DATA MANAGEMENT FINAL PROJECT

LOS ANGELES CRIME DATA FROM 2020 TO PRESENT

Group 15
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Crime Data In Los Angeles

- Dataset sourced by the Los Angeles Police Department

- 28 fields

- 843,514 rows

- Each row represents an incident of crime

- Timeframe: Jan.01. 2020-Nov. 12. 2023

- https://data.lacity.org/Public-Safety/Crime-Data-from-2020-to-Present/2nrs-mtv8/about_data

Importance Of Our Dataset

Relevance

Focus: Crime incidents in Los Angeles from 2020 to present.
Usefulness: Identifying trends, studying patterns and informing the public

Depth of Analysis Potential

Rich Data: Allows for complex statistical analyses.
Insightful: Facilitates in-depth understanding of crime causation and correlations.

Diversity in Data Variables

Variables: 28 columns including date/time, location, crime types.
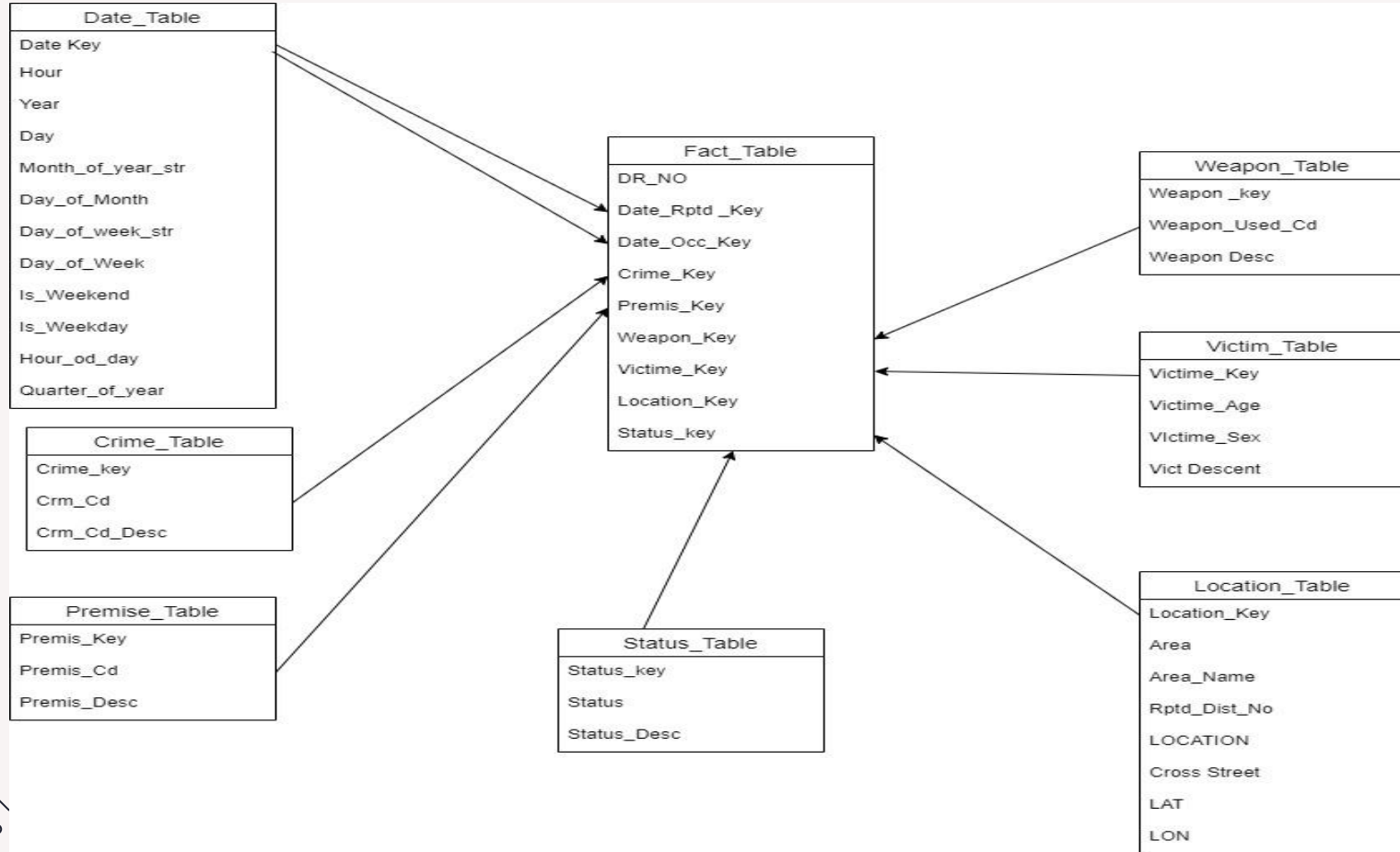Benefit: Enables nuanced exploration of crime-related factors.

