Module 3: Setting Parameters

DAT-375

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I am being asked to review the NYC borough data which will be used to help set the insurance rates. This report will only analyze the 3 boroughs with the highest number of violations.

To begin, the top offending boroughs were determined to be Brooklyn, Queens, and Manhattan.

Graphical user interface, text, application, email

Description automatically generated

**Define the parameters**

Now that the top offending boroughs are known. The analysis parameters must be defined. As insurance rates are sensitive to the likelihood of a crash and the type of violations these will be the primary analysis directions.

* Likelihood of a crash: average number of crashes per month per borough
* Type of violation: count of distinct violations per borough

**Likelihood of a crash**

To calculate the average number of crashes per month per borough the following query was executed:

*SELECT NYCBOROUGH, (Count(crashdate) / count(distinct month(str\_to\_date(crashdate, '%m/%d/%Y')))) as Average*

*from dat375.boroughdata375*

*where (*

*NYCBOROUGH like 'Brook%'*

*or NYCBOROUGH like 'Queens'*

*or NYCBOROUGH like 'Manh%'*

*)*

*group by NYCBOROUGH*

*order by Average;*

Which produced these results:

Table

Description automatically generated

Queens had the greatest occurrence of crashes at >114 per month and Manhattan the lowest at ~63.

**Count of distinct violations per borough**

To determine how many violations per borough the following query was executed:

*SELECT NYCBOROUGH, Count(ViolationCode) as Counts*

*from dat375.boroughdata375*

*where (*

*NYCBOROUGH like 'Brook%'*

*or NYCBOROUGH like 'Queens'*

*or NYCBOROUGH like 'Manh%'*

*)*

*group by NYCBOROUGH*

*order by Counts;*

Which returned these results:

Table

Description automatically generated

Brooklyn this time had the greatest occurrence of violations, 670, with Manhattan being the lowest again at 379.

**Conclusion**

From this simple analysis, the rates in Manhattan should be the lowest of the 3 highest offending boroughs. This is due to Manhattan having the lowest average crashes per month and the lowest violation count of the three boroughs.