**911 Call Analytics Report for Baltimore City - 2021**

*Prepared by: Thrushwanth Kakuturu*

**Executive Summary:**

This report presents a comprehensive analysis of the 911 call data for Baltimore City during the year 2021. The analysis aims to provide insights into call patterns, priorities, incidents, and geographic distribution. The findings outlined below offer a deeper understanding of the trends and characteristics of emergency calls within the city.

**Findings:**

**Monthly Call Volume Trends:** The line plot depicting the number of calls per month revealed significant call volume during the first quarter, particularly in January, February, and March, with counts of 265,000, 160,000, and 128,805, respectively. Subsequent months showed a gradual decline in call volume, reaching a low in December.

**Daily Call Patterns:** The area plot representing call volume across different hours of the day indicated a substantial surge in calls from evening until early morning (6:00 AM). Notably, the highest call volume occurred at midnight (12:00 AM), suggesting a potential correlation with nightlife activities and emergency situations during those hours.

**Call Priority Distribution:** Analysis of call priority revealed that most calls (63.8%) were classified as non-emergency, while a small percentage (0.01%) were categorized as emergencies. High-priority calls accounted for 4.89%, medium-priority for 15.1%, and low-priority for 16.08% of the total call volume.

**Top Incidents by Call Volume:** The visualization identified the most frequent incident types based on call volume. The top incidents included business checks, director patrol, 911/no voice, auto incidents, and common assault, shedding light on the prevalent issues requiring emergency attention.

**Geographic Call Distribution:** The geographical distribution map displayed the concentration of calls across different ZIP codes. ZIP code 21215 stood out with the highest call volume. Additionally, central and northwestern parts of Baltimore exhibited the highest concentration of calls, indicating potential areas of concern or heightened activity.

**Police District Analysis:** By analyzing the number of calls per police district, it was evident that Northwestern, Southeastern, Southern, and Eastern districts had the highest call volumes in descending order. This insight can assist in resource allocation and deployment.

**Call Volume by Area:** Downtown Baltimore had the highest call volume with 53,947 calls, followed by Sandtown-Winchester and Brooklyn. Central Park Heights also registered a significant call volume. This information can guide targeted interventions and resource allocation.

**Synchronization of Call Needs:** A notable observation is that nearly all calls require synchronization, emphasizing the importance of efficient communication and coordination in emergency response scenarios.

**Conclusion:**

The analysis of the 911 call data for Baltimore City in 2021 highlights distinct patterns in call volume, timing, priority distribution, incident types, and geographic concentration. These insights contribute to informed decision-making for emergency services, resource allocation, and public safety enhancements.