

# Traffic Crashes 2021



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# DATASET

- Taken from Chicago Data Portal
- Merged Traffic Crash Dataset with People involved dataset
- Analysed only 2021 data
- Sampled the data to 2500 random points to avoid overplotting

```
crashData = ▼ Array(2500) [  
  0: ▼ Object {  
    city: "HAZEL CREST"  
    state: "IL"  
    sex: "M"  
    age: 63  
    safety: "USAGE UNKNOWN"  
    airbag: "NOT APPLICABLE"  
    injury_class: "NO INDICATION OF INJURY"  
    phy_condition: "NORMAL"  
    speed_limit: "30"  
    traffic_control_device: "NO CONTROLS"  
    device_condition: "NO CONTROLS"  
    weather_condition: "CLEAR"  
    lighting_condition: "DAYLIGHT"  
    road_condition: "DRY"  
    road_defect: "NO DEFECTS"  
    damage: "OVER $1,500"  
    injury_count: "0.0"  
    hour: 14  
    day: 2  
    month: 3  
    time: 871  
  }  
]
```



# Our Questions

## Domain Questions

- How does weather/season affect traffic crashes?

## Data Questions

- Which age groups are most likely to be in a car crash?
- What is the distribution of features like weather conditions during summers vs winters?
- What are the frequencies of the types of injuries suffered in summers vs winters?
- Do seasons or months affect the total number of crashes?

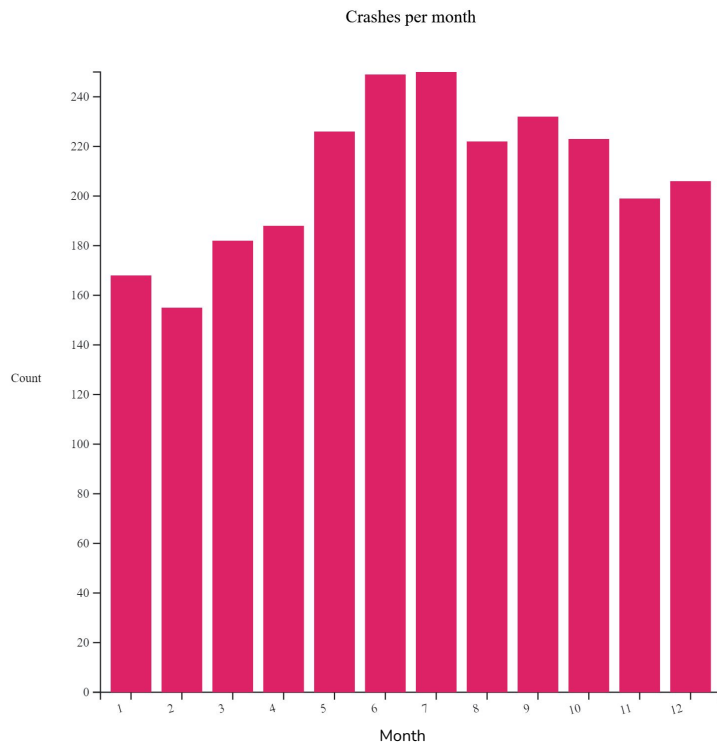


# Hypotheses

- People in their prime tend to have more crashes
- There are more crashes in summer than winter
- Bad driving conditions lead to more crashes



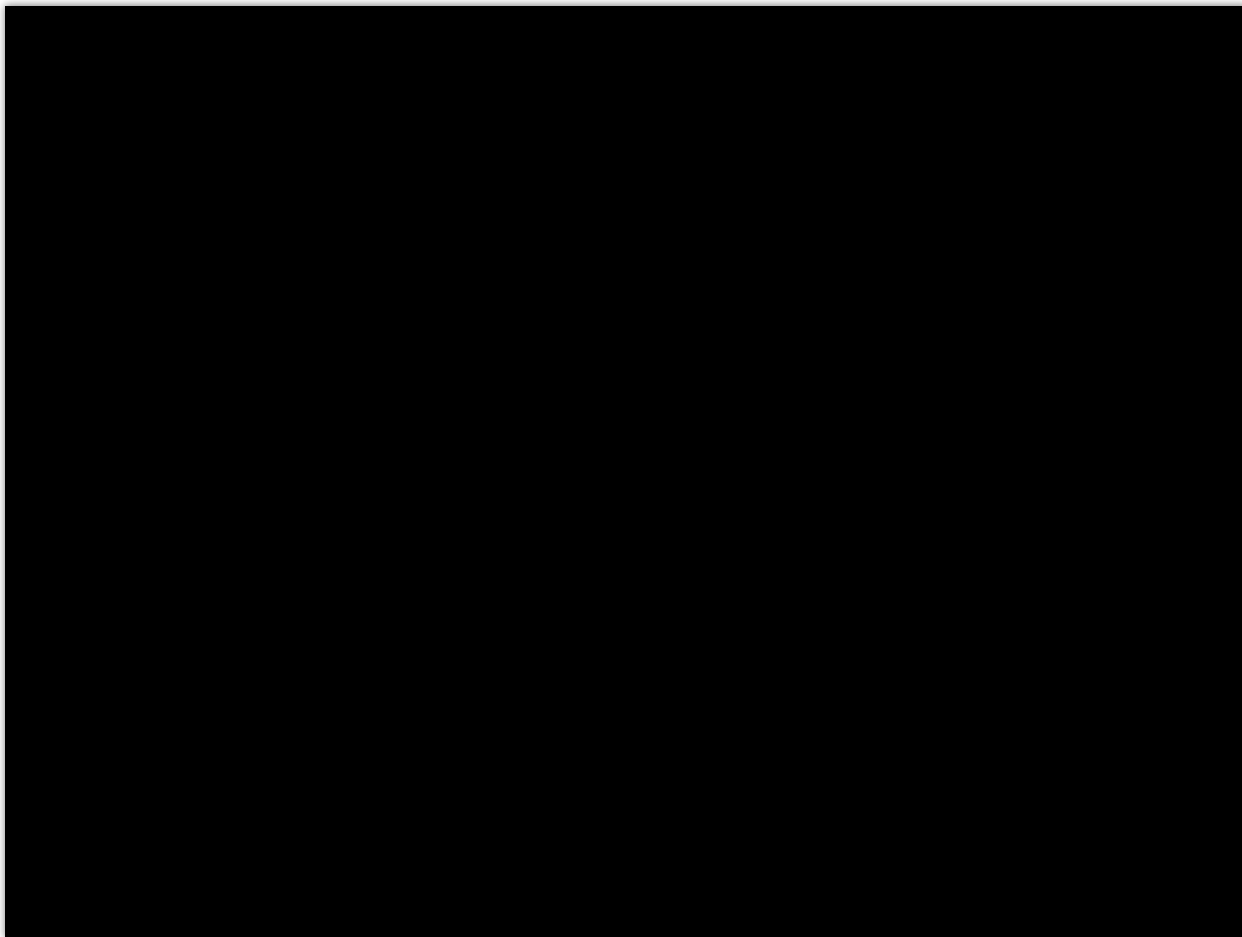
# Which months do crashes occur the most?





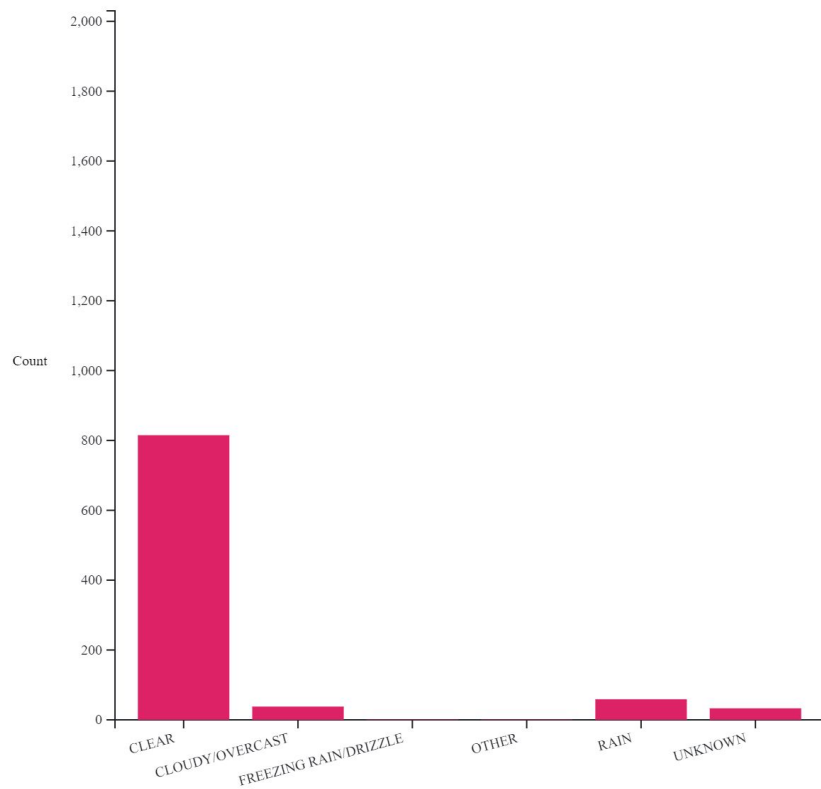
# **Crash counts: Summers v/s Winters**





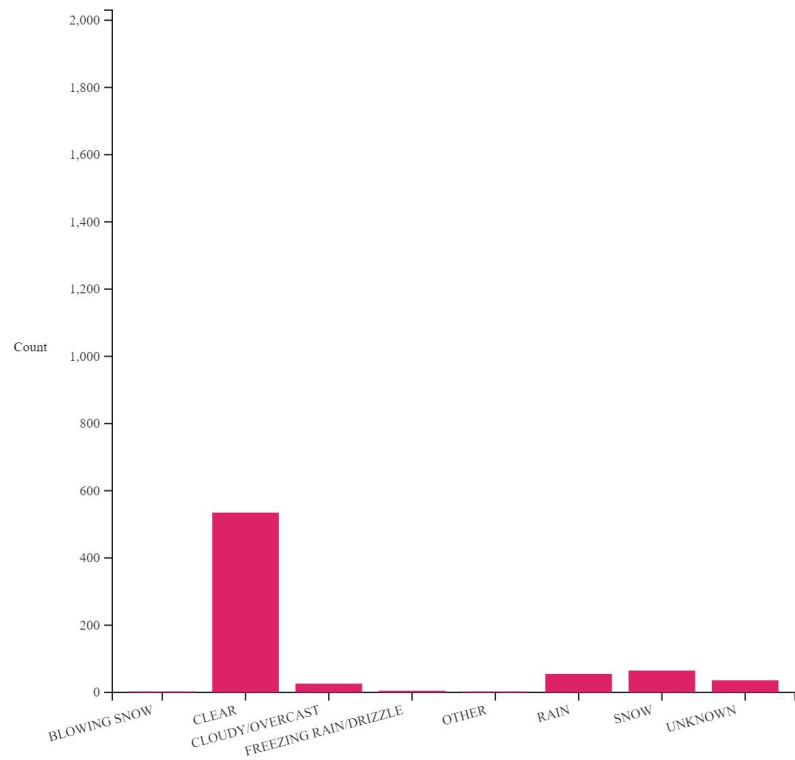
Summers Winters Both

Weather Condition - Summers



Summers Winters Both

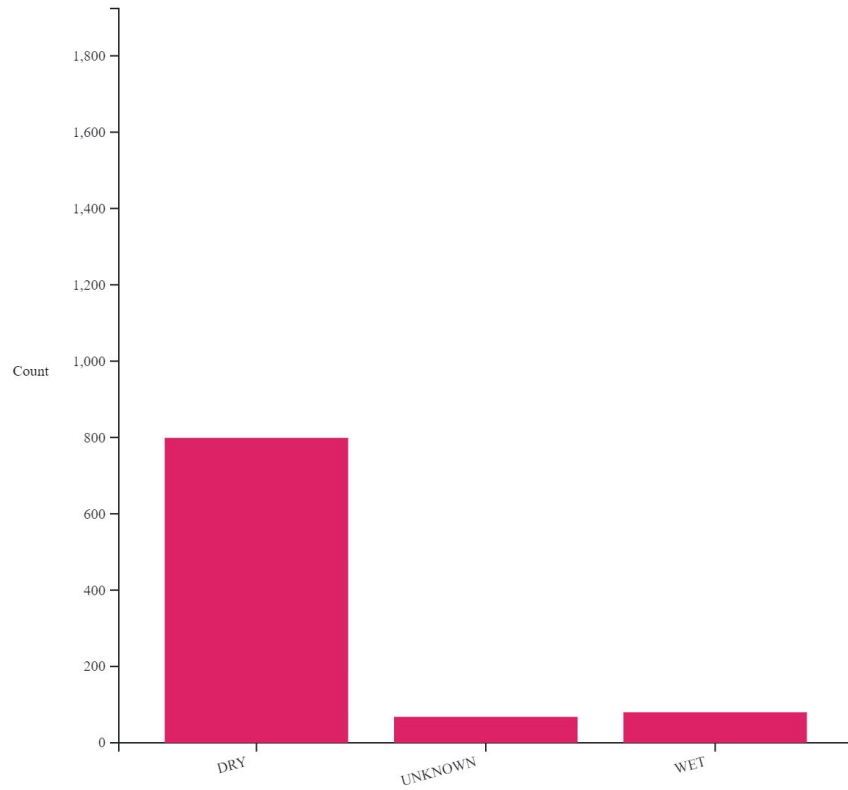
Weather Condition - Winters





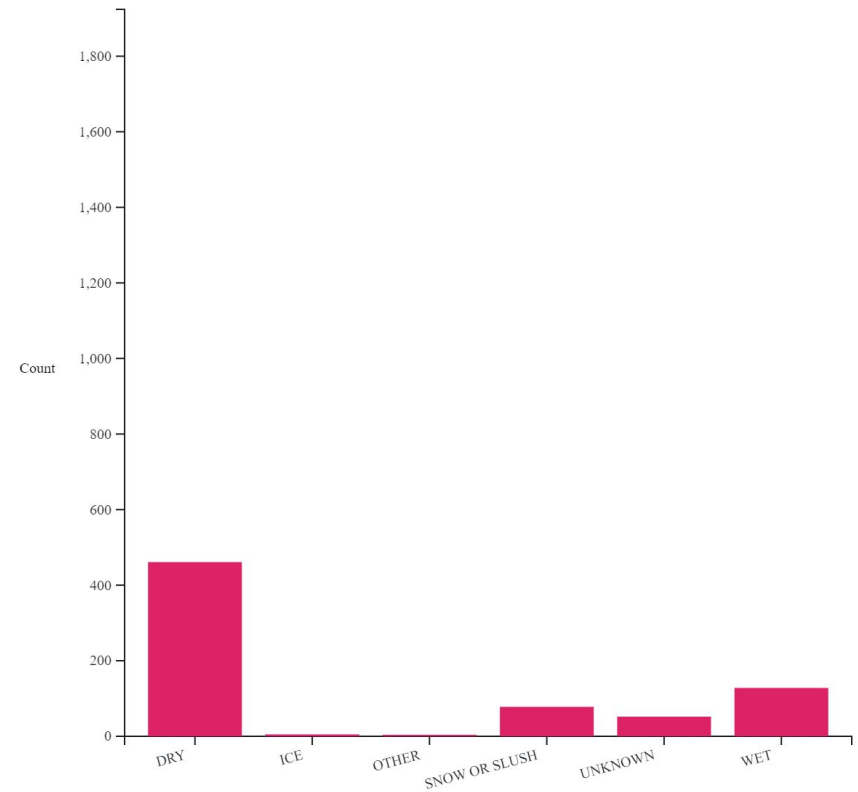
Summers Winters Both

Road Condition - Summers



Summers Winters Both

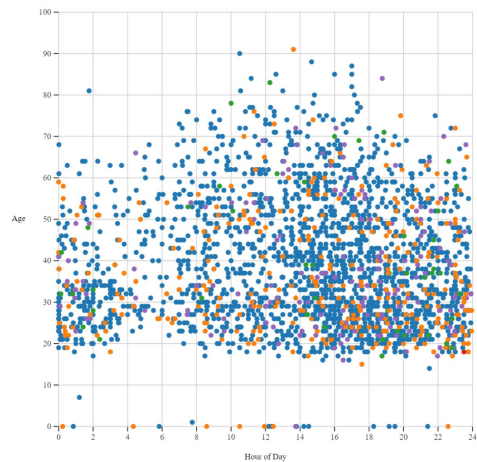
Road Condition - Winters



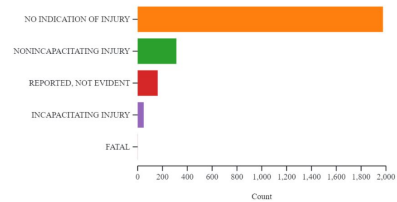
**Age demographics and  
impact on injury severity,  
cost of damages, and  
number of injuries**



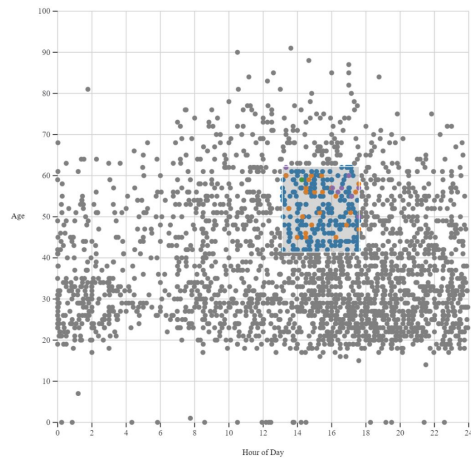
Age v/s Time of Crash



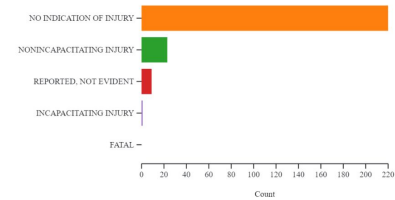
Injury Severity



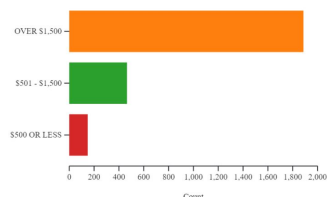
Age v/s Time of Crash



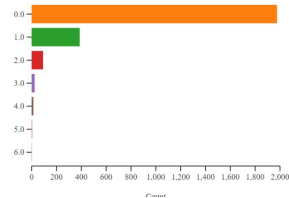
Injury Severity



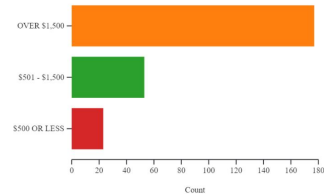
Damage Cost



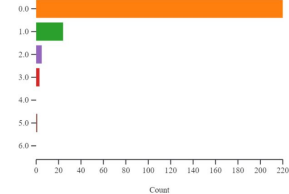
Injury Count



Damage Cost



Injury Count





## Revisiting our Hypotheses

- People in their prime tend to have more crashes - **CORRECT**
- There are more crashes in summer than winter - **CORRECT**
- Bad driving conditions lead to more crashes - **INCORRECT**



**Thank you**