

Bengaluru Traffic Analysis: Solutions and Insights

1. Key Metrics Summary

- **Total Incidents:** Bengaluru recorded a total of **14,000 traffic incidents**, providing an overview of the scale of traffic issues in the city.
 - **Average Speed:** The average speed across the city was **39.45 km/h**, which indicates moderate congestion.
 - **Total Traffic Volume:** Over **261 million vehicles** contributed to the traffic, emphasizing the need for better traffic management.
 - **Public Transport Usage:** With **402,890 users**, public transport is underutilized compared to the total traffic volume, suggesting room for improvement in public transit systems.
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2. Average Traffic Volume by Year

- The **line chart** highlights a decrease in average traffic volume from **29.46K in 2022 to 29.02K in 2023**, followed by a slight rise to **29.23K in 2024**.
 - This trend indicates temporary relief in traffic congestion in 2023, potentially due to roadwork or policy changes.
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3. Traffic Volume and Speed by Weather Conditions

- **Clear Weather:** Highest traffic volume at **158M vehicles** and a steady speed of **39.47 km/h**.
 - **Rain and Fog:** Both reduce traffic volume and speed significantly, highlighting their adverse impact on road conditions.
 - **Windy Conditions:** The lowest traffic volume (**13M vehicles**) with an average speed of **39.53 km/h**, suggesting people avoid traveling in windy weather.
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4. Parking Usage by Area

- **Indiranagar** has the highest parking usage (**130K**), reflecting its status as a busy area.
 - **M.G. Road (112K)** and **Koramangala (102K)** follow, emphasizing their popularity as commercial and residential hubs.
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5. Road Capacity Utilization by Area

- The **pie chart** shows that **Indiranagar** has the highest road capacity utilization (**20.03%**), followed by **M.G. Road** (**17.62%**) and **Koramangala** (**16.11%**).
 - These areas require better traffic planning and infrastructure upgrades to reduce congestion.
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6. Congestion Level by Roadwork Activity

- **No Roadwork:** Areas without roadwork experience significantly higher congestion levels (**651K incidents**).
 - **With Roadwork:** Areas with roadwork have a reduced congestion level (**71K incidents**), indicating better traffic management during construction.
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7. Incident Reports by Roads/Intersections

- **Treemap Insights:** Roads with the highest incident reports include:
 - **100 Feet Road**
 - **Trinity Circle**
 - **Sony World Junction**
 - Other notable areas: **CMH Road** and **Sarjapur Road**.
 - These areas need focused traffic interventions, like better signage, traffic signals, and monitoring.
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These insights provide a roadmap for improving Bengaluru's traffic management by addressing congestion, enhancing public transport, and focusing on high-incident areas.