Project Report

Comprehensive Analysis of Road Accident Data

(Excel-based)

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Date: 08/09/2023

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Executive Summary

- Conducted a meticulous analysis of road accident data to unveil critical insights.

- Employed advanced Excel techniques for data cleaning, visualization, and pattern identification.

- Findings provide actionable recommendations for enhancing road safety in [Urban and Rural Area].

Introduction

- Addressed the pressing concern of road accidents and their impact on public safety.

- Focused on a comprehensive study of road accident data from [].

- Objective is to discern trends and identify areas for intervention to reduce accident risks.

Data Collection and Preprocessing

- Rigorously cleaned and preprocessed data to ensure accuracy and reliability.

- Addressed missing values, outliers, and standardized data formats.

- Integrated geospatial coordinates for precise mapping and analysis.

Methodology

- Combined Excel functions, pivot tables, and advanced statistical techniques for analysis.

- Conducted descriptive statistics, trend analysis, and geospatial mapping to extract insights.

- Approach ensured a thorough understanding of accident patterns and contributing factors.

Key Performance Indicators (KPIs)

- Selected key metrics to provide a comprehensive assessment of accident patterns:

- Road Surface Condition

- Road Type

- Monthly Trand

-Casualties by Vehicle Type

-Day and Night

Data Analysis and Insights

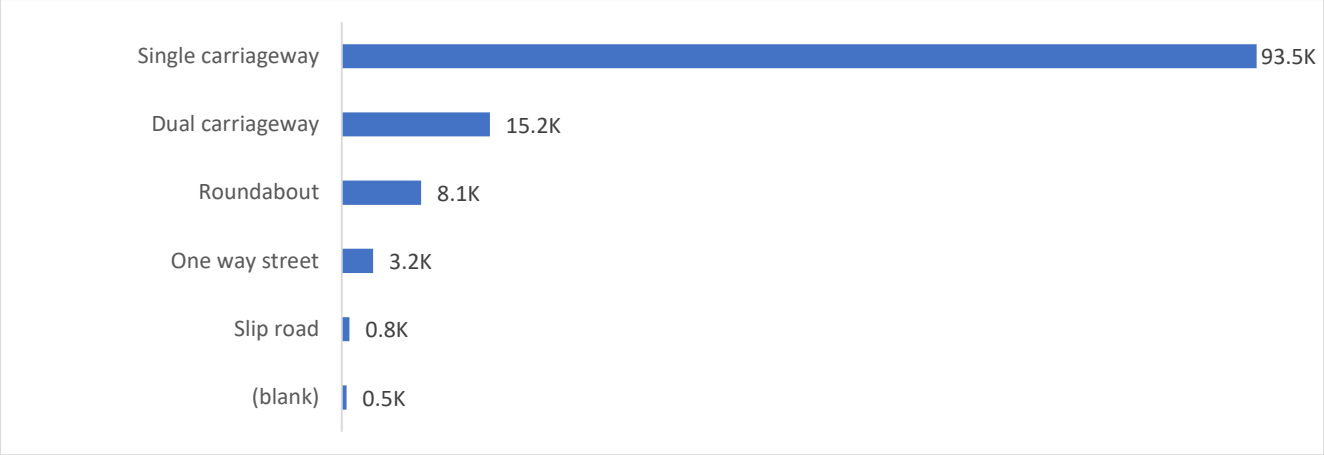
- Road Surface Condition(Rural)

Row Labels	Sum of Number_of_Casualties
Dry	45637
WET	21500
Frost	7249
Grand Total	**74486**

- Road Surface Condition(Urban)

Row Labels	Sum of Number_of_Casualties
Dry	86339
WET	28841
Frost	5969
Grand Total	**121251**

-Road Type



-Monthly Trand Year wise

Year	2021

Row Labels	Sum of Number_of_Casualties
Jan	11007
Feb	8681
Mar	11328
Apr	10596
May	11599
Jun	11474
Jul	11639
Aug	10683
Sep	11401
Oct	12281
Nov	12896
Dec	11028
Grand Total	**134613**

Year	2022

Row Labels	Sum of Number_of_Casualties
Jan	8041
Feb	9142
Mar	10605
Apr	9746
May	10438
Jun	10842
Jul	10567
Aug	9875
Sep	11032
Oct	11443
Nov	11643
Dec	7877
Grand Total	**121251**

-Casualties by Vehicle Type

Row Labels	Sum of Number_of_Casualties
Agricultural vehicle	227
CAR1	95720
BUS	
VAN	9740
BIKE	10082
OTHERS	934
bus1	4548
Grand Total	**121251**

-Day and Night

Row Labels	Sum of Number_of_Casualties
Daylight	89.3K
DARKNESS	32.0K
Grand Total	**121251**

-As we can see that the most of accident occure in urban area in daylight by car and on dry surface

Dashboard

[Created dynamic dashboard by using pivot table and charts,

Finding key point

-Road Surface Condition(Rural) and (Urban)

-Casualties by Vehicle Type

-Casualties in day and night

etc…]

Recommendations

- Enhanced Traffic Enforcement:
  - Advocating increased police presence during high-risk hours.
- Infrastructure Upgrades:
  - Proposing measures to improve road safety infrastructure.
- Public Awareness Campaigns:
  - Recommending targeted campaigns to promote safe driving practices.

Conclusion

- The Comprehensive Analysis of Road Accident Data offers critical insights into accident patterns within [Urban and Rural Area].
- Implementing the proposed recommendations holds the potential to significantly reduce accident occurrences and enhance public safety.

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