Geographic Specificity

Area: Specific to Los Angeles.
Advantage: Vital for local policymakers, law enforcement, and researchers.
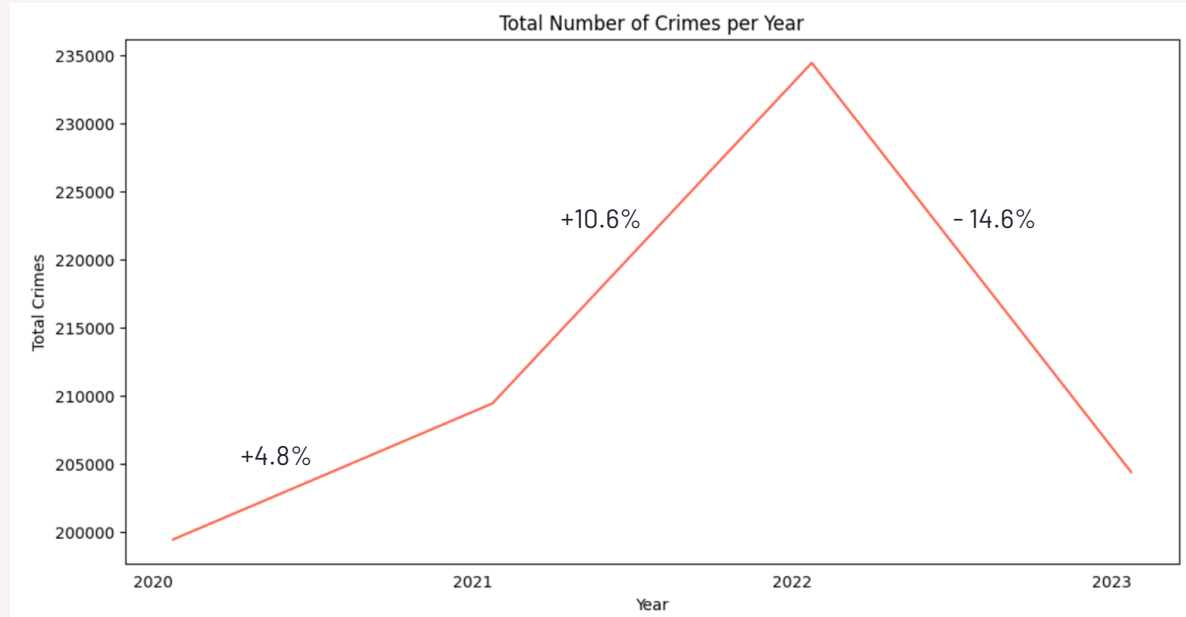Focus: Offers deep insights into local crime dynamics.

Schema

QUESTION 1:

How has the overall crime rate in the city
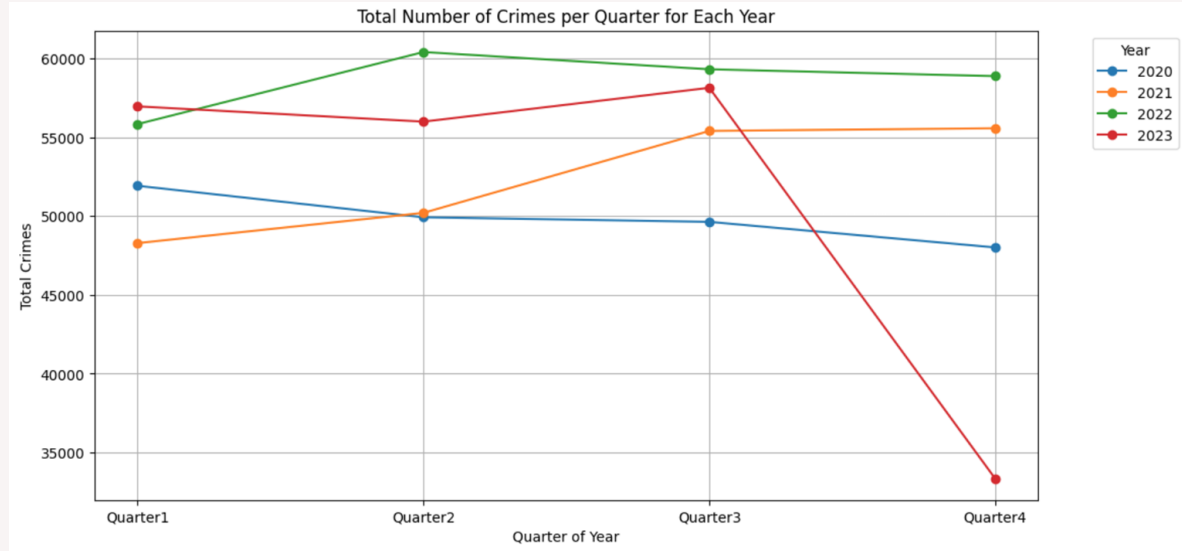behaved over the past few years?

