Sri Lanka Accident Analysis

YoY Relative Accident (2012 - 2011)
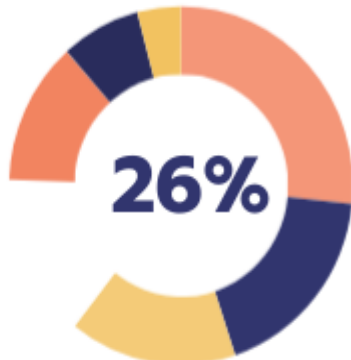
▽ **-8%** Decreased w.r.t 2012

YoY Relative Injury (2012 - 2011)

▽ **-3%** Decreased w.r.t 2012

All Island Distribution
Years of 2012 2011 2010

26%

Highest vehicle accident caused due to Motor Cycle Crashes

Vehicle Accident Distribution

49%

Highest Injury type of vehicle accident caused due to Non Grievous Injury Males

Injury Type Distribution

Top Province wise Variation

⚙ **53%** Western

9% Southern

No of High Accidents records in Western Province

Vehicle Type Variation

20000

0

Colombo Gampaha

■ 2010 ■ 2011 ■ 2012

Injury Type Variation

2500

0

Colombo Gampaha

■ 2010 ■ 2011 ■ 2012
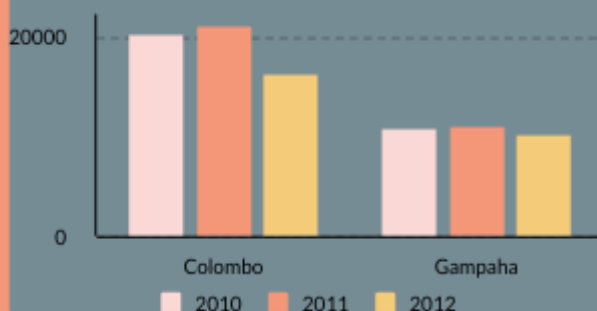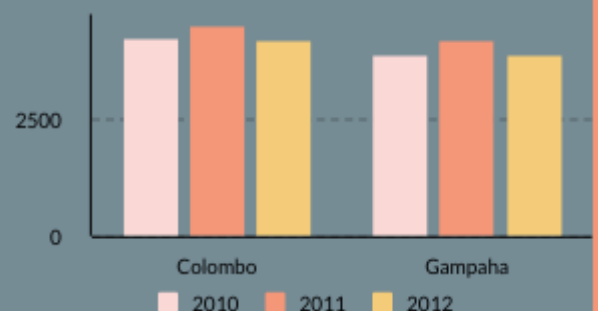
introduction:

The analysis aims to provide insights into road accidents in Sri Lanka by leveraging government census data from 2010 to 2012. Through a comprehensive examination of accident data, vehicle types, and injury patterns, the infographic sheds light on key trends, challenges, and policy implications for enhancing road safety in the country.

Tools and Techniques Used:

- Data Integration: Utilized Python programming language and pandas library for integrating and preprocessing census data from multiple years.
- Descriptive Analysis: Conducted descriptive statistical analysis to summarize accident data and visualize trends using Plotly.
- Comparative Analysis: Compared accident rates, vehicle involvement, and injury distributions across different years to identify temporal trends and variations.
- Data Visualization: Created visually appealing charts, graphs to communicate analysis findings effectively using tools like Plotly.

Challenges in the Dataset:

- Data Consistency: Ensuring consistency and comparability of data across different years and sources may pose challenges due to variations in reporting standards and data collection methodologies.
- Interpretation Complexity: Interpreting multi-year census data requires careful consideration of contextual factors, such as changes in population demographics, infrastructure development, and policy interventions, which may influence road safety outcomes.

Methodological Approach:

- Data Collection: Obtained census data on road accidents, vehicle types, and injury patterns from government sources for the years 2010-2012.
- Data Preprocessing: Cleaned and preprocessed the dataset to handle outliers, and inconsistencies using Python and pandas.
- Descriptive Analysis: Conducted descriptive statistical analysis to summarize accident data, identify trends, and visualize patterns using Matplotlib and Seaborn.
- Comparative Analysis: Compared accident rates, vehicle involvement, and injury distributions across different years to discern temporal trends and variations.
- Policy Implications: Formulated recommendations for enhancing road safety measures and policy interventions based on analysis findings to mitigate accident risks and improve public health outcomes.

Disclaimer:

The analysis is based on government census data and is intended for informational purposes only. The findings and recommendations provided herein should be interpreted with caution and validated with additional research and expert consultation.

Conclusion:

Through a rigorous analysis of road accident data in Sri Lanka, the infographic provides valuable insights into temporal trends, vehicle-wise patterns, injury outcomes, and policy implications for enhancing road safety measures and protecting public health. By leveraging data-driven insights and innovative analytical techniques, stakeholders can develop targeted interventions to address road safety challenges and promote sustainable development in Sri Lanka.

Github Link: https://github.com/TuanMinhajSeedin/DS-infographic-poster

Dashboard UI: https://ds-infographic-poster.streamlit.app/