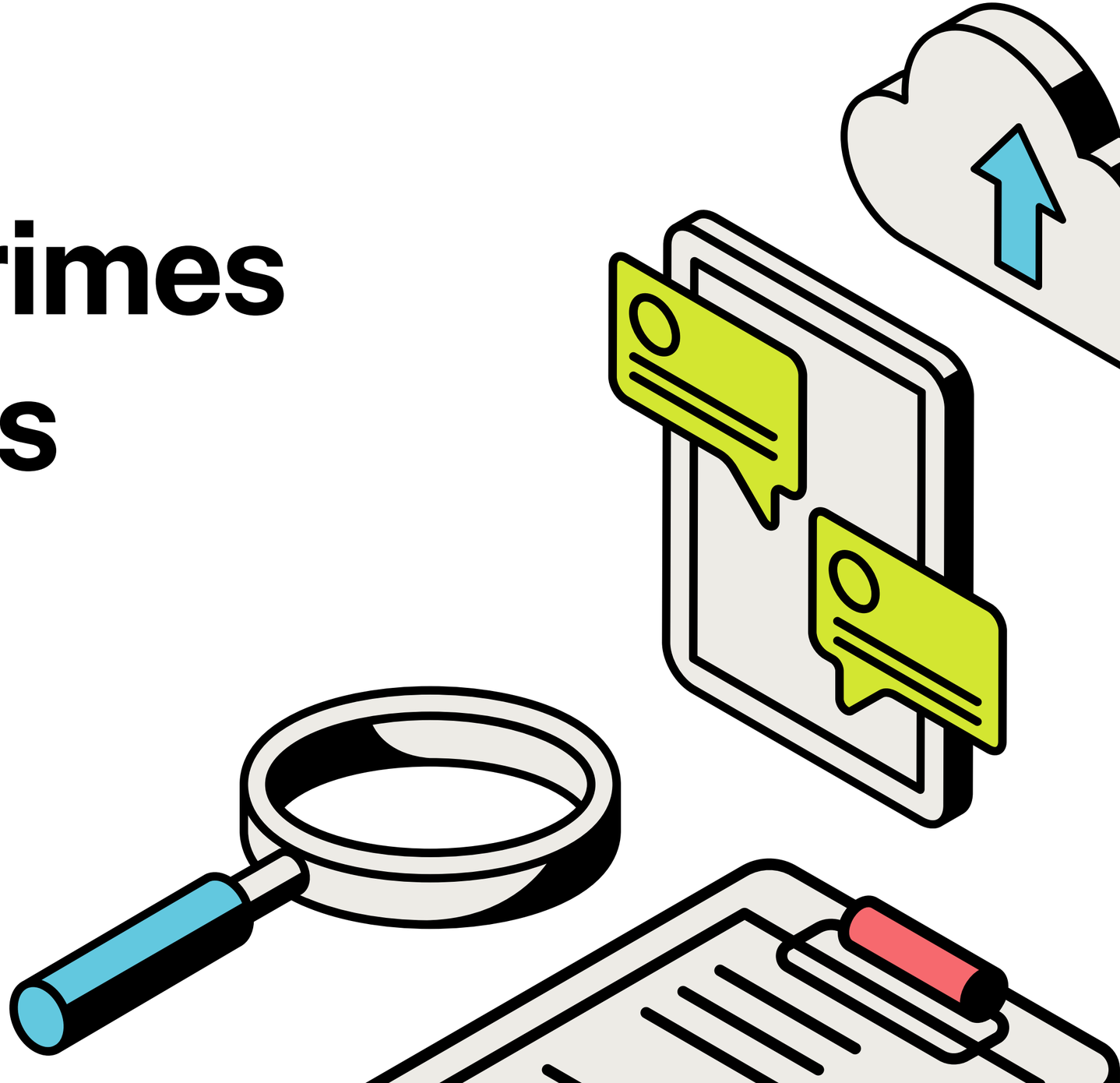
Evaluating Crimes in Los Angeles

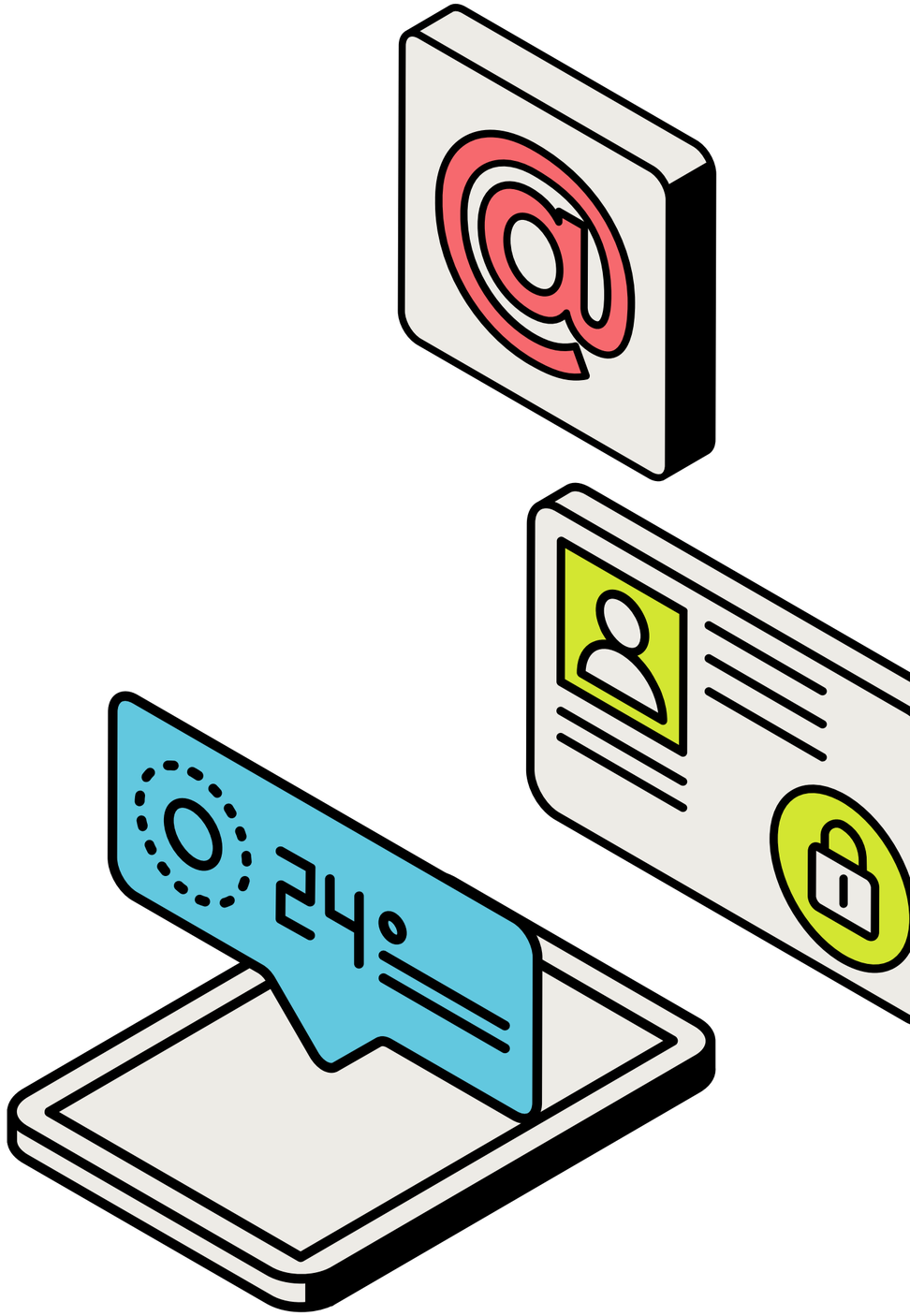


Overview

Los Angeles, California. The City of Angels.

Famous for its warm climate, palm trees, extensive coastline, and Hollywood, Los Angeles has produced some of the most iconic films and songs. However, like any densely populated city, it has its share of challenges, including a significant amount of crime. That's where your expertise comes in!

