

## Lab 2 - Caution

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### US Accidents Data

#### **Data We Have:**

1. ID - Unique Identifier for each accident
2. Source - Indicates source of the accident report (i.e. the API which reported the accident.)
3. TMC - Traffic Message Channel code which provides more details on the accident
4. Severity - Scale of 1 - 4, 1 being the least severe, and 4 being the most severe
5. Start Time
6. End Time
7. Starting Latitude
8. Start Longitude
9. Ending Latitude
10. Ending Longitude
11. Distance(mi)
12. Description
13. Number
14. Street
15. Side
16. County
17. State
18. Zip Code
19. Country
20. Timezone
21. Airport\_Code
22. Weather\_Timestamp
23. Temperature(F)
24. Wind\_Chill(F)
25. Humidity(%)
26. Pressure(in)
27. Visibility(mi)

- 28. Wind\_Direction
- 29. Wind\_Speed(mph)
- 30. Precipitation(in)
- 31. Weather\_Condition
- 32. Amenity
- 33. Bump
- 34. Crossing
- 35. Give\_Way
- 36. Junction
- 37. No\_Exit
- 38. Railway
- 39. Roundabout
- 40. Station
- 41. Stop
- 42. Traffic\_Calming
- 43. Traffic\_Signal
- 44. Turning\_Loop
- 45. Sunrise\_Sunset
- 46. Civil\_Twilight
- 47. Nautical\_Twilight
- 48. Astronomical\_Twilight

**Platform:**

Web application

***Programming Languages:***

- Node.js
- HTML
- CSS

**Feature List (Questions of Interest):*****Important Features:***

1. How does weather affect the number of accidents in a day and the severity of accidents on those days?
2. Does location (near a highway vs not near a highway) affect the number of accidents that occur?
3. Does time of year affect the frequency of car accidents, based on weather conditions during different times of the year as well as proximity to holidays?
4. What are cities that see a higher frequency of car accidents? Does this correlate with bigger cities?

5. Do speed bumps help reduce the frequency of accidents? Are stop signs more effective than speed bumps or vice versa?
6. How does humidity affect the likelihood of ending up in an accident? Does humidity also affect the severity of the accident?

***Implement if we have time as we need additional data:***

1. Does the frequency of accidents in a zip code correlate with the relative wealth or affluence of an area?
2. Which weather conditions in California lead to higher severity accidents?
3. Which states have the highest day to night ratio in accidents, which have the lowest?
4. Which side of the road do more accidents occur and why?