Quarterly Report on Crime in Los Angeles

Data-Driven Insights & Strategic Recommendations from CID Analysis

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Agenda/Overview

Introduction: Understanding the Problem & Solution Approach

Problem Statement

- Across Los Angeles, escalating crime reports have raised public concern.

- New CID established by the mayor to investigate trending crime patterns.

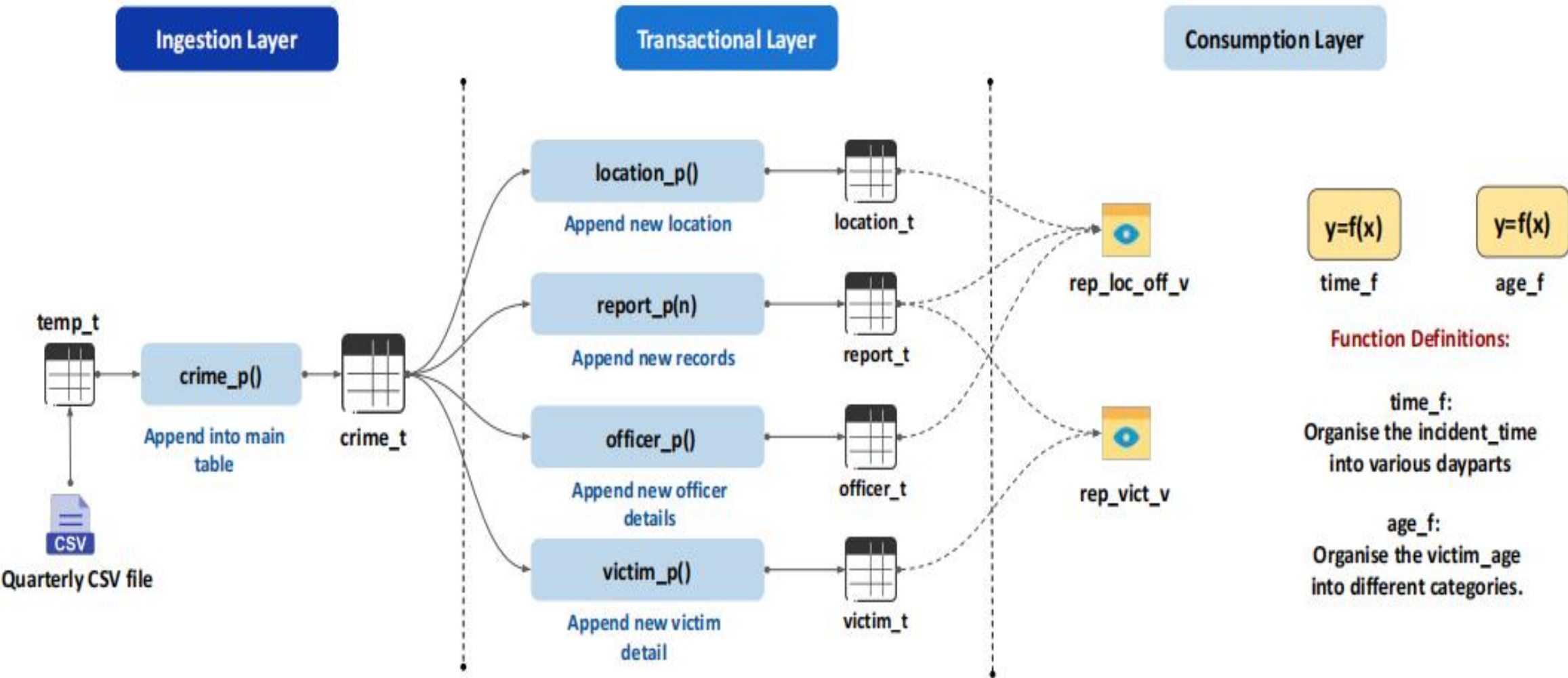- Public safety is at risk due to unorganized, flat file data.

Objective

- Build a SQL data pipeline to centralize and structure disparate crime data. **For sustainable data management, faster query responses, actionable insights**

- Analyze key factors: crime frequency, victim demographics, time and location specifics.