This project analyzes crime data to uncover patterns in criminal behavior, and to allocate resources more effectively to address various crimes in different neighborhoods.



Problem Statement

This project aims to analyze crime data in Los Angeles to identify patterns in criminal activity. The goal is to use these patterns to allocate resources more effectively to address crime in different neighborhoods.

Goals

Analyze crime data to uncover trends in criminal behavior.

Identify the hour with the highest frequency of crimes.

Determine the area with the most night time crimes (10pm to 3:59am).

Explore the number of crimes committed against victims in various age groups.

Dataset & Source

The dataset used in this project is a modified version of a publicly available dataset from Los Angeles Open Data. It includes a single CSV file named **'crimes.csv'.**

The dataset contains the following columns:

- **'DR_NO':** Official file number for the crime incident.
- **'Date Rptd':** Date the crime was reported (MM/DD/YYYY).
- **'DATE OCC':** Date the crime occurred (MM/DD/YYYY).
- **'TIME OCC':** Time of the crime occurrence in 24-hour military format.
- **'AREA NAME':** Name of the geographic area or patrol division where the crime took place.
- **'Crm Cd Desc':** Description of the crime committed.
- **'Vict Age':** Age of the victim in years.
- **'Vict Sex':** Victim's sex (F: Female, M: Male, X: Unknown).
- **'Vict Descent':** Victim's ethnicity.
- **'Weapon Desc':** Description of the weapon used in the crime (if applicable).
- **'Status Desc':** Status of the crime.
- **'LOCATION':** Street address of the crime incident.

Outputs

Analyze the `**crimes.csv**` dataset to solve the following questions:

1

Which hour records the highest number of crimes? Save the result as an integer variable named **`peak_crime_hour`.**

2

Which area has the highest frequency of crimes occurring at night (between 10 PM and 3:59 AM)? Save this as a string variable named **`peak_night_crime_location`.**

3

Determine the number of crimes committed against victims in different age groups. Save this as a pandas Series named **`victim_ages`,** with the following age group labels as the index: **`0-17`, `18-25`, `26-34`, `35-44`, `45-54`, `55-64`,** and **`65+`,** and the corresponding frequency of crimes as the values.

Data
Findings

01

Peak Crime Hour:
The hour with the highest frequency of crimes is 12pm (midday).

02

Peak Night Crime Location:
The area with the most crimes committed between 10pm and 3:59am is Central.

