

FINDINGS: -

Title: - Analysing and Understanding Road Accidents on State Highways during 2021 in Indian States and Union Territories. (Made by: -Abdulabin Lahaji)

Source of data: - data.gov.in (Authorised by Indian government published data on 25-09-2023)

- **Serious injuries:** These are injuries that require hospitalization or result in permanent disability.
- **Minor injuries:** These are injuries that do not require hospitalization and are not permanent.
- **Total injuries:** This is the sum of serious and minor injuries.

1. States & UTs which are having Highest & Lowest Serious Injuries.

Highest

- 1.Tamil Nadu
- 2.Kerala
- 3.Karnataka
- 4.Uttar Pradesh
- 5.Maharashtra

Lowest

- 1.Andaman and Nicobar Islands
- 2.Ladakh
- 3.Goa
- 4.Manipur
- 5.Mizoram

2. States & UTs which are having Highest & Lowest Minor Injuries.

Highest

- 1.Tamil Nadu
2. Madhya Pradesh
- 3.Karnataka
4. Andhra Pradesh
5. Rajasthan

Lowest

1. Tripura
2. Meghalaya
3. Andaman and Nicobar Islands
4. Mizoram
5. Dadra and Nagar Haveli

3. States & UTs which are having Highest & Lowest Minor Injuries.

Highest

- 1.Tamil Nadu
2. Madhya Pradesh
3. Karnataka
4. Kerala
5. Uttar Pradesh

Lowest

1. Andaman and Nicobar Islands
2. Mizoram
3. Meghalaya
4. Dadra and Nagar Haveli
5. Ladakh

From the above states and UTs, Tamil Nadu, Karnataka, Kerala, Uttar Pradesh, and Madhya Pradesh have a consistently high number of minor, serious, and total injuries on Indian state highways.

3. What is the probability of serious and minor injuries in Indian state highway accidents?

Based on the data, there is a 52.9% probability that a State Highway Accident will result in minor injuries, and a 47.1% probability that it will result in serious injuries.

4. How many states and UTs in India have a higher ratio of serious injuries to minor injuries?

Among the 36 states and UTs in India, 19 have a higher ratio of serious injuries to minor injuries.

5. What are the top five states and union territories in India with the highest probability of Serious injuries in accidents, and what are their respective probabilities?

1. Tripura (99.17%)
2. Bihar (95.12%)
3. Assam (90.34%)
4. Meghalaya (87.50%)
5. West Bengal (84.59%)
11. Maharashtra (67.88%)

In above states the probability of serious injuries is greater than 80 %

6. What are the top five states and union territories in India with the highest probability of minor injuries in accidents, and what are their respective probabilities?

1. Andaman and Nicobar Islands (48.00 %)
2. Puducherry (47.86 %)
3. Karnataka (47.38 %)
4. Tamil Nadu (42.06 %)
5. Himachal Pradesh (41.70 %)

Root Causes of Accidents: -

There are various reasons behind Accidents some of most common are,

1. **Human error:** - distracted driving, speeding, and driving under the influence of alcohol or drugs.
2. **Vehicle problems:** - Mechanical failures, such as brake or tire failure, can also cause accidents.
3. **Road conditions:** wet or slippery roads, potholes, cracks, and poorly lit roads can make it difficult for drivers to maintain control of their vehicles.
4. **Weather conditions:** - Bad weather, such as rain or fog, can reduce visibility and make it harder for drivers to see and react to hazards.
5. **Animal interference:** - Animals on the road, such as cats or dogs, can cause accidents if drivers don't have time to stop.

Suggestions for Reducing Accidents in India: A Data-Driven Approach mean by data driven approach: -

1. **Improved Road infrastructure:** - This includes building safer roads, improving road signage, and installing traffic lights and other safety features.
2. **Increased enforcement of traffic laws:** This includes cracking down on speeding, drunk driving, and other traffic violations.
3. **Public awareness campaigns:** These campaigns can educate people about the dangers of road accidents and injuries, and promote safe driving practices.
4. **Develop safer vehicles:** This includes incorporating safety features into vehicles, such as anti-lock brakes and airbags.
5. **Building fences or other barriers to prevent animals from accessing the road.** This can be an effective solution in areas where there is a high volume of traffic or where animal interference is a frequent problem

The project is open to contributions from all interested parties. Please feel free to contact us and let us know if you have any questions, feedback, or are interested in collaborating. For more details, please visit the GitHub repository. [abdullahlahaji10@gmail.com].

<https://github.com/Abdulabin/Indian-State-Highway-Accidents-Data-Analysis.git>