Crime Occurrences per Year

- 2020 shows lowest number of crimes occurred
- 2022 shows highest number of crimes occurred
- Avg. number of reported crimes occurred per year: 211,000
- Avg. number of reported crimes occurred per day: 590
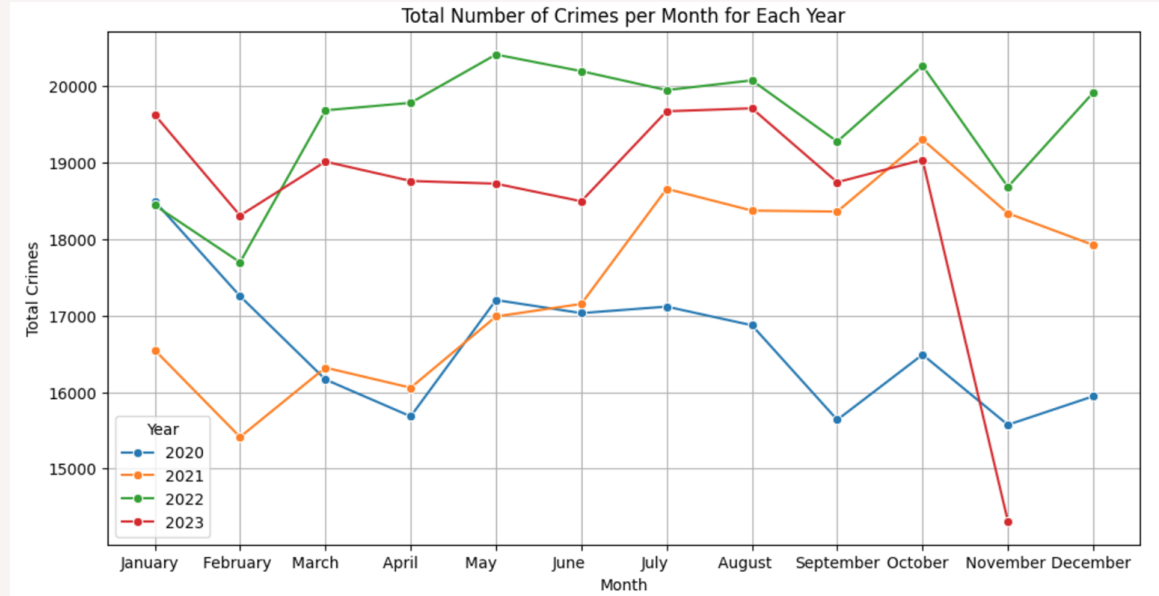
Crime Occurrences per Quarter by Year

- 2022 marks the highest crime rates across 3 out of 4 quarters.
- Consistent rise in crime occurrences in 2021 leads into the peak present in 2022.
- Quarter with highest average: Q3 - 56,000
- Quarter with lowest average: Q1 - 53,000

Note: This dataset includes no data from December 2023

Crime Occurrences per Month by Year

- 4/5 of the peak months for occurrences of crime are summer months
- 2020 crime patterns hint at well known environmental factors such as the onset of the COVID-19 pandemic and increased social unrest in the summer of 2020
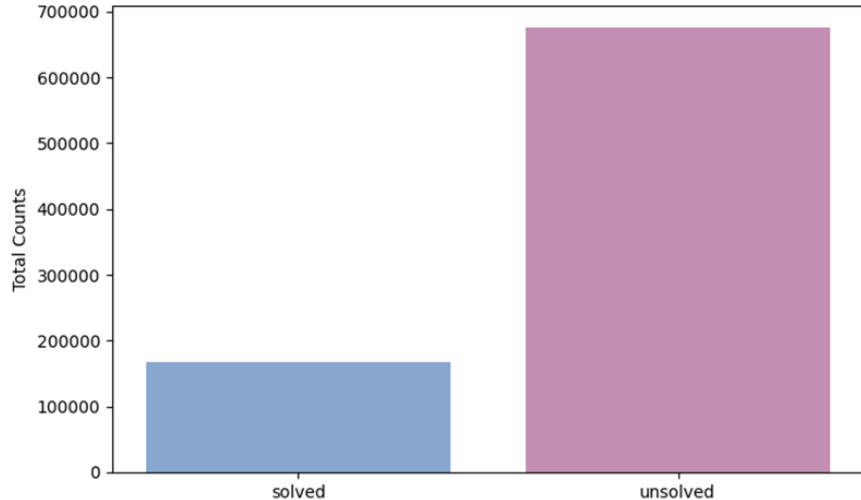

Total Number of Crimes per Month for Each Year

Note: This dataset includes no data from December 2023

Question 2

What are the top 10 types of crimes that have been solved and unsolved?
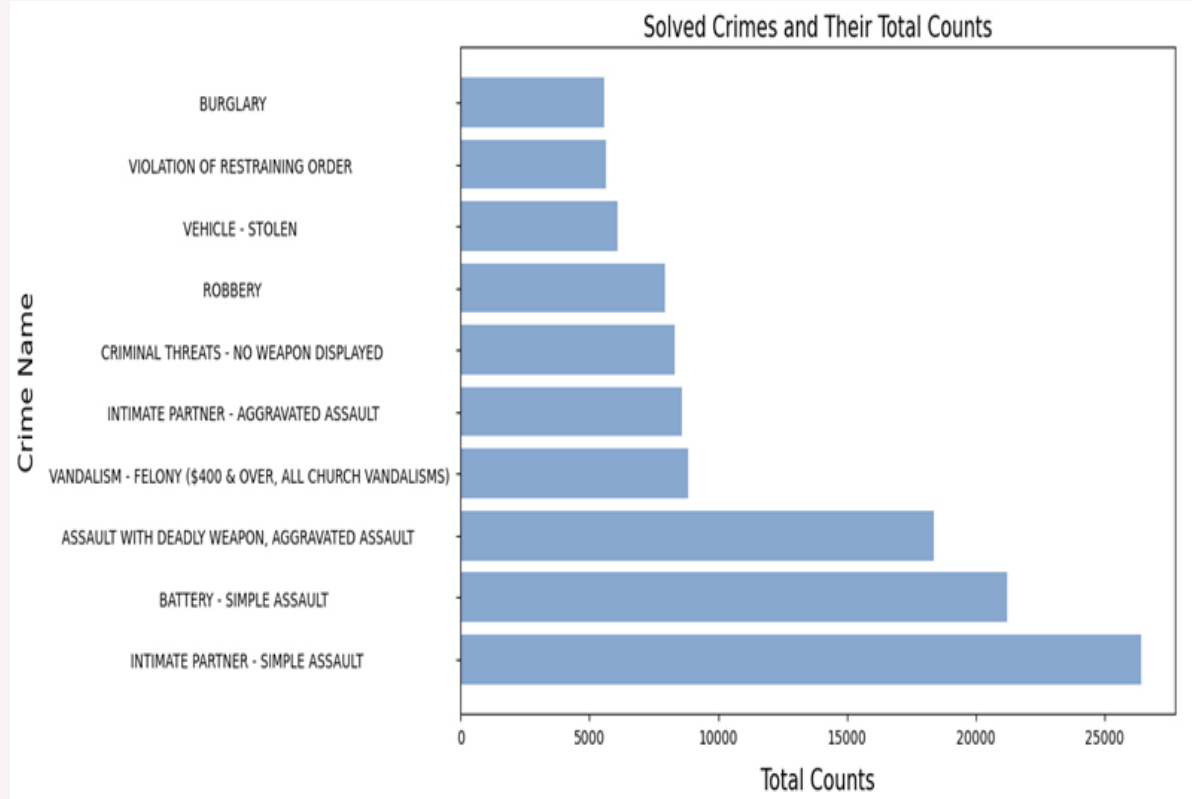
Overview of Solved and Unsolved Cases