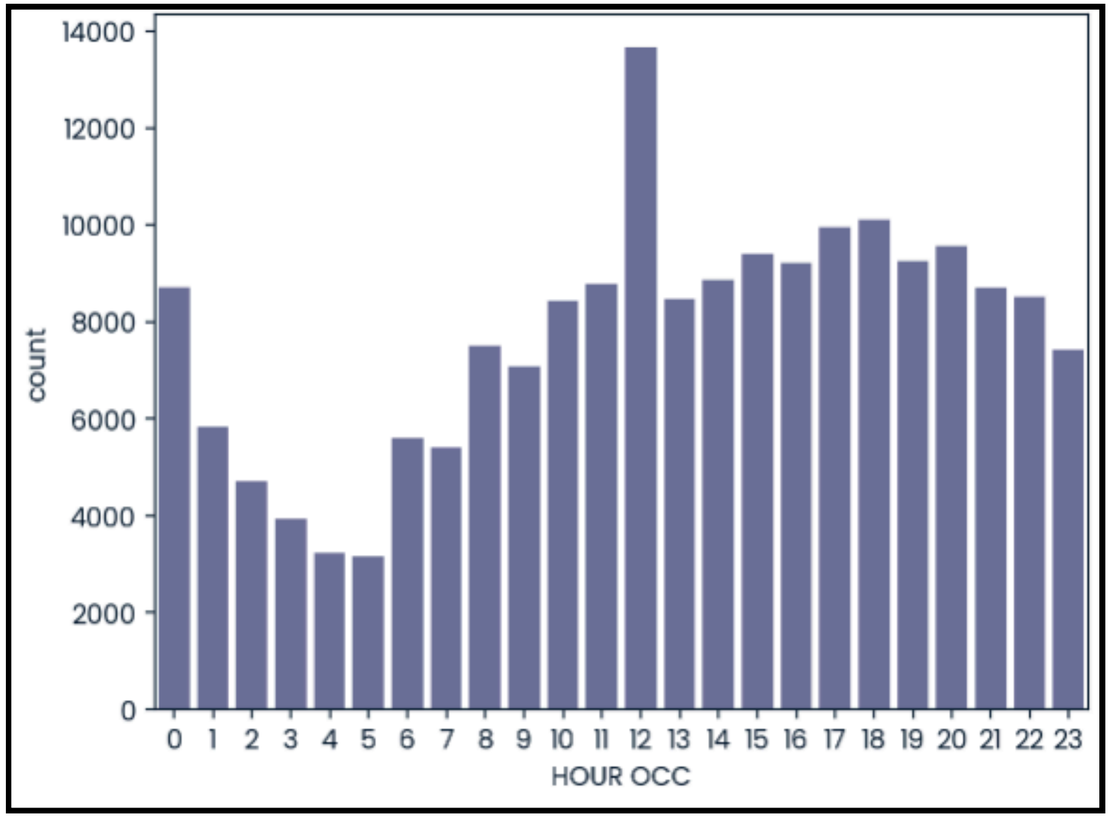
03

Victim Age Groups:
The age groups with the highest number of crimes committed against them are 26-34 and 35-44.

This histogram visualizes the distribution of crime occurrences across different hours of the day in Los Angeles. Each bar in the chart represents a specific hour (0-23), and the height of the bar indicates the frequency of crimes reported during that hour.

Key Observations:

- **Peak Crime Hours:** The chart shows a clear peak in crime occurrences between 11 AM and 1 PM. This suggests that midday might be a time when people are more vulnerable to crime, perhaps due to increased activity and reduced vigilance.
- **Nighttime Crime:** There is also a noticeable increase in crime activity during the late evening and early morning hours (around 10 PM to 3 AM). This is a typical pattern observed in many cities, likely due to factors like reduced visibility, fewer people on the streets, and increased opportunities for criminal activity.
- **Lower Crime Periods:** The early morning hours (4 AM to 7 AM) and late afternoon (4 PM to 6 PM) appear to have lower crime rates.



This output provides two key pieces of information:

1. **Area with the Highest Nighttime Crime:** It identifies **Central as the area with the highest volume of night crimes** (between 10 PM and 3:59 AM). This information is crucial for law enforcement agencies to allocate resources effectively and focus on crime prevention and response strategies in this specific area.
2. **Crime Frequency by Victim Age Group:** The subsequent table shows the number of crimes committed against victims in different age groups. The age groups and their corresponding crime counts are:
    - **26-34:** 47,470 crimes
    - **35-44:** 42,157 crimes
    - **45-54:** 28,353 crimes
    - **18-25:** 28,291 crimes
    - **55-64:** 20,169 crimes
    - **65+:** 14,747 crimes
    - **0-17:** 4,528 crimes

```
The area with the largest volume of night crime is Central
26-34    47470
35-44    42157
45-54    28353
18-25    28291
55-64    20169
65+      14747
0-17      4528
Name: Age Bracket, dtype: int64
```

- **This breakdown** provides insights into the demographics of crime victims. Law enforcement agencies can use this information to tailor their crime prevention and victim support programs to address the specific needs of vulnerable age groups.
- **By combining these two pieces of information,** law enforcement can implement targeted strategies to reduce crime in high-risk areas and protect vulnerable populations.

Insights

1

Crime frequency is not evenly distributed throughout the day, with midday having the most incidents.

2

Nighttime crime is concentrated in specific areas, suggesting targeted patrol strategies could be effective.

3

Certain age groups appear to be more vulnerable to crime, potentially requiring additional crime prevention efforts in those communities.

Recommendations

Law enforcement agencies should allocate more resources to patrol areas with high crime rates, particularly during peak hours (midday) and nighttime hours (10pm to 3:59am) in Central.

Further investigation into the reasons behind the high crime rates in these areas and age groups may be beneficial.