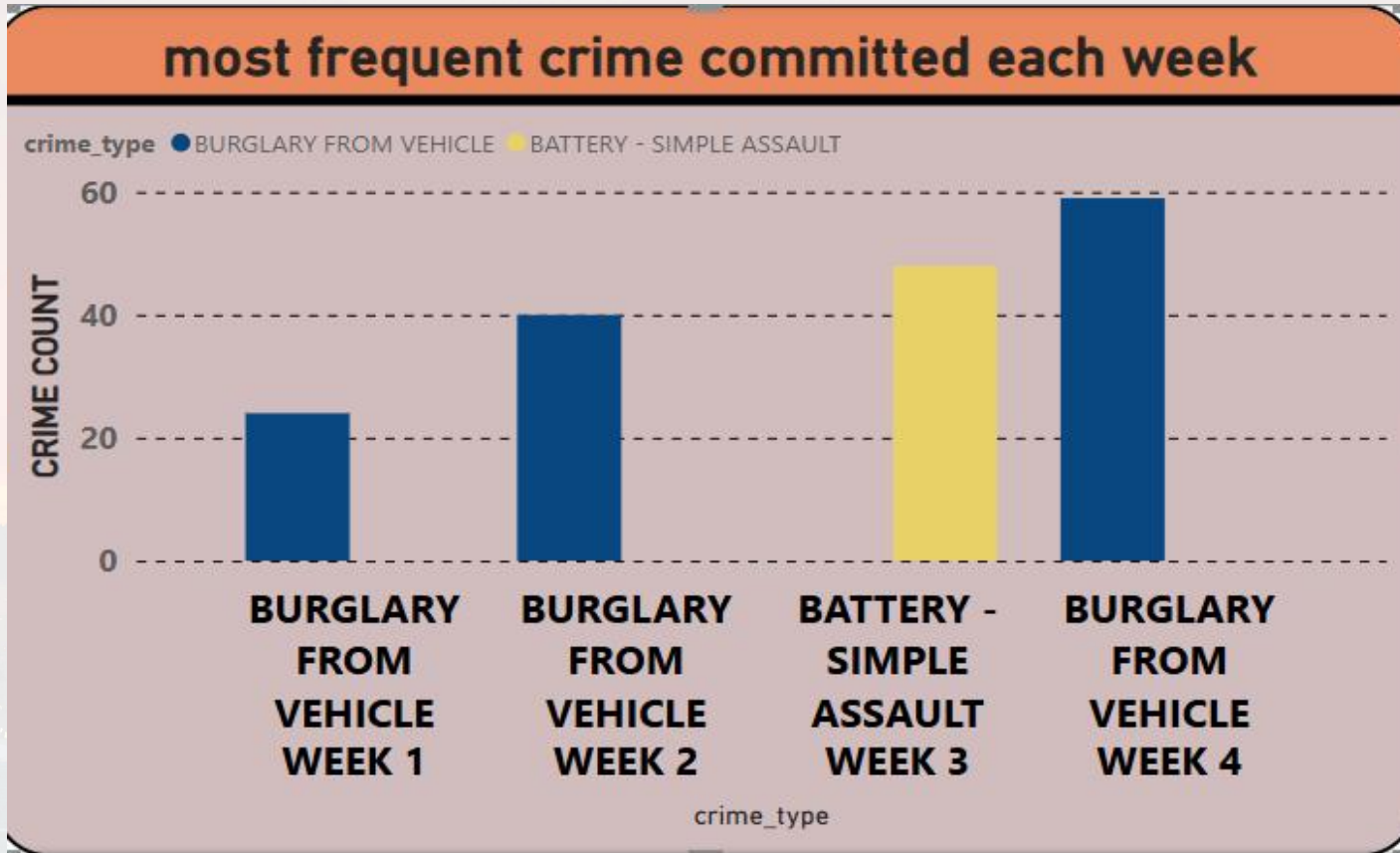- **Provide actionable insights** for enhanced law enforcement response.
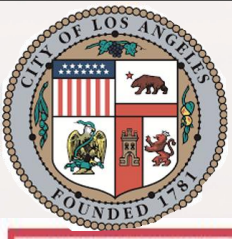
Data Pipeline

Weekly Crime Frequency: Identifying Trends

most frequent crime committed each week

crime_type ● BURGLARY FROM VEHICLE ● BATTERY - SIMPLE ASSAULT

- ☑ Burglary from Vehicle is the most frequent crime overall.
- ☑ Week 4 recorded the highest burglary cases (~50 incidents).
- ☑ Battery - Simple Assault peaked in Week 3 (~45 incidents).
- ☑ Crime trends suggest patterns officials can use for strategic policing

Burglary incidents are consistently high; prevention efforts should focus on reducing vehicle-related crimes
