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Mini Project Report on

“Traffic Accident Data Analysis”

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1. Introduction

Traffic accidents cause major loss of life and property every year. Analyzing accident data helps identify high-risk conditions and prevent such incidents in the future.

2. Objective

To analyze traffic accident data and identify patterns related to location, weather, vehicle type, and accident cause.

3. Tools Used

Python, Pandas, Matplotlib, Seaborn, and Visual Studio Code were used for this project.

4. Dataset Description

The dataset contains columns such as Date, Time, Location, Weather, Vehicle Type, Cause, Fatalities, and Injuries. It was created manually for demonstration purposes.

5. Methodology

1. Data Collection and Cleaning
2. Data Visualization using bar charts
3. Analysis of patterns by cause, weather, and location
4. Deriving insights and conclusions.

6. Output & Graphs

The program generated bar charts showing accidents by cause, weather, location, and vehicle type. The outputs also display total accidents, fatalities, and injuries.

7. Results & Findings

• Over speeding and drunk driving were the most frequent causes.
• Most accidents occurred in clear weather.
• Chennai and Trichy had the highest number of accidents.
• Two-wheelers and cars were more involved in accidents.

8. Conclusion

This project provides valuable insights into accident causes and patterns. By using data analysis, authorities can improve road safety and reduce accident rates.

9. References

• Tools: Python, Pandas, Matplotlib, Seaborn
• Dataset: Created manually
• Institution: Amrita Vishwa Vidyapeetham, Nagercoil Campus