# **Analyzing New York City 311 Calls Using Apache Hive**

**I. Introduction:**

With the objective of offering practical ideas for enhancing city services, the paper provides a thorough examination of the NYC 311 Service Requests dataset. Identifying the most common complaints, reviewing response times, evaluating time-based patterns, analysing regional distribution, looking at trends over time, and performing a demographic study are some of the main topics of this investigation.

**II. Identification of Top Service Requests:**

The most frequent grievances and service requests sent to the 311 call centre are highlighted in this section. The goal of the analysis is to efficiently allocate resources, which will enhance city services. Important suggestions include the establishment of specialised task groups to handle high-frequency issues and focused public awareness efforts.

A screenshot of a computer

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**III. Geographic Distribution Analysis:**

By looking at the complaints' geographic distribution, the city can determine which areas have greater needs. The city can strategically distribute resources to better serve its citizens by comprehending regional patterns. The appendix's maps and visualisations give a clear picture of the hotspots for complaints.

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**IV. Temporal Analysis:**

The city can more efficiently assign personnel and resources by analysing the frequency of complaints according to the day and time of day. Recommendations include boosting service availability at particular times and modifying worker levels during peak complaint periods.

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**V. Response Time Assessment:**

By examining the turnaround times for various complaint categories, this component helps the city identify areas in need of development. Through detection and resolution of delays, the city can improve overall service effectiveness. For a thorough understanding, the report's appendix includes detailed visualisations.

**VI. Trends Over Time:**

Allocating resources and making policy decisions are informed by examining trends in service requests over time. The city can anticipate problems and modify its services to match changing needs by seeing trends and changes.

**VII. Demographic Analysis:**

Potential discrepancies in service access can be found by analysing service requests by demographic variables such age, gender, and race. This data is essential for creating focused interventions that guarantee fair service delivery.

**IX. Conclusion:**

To sum up, this paper presents a thorough examination of the NYC 311 Service Requests dataset and delivers insightful information to help with strategic decision-making. The city can address potential inequities in service access, increase efficiency, and improve municipal services by putting the suggested solutions into practice.