Road Accident Analysis - Task 3 Report

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Tool Used: Power BI

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Introduction:

This report presents an interactive Power BI dashboard designed to analyze and visualize road accident data in order to identify high-risk zones, assess accident severity, and extract patterns based on environmental, geographic, and human-related factors. The project focuses on improving road safety awareness and supporting data-driven policy formulation.

Key Findings:

- Urban areas accounted for the majority of reported accidents, especially during nighttime.
- Cars and two-wheelers were involved in the highest number of casualties.
- High-risk zones were clustered around specific coordinates, indicating frequent accident hotspots.
- Casualty counts peaked during certain months, revealing seasonal trends.
- Accidents under wet or icy conditions had higher fatality rates.

Recommendations:

- Install better lighting and signage in urban accident-prone areas.
- Improve road surface monitoring during monsoon or winter months.
- Increase safety campaigns for two-wheeler and car drivers.
- Use location-based alerts in frequently affected coordinates.
- Enable dynamic speed control using real-time conditions.

Conclusion:

This project demonstrates how Power BI can be leveraged to turn raw accident data into actionable insights. The dashboard enables quick identification of critical safety risks and supports informed decision-making for policy makers and safety authorities.

Dashboard Overview: