**Time Analysis:**

Time of Day and Crashes: Analyze the frequency of crashes by different times of the day to see if there are times when more crashes occur.

**Day of the Week:**

Check if certain days of the week have a higher number of crashes.

**Monthly/Seasonal Trends:**

Identify if there are months or seasons with higher crash rates, which could be linked to weather conditions or holiday traffic.

**Spatial Analysis:**

1. Crash Hotspots: Use latitude and longitude data to identify areas with high frequencies of crashes.
2. Road Type and Crashes: Compare crash rates on different types of roads (state, county, municipal).
3. Crashes by Municipality: Examine crash distribution across different municipalities to see if urban areas have more crashes compared to rural.

**Weather Conditions:**

1. Impact of Weather: Assess how different weather conditions affect the number of crashes.
2. Correlation between Weather and Severity: Investigate if certain weather conditions lead to more severe crashes.

Driver and Vehicle Characteristics:

1. Driver Fault and Substance Abuse: Explore the relationship between being at fault in a crash and substance abuse.
2. Vehicle Type and Crash Severity: Analyze whether certain types of vehicles are more likely to be involved in severe crashes.
3. Vehicle Age and Crashes: Check if older vehicles are more prone to being involved in crashes.

**Crash Types and Outcomes:**

1. Types of Collisions: Analyze the frequency and severity of different types of collisions (e.g., rear-end, sideswipe).
2. Non-Motorist Involvement: Look into crashes involving bicyclists or pedestrians to identify patterns and risk factors.
3. Injury Severity Analysis: Classify crashes by injury severity to identify factors that contribute to more severe outcomes.

**Impact of Road Features:**

1. Traffic Control and Crashes: Study the influence of traffic control devices (e.g., traffic signals, no controls) on crash occurrences and outcomes.
2. Light Conditions and Crashes: Explore how different lighting conditions (daylight, dark with lights, etc.) correlate with crash frequency and severity.

**Behavioral Factors:**

1. Driver Distraction: Identify common distractions leading to crashes and their impacts on crash severity.
2. Substance Abuse Impact: Analyze the data on driver and non-motorist substance abuse to see its correlation with crash causes and severity.

**Machine Learning**

1. Predictive Models: Develop models to predict the likelihood of crashes based on various factors like time, location, weather, and road conditions.
2. Cluster Analysis: Perform cluster analysis to identify groups of similar crash characteristics or patterns.