- Solved is 168389

- Unsolved is 675125
  Approximately 80%

Most Resolved Crime Categories

- Intimate Partner - Simple Assault: 26,413
- Battery - Simple Assault: 21,204
- Assault With Deadly Weapon: 18,374
- Vandalism - Felony: 8,824
- Intimate Partner - Aggravated Assault: 8,595

Solved Crimes and Their Total Counts
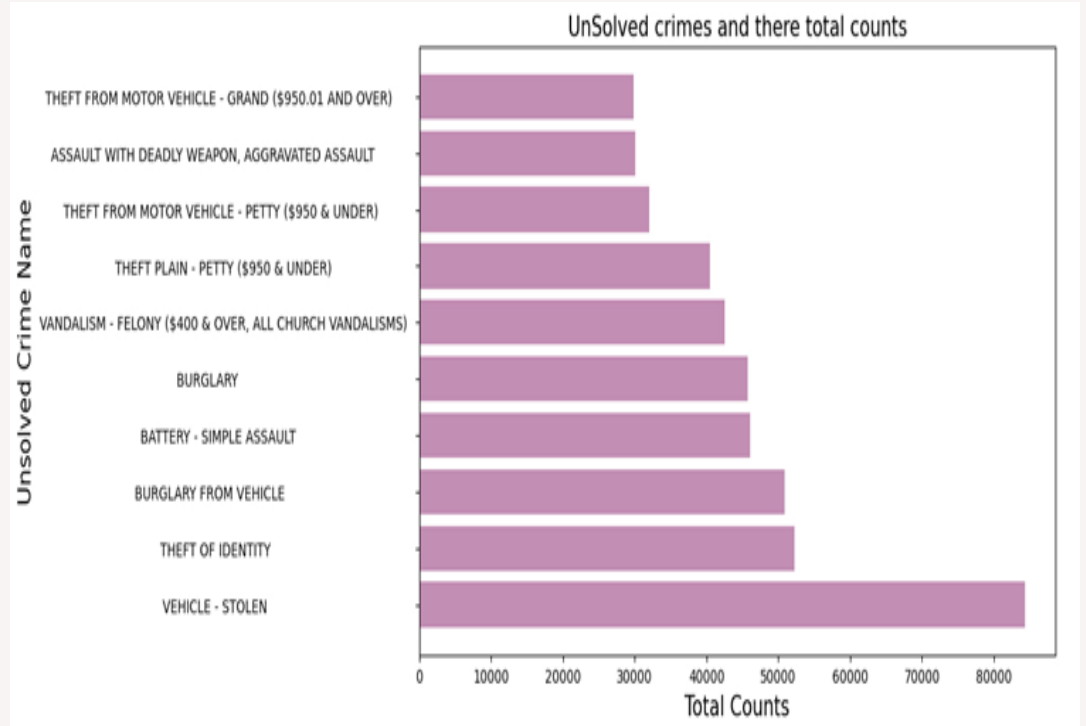
Most Unsolved Crime Categories

Vehicle Stolen: 84,351 cases

Tops the list with the highest number of unsolved cases

Theft of Identity: 52,214 cases

Burglary from Vehicle: 50,856 cases
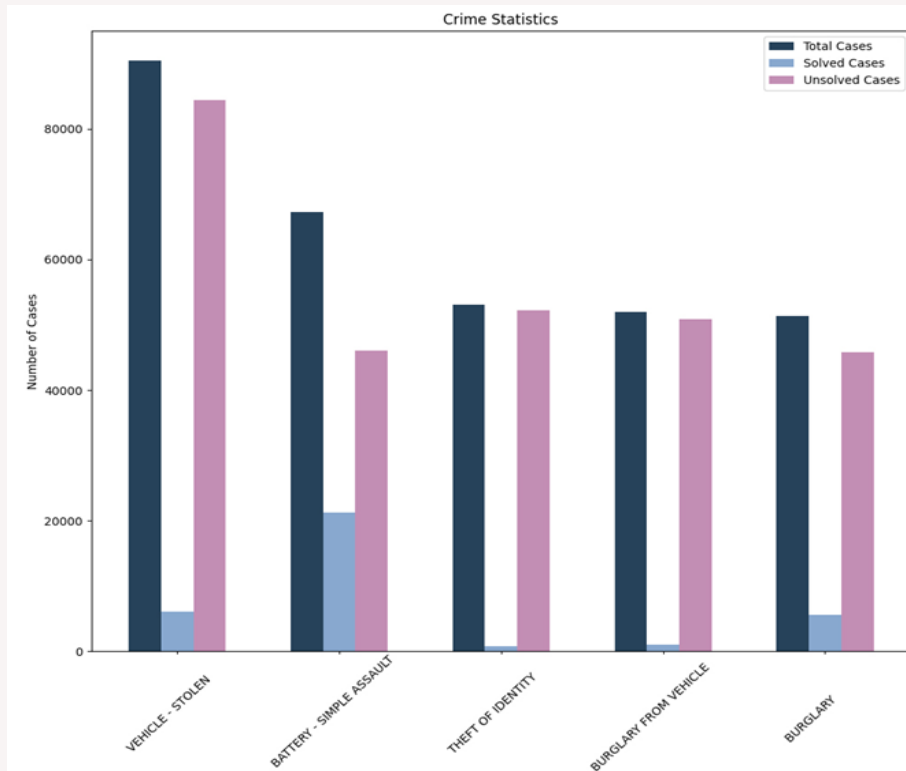
Battery - Simple Assault: 46,096 cases

UnSolved crimes and there total counts

Comparative Analysis of Crime Cases for Top 5 Crimes

[95]:

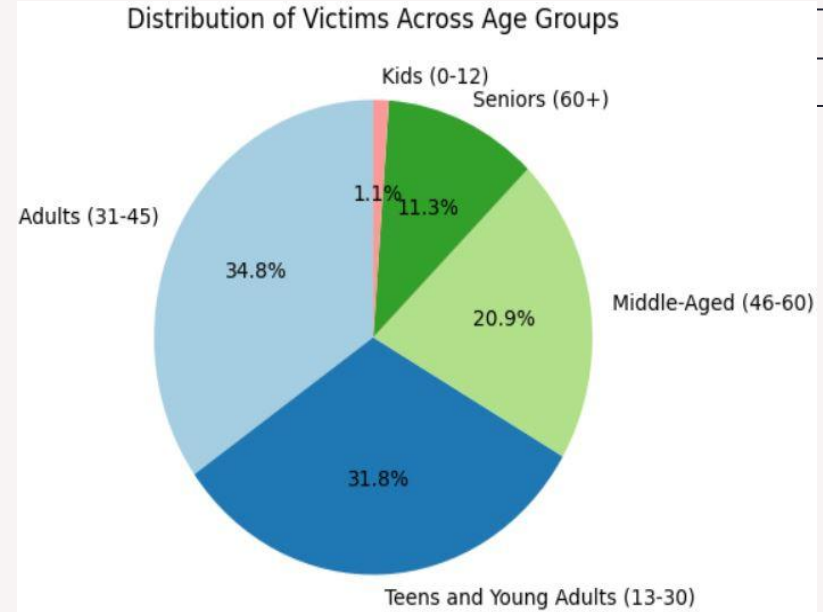| crime_description	total_cases	solved_cases	unsolved_cases
VEHICLE - STOLEN	90464	6113	84351
BATTERY - SIMPLE ASSAULT	67300	21204	46096
THEFT OF IDENTITY	53026	812	52214
BURGLARY FROM VEHICLE	51906	1050	50856
BURGLARY	51363	5589	45774

QUESTION 3:

What is the distribution of total crime victims across different age groups? and
What are the top 3 crimes and their counts for each age group of the victims?
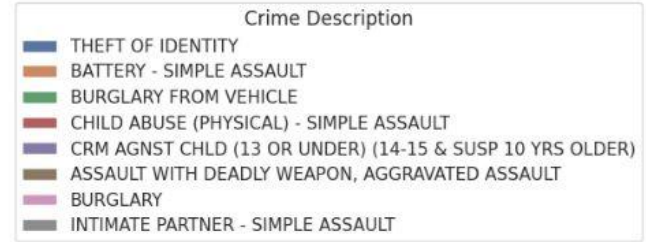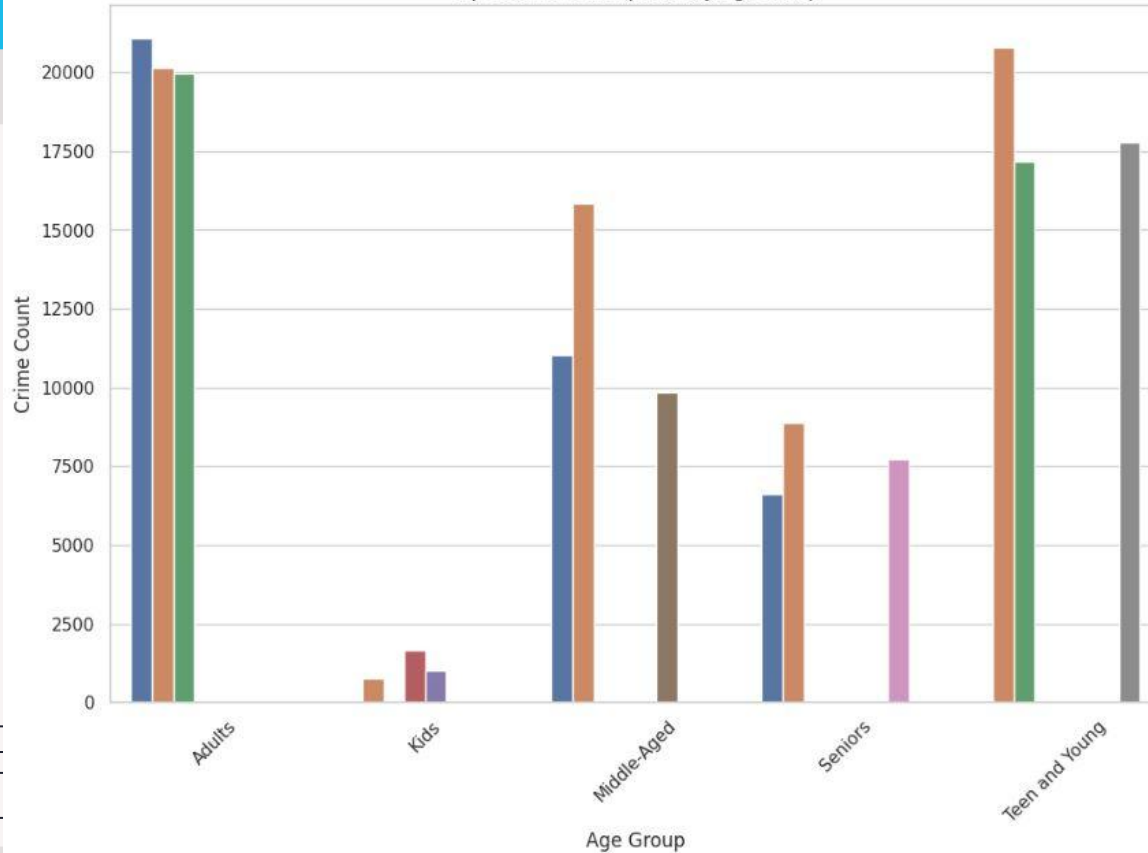
Age Group Categorization of Victims

AGE CATEGORY	AGE GROUP	TOTAL VICTIMS
ADULTS	31-45	220759
TEENS AND YOUNG ADULTS	13-30	201944
MIDDLE-AGED	46-60	132648
SENIORS	60+	71770
KIDS	0-12	7284

Distribution of Victims Across Age Groups

Kids (0-12)
Seniors (60+)
Adults (31-45)
1.1%
11.3%
34.8%
Middle-Aged (46-60)
20.9%
31.8%
Teens and Young Adults (13-30)

Top 3 Crime Descriptions by Age Group

Crime Description
- THEFT OF IDENTITY
- BATTERY - SIMPLE ASSAULT
- BURGLARY FROM VEHICLE
- CHILD ABUSE (PHYSICAL) - SIMPLE ASSAULT
- CRM AGNST CHLD (13 OR UNDER) (14-15 & SUSP 10 YRS OLDER)
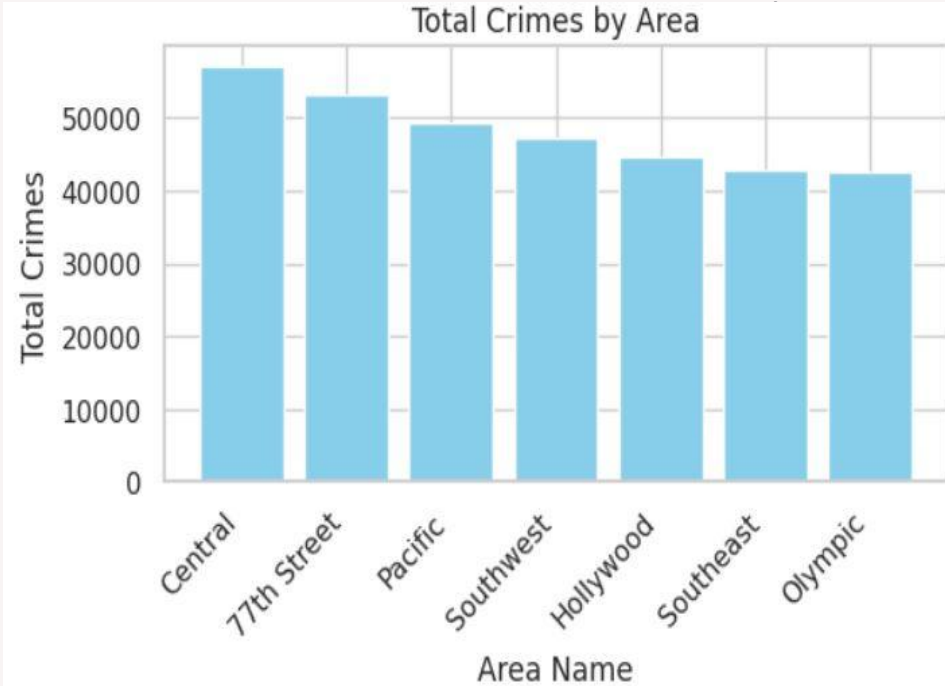- ASSAULT WITH DEADLY WEAPON, AGGRAVATED ASSAULT
- BURGLARY
- INTIMATE PARTNER - SIMPLE ASSAULT

- 'THEFT OF IDENTITY', 'BATTERY - SIMPLE ASSAULT', 'BURGLARY FROM VEHICLE' Are The Most Prevalent Crimes Across Various Age Groups.

- 'Assault With Deadly Weapon', Majority Of The Victims Are In The Age-category Of Middle-aged.

- "Intimate Partner - Simple Assault" Is A Notable Crime For The 'Teen And Young' Age Group.
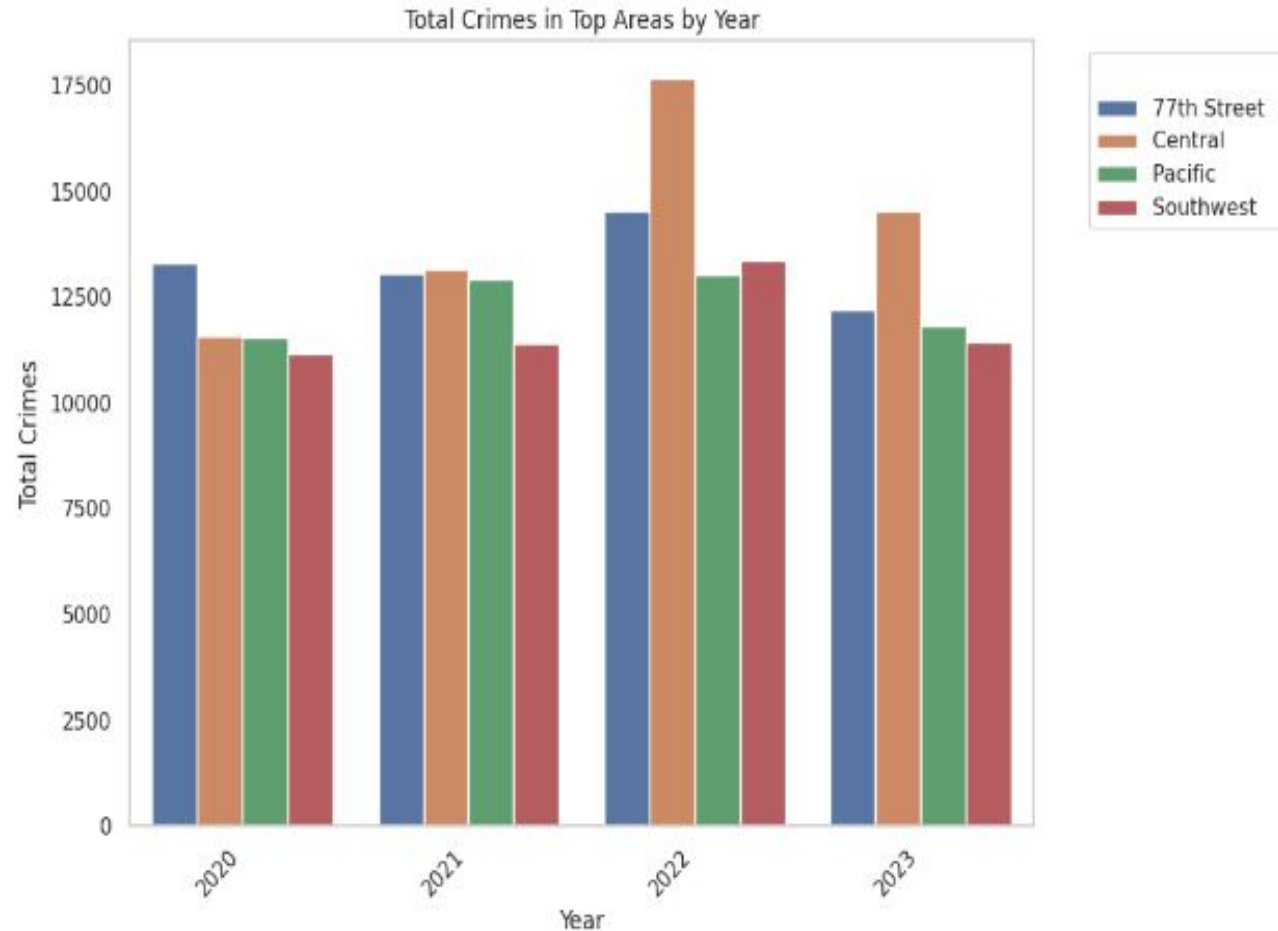
Neighborhoods that have the highest crime rates

- "Central" area reported the highest crimes at 57,280 incidents.

- "77th Street" followed with 53,324 incidents, and "Pacific" reported 49,502 incidents. Other notable areas include "Southwest" (47,581), "Hollywood" (44,790), "Southeast" (43,127), and "Olympic" (42,732).
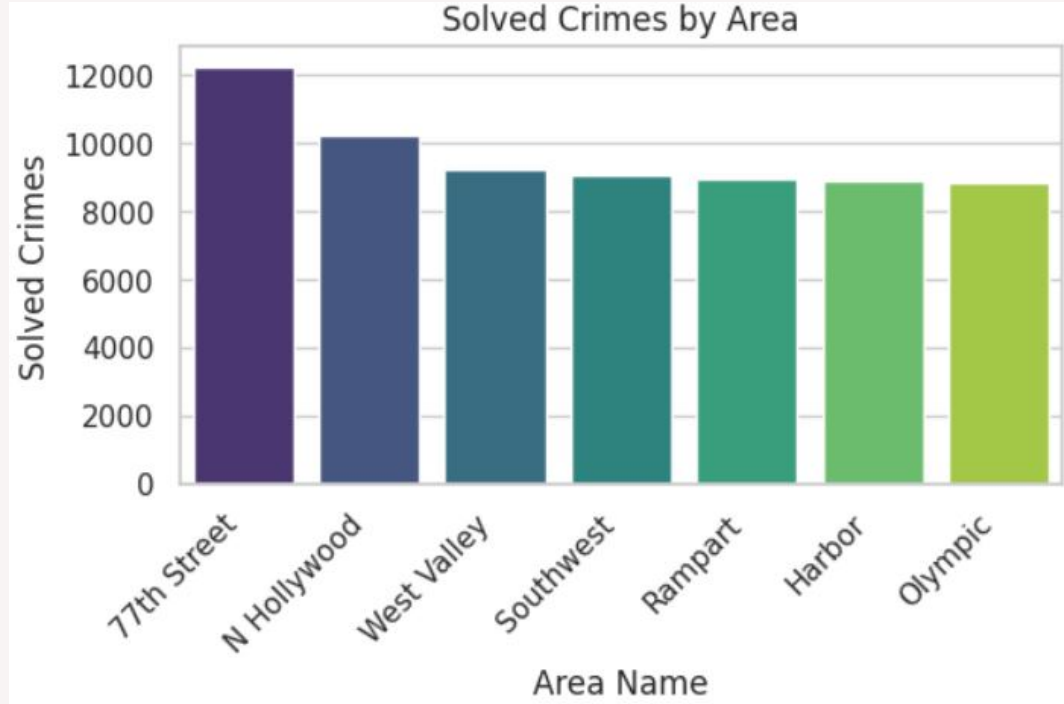

Total Crimes by Area

Top Areas for crime in all the 4 Years are

- 77th Street
- Central
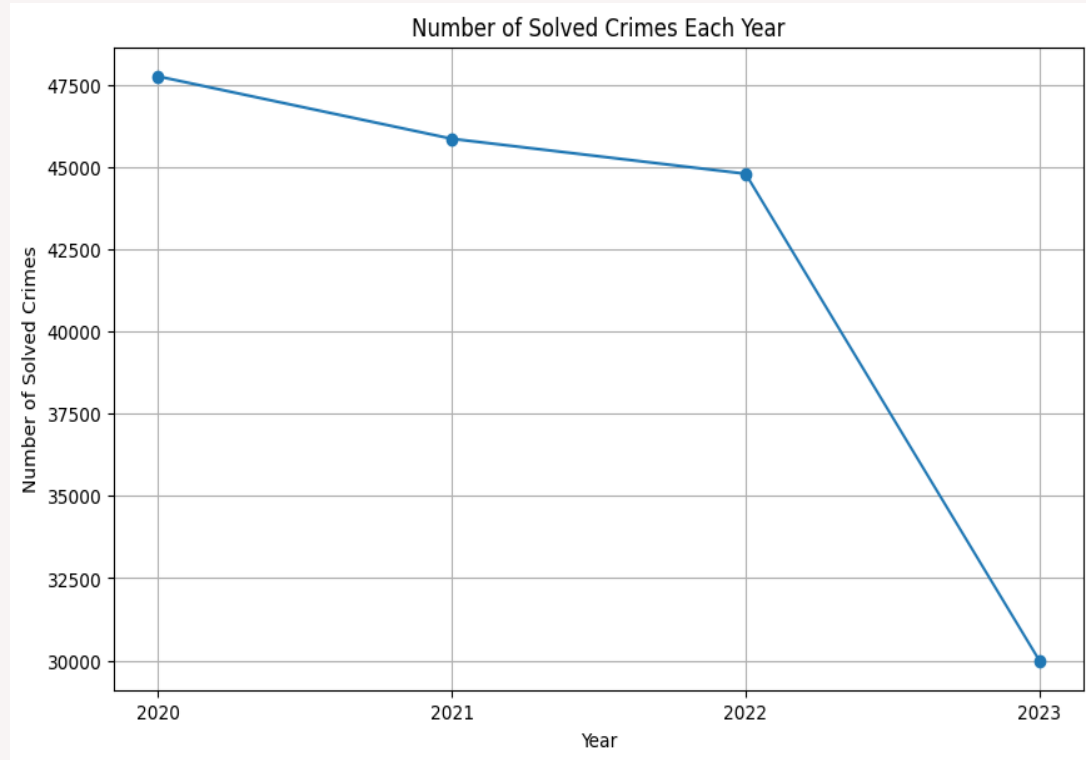- Pacific
- Southwest

Total Crimes in Top Areas by Year

Top Areas where Most number of crimes are solved

- 77th Street
- N Hollywood
- West Valley
- Southwest
- Rampart
- Harbor
- Olympic

Solved Crimes by Area

How many crimes were solved each year?

- 2020: 47,751 solved crimes
- 2021: 45,854 solved crimes
- 2022: 44,790 solved crimes
- 2023: 29,994 solved crimes

Number of Solved Crimes Each Year

Conclusion

- Focused Policing:
  Concentrate law enforcement efforts in high-crime areas like "Central," "77th Street," and "Pacific."

- Targeted Interventions:
  Address specific crimes, e.g., "Vehicle - Stolen," with tailored strategies.

- Seasonal Planning:
  Adapt policing strategies based on seasonal and quarterly crime trends.

- Enhanced Law Enforcement Resources:
  Consider recruiting additional personnel to address the backlog of pending cases and improve overall resolution rates.