Road Traffic Accidents Dataset:
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What We Found and What It Means

For this project, I worked on a road traffic accident dataset to figure out how different factors—like the road layout, weather, surface conditions, and traffic signals—affect accidents and their severity.

How I Did It

I analysed the dataset and created a dashboard in Power BI that breaks down accidents by different factors.
I looked at things like:

- How many accidents happened when people broke traffic rules

- How road surface conditions (like rain, ice, or snow) affected accident numbers

- Where accidents happened most — like at intersections or divided highways

- Whether traffic control devices like stop signs and lights made a difference

By organizing and comparing these categories, I was able to clearly spot patterns and understand where the biggest risks are.

What I Learned

- **Bad weather makes accidents worse**: There were way more injuries and fatalities during rainy and snowy conditions than on dry roads.

- **Certain road designs are more dangerous**: Roads with intersections, T-intersections, and divided highways showed a higher number of serious accidents.

- **Traffic control devices aren't foolproof**: Even where traffic lights and signs were present, crashes still happened. This might be because drivers ignore them, or maybe because the signs aren't always easy to see.

- **Human behavior plays a big role**: A lot of accidents were linked to people breaking rules, speeding, or just not paying attention. So even perfect roads won't fix everything if drivers aren't careful.

Suggestions Going Forward

For the Government:

- Redesign risky intersections and improve road markings where needed.

- Make sure traffic lights and signs are clearly visible and maintained properly.

- Run awareness campaigns, especially before winter and rainy seasons, to remind people to drive safely.

- Use technology like speed cameras to catch rule-breakers and make enforcement stricter.

- Keep analyzing accident data regularly to spot and fix dangerous areas early.

For Drivers and the Public:

- Always follow traffic rules, no exceptions.

- Adjust driving habits based on weather — slow down when it's wet, icy, or snowy.

- Keep your car properly maintained, especially brakes and tires.

- Stay focused — avoid distractions like texting or adjusting the radio while driving.

Final Thoughts

In short, this project showed me that accidents aren't caused by just one thing.
Both the way roads are built **and** the way people behave matter a lot.
If governments improve infrastructure and drivers become more responsible, we can make the roads much safer for everyone.