**PENALTY CHARGE NOTICE ANALYSIS REPORT**

**INSIGHTS DRAWN FROM PENALTY CHARGE NOTICE DATASET**

1. Line chart- Months(Issue Date) by Contravention

* Observation: More penalties noted during the winter or Christmas season compared to other months/quarters.

Reasons:

* Holiday Season: Increased activities, shopping, and travel.
* Social Gatherings: Crowded areas leading to a lack of parking.
* Weather conditions: Snow/ice resulting in traffic-related penalties.

A graph showing a line

Description automatically generated

1. Pie Chart- Days(Issue Day) by Contravention

* Observation: Fewer penalties on Sundays and Mondays. In 2022, Saturday, Sunday, and Monday have the least penalties.

Reasons:

* Lower activity on Sundays.
* Preference for staying at home or using public transport on Sundays and Mondays.

A pie chart with numbers and a diagram

Description automatically generated

1. Tree Map- Penalties(Contravention Description) issued by contravention type.

* Observation: Most common penalty is for being in a bus lane, followed by various parking violations.

Reasons:

* Bus Lanes: Importance of keeping lanes clear for safety and smooth traffic.
* Parking Issues: Indicates a need for better parking management.

A blue and purple squares

Description automatically generated with medium confidence

1. Stacked Column Chart: Time(Issue Time) by contravention.

* Observation: Most penalties issued from 9 am to 6 pm, acting as peak hours.

Reasons:

* Peak business/operational hours with active use of parking and public areas.

A blue graph with white text

Description automatically generated

1. Bar Chart: Street by count of penalty.

* Observation: Most common penalty issued on Canal Street near Middle Hill (Westbound), followed by Canal Street near Albion Street (East Bound) and Beck Street (Bus Gate).

Reasons:

* High Traffic: Suggests a need for clear communication regarding parking.
* Resource Allocation: Indicates the necessity for more resources in these busier areas.

A graph of a number of blue bars

Description automatically generated

**WORK DONE ON DATA:**

* Grouped the contravention description column: select column field-> New group->Grouping distinct values for all the datasets.
* Using Power Query Editor- Transformed Issue time to time only, but it contained date and time in all datasets.
* The date format was not proper in 2022 dataset- I created a new column in model view and used DAX(Data Analysis Expressions) expressions to put delimiter in between the whole number. Example: 20200101 to 2020/01/01.

Formatted Issue Date =

DATE(

INT(LEFT(‘2022’[Issue Date], 4)), // Extract the year

INT(MID(‘2022’[Issue Date], 5, 2)), // Extract the month

INT(RIGHT('2022'[Issue Date], 2)) // Extract the day

)

**CHALLENGES:**

* Initial lack of grouping for the Contravention Description column.
* Issue Time column included both date and time.
* 2022 issue date was not in the proper hierarchy.

**CONCLUSION:**

The analysis provides valuable insights into the patterns of Penalty Charge Notices issued in Nottingham, shedding light on seasonal variations, day-specific trends, common contraventions, peak hours, and high-traffic locations. Recommendations include improved parking management, clear communication strategies, and resource allocation in areas with higher penalties.