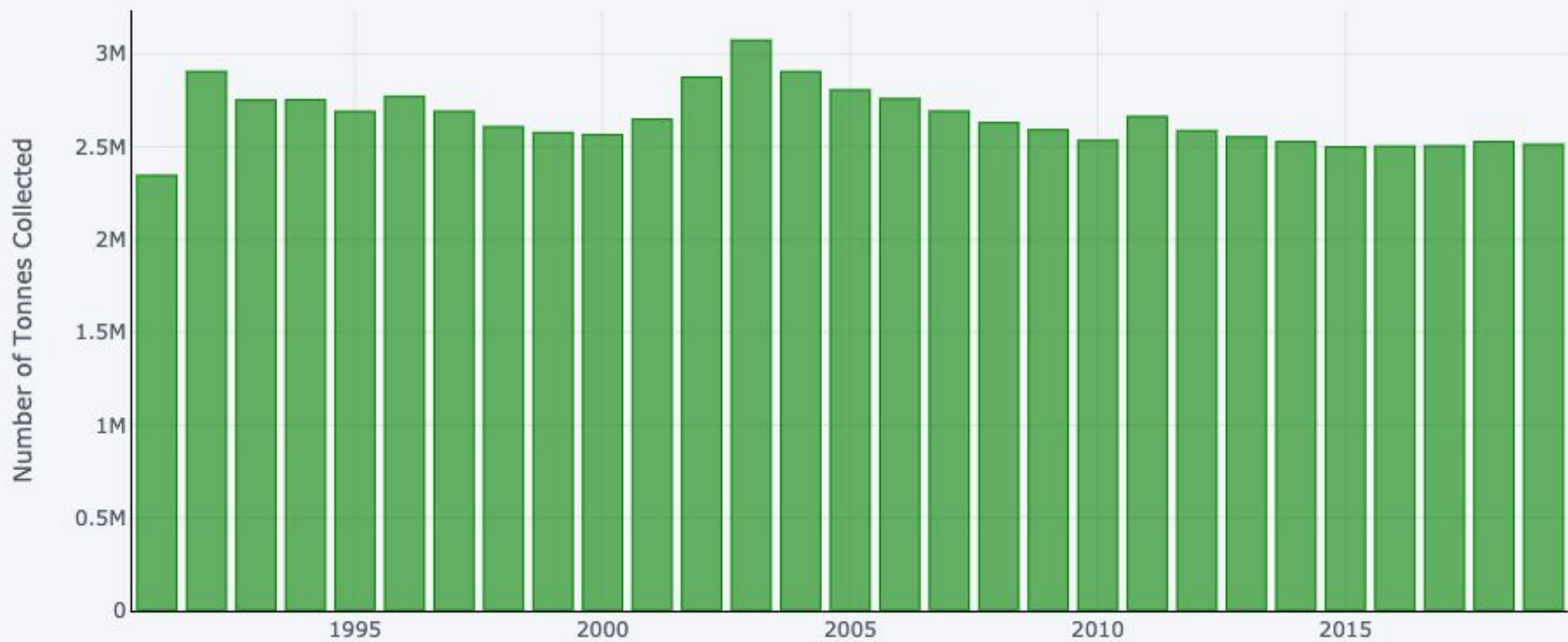
# Exploratory Data Analysis

Tonnes Collected by Borough

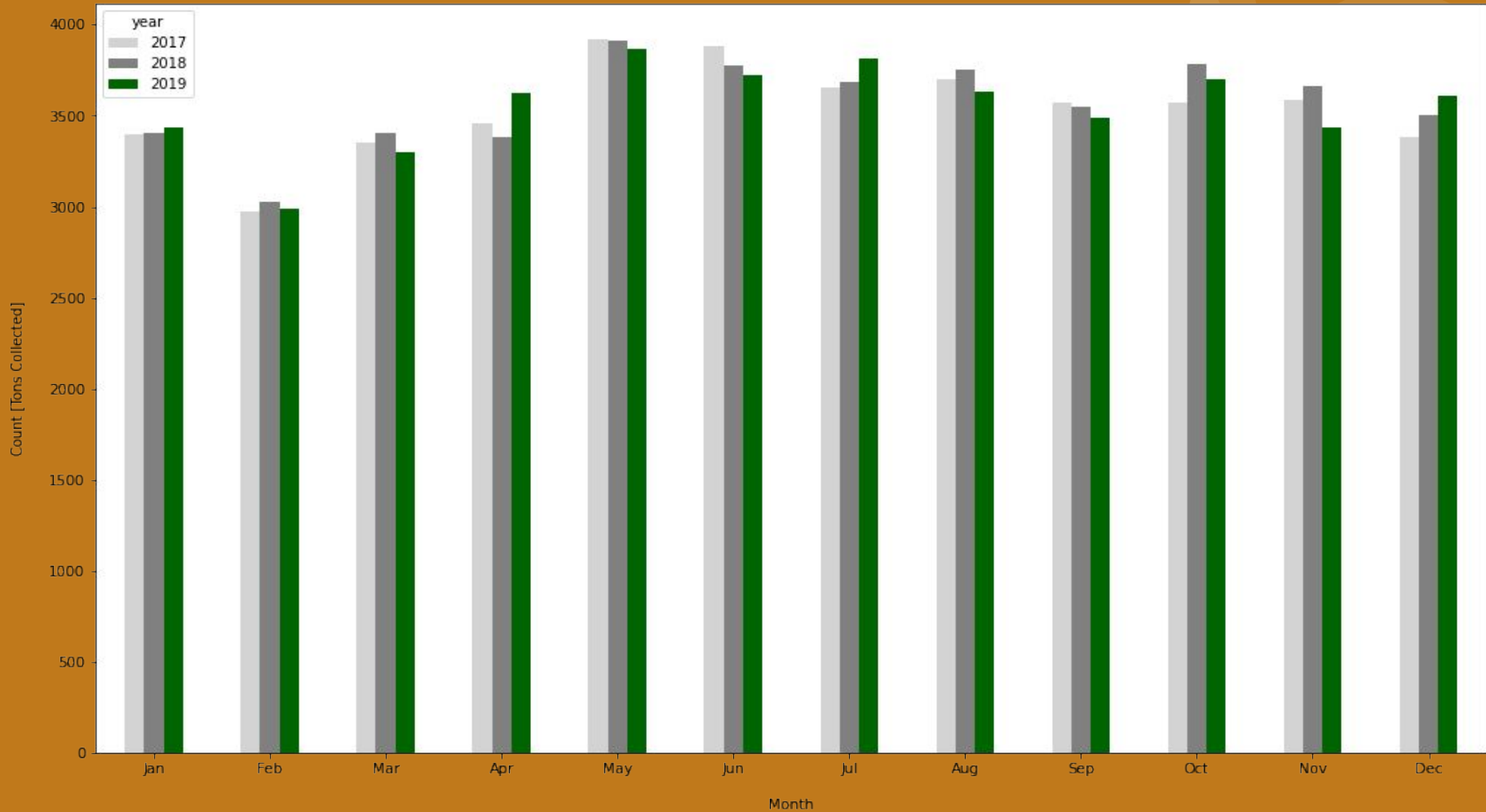


- **Skewness**  
0.4358
- **Kurtosis**  
-0.2188  
*Outliers were less than expected*
- **50th percentile (Q2)**  
3591.9  
*Approx. 50% of the population data lied at around 3500 tons collected monthly*

Trash Tons Collected 1991-2019



# Count of Trash Tons Collected 2017-2019: Month by Month Comparison





# Insights



- Brooklyn and Queens account for the highest collection of trash tons historically
- Trash and refuse tons collected *shows progress towards declining, but very slowly*
- Trash tonnage **decreases significantly in January and February, increases June and July**
- Slight **uptick** in the year 2010 - population increase in NYC - new residents likely followed current resident behavior, and slow gradual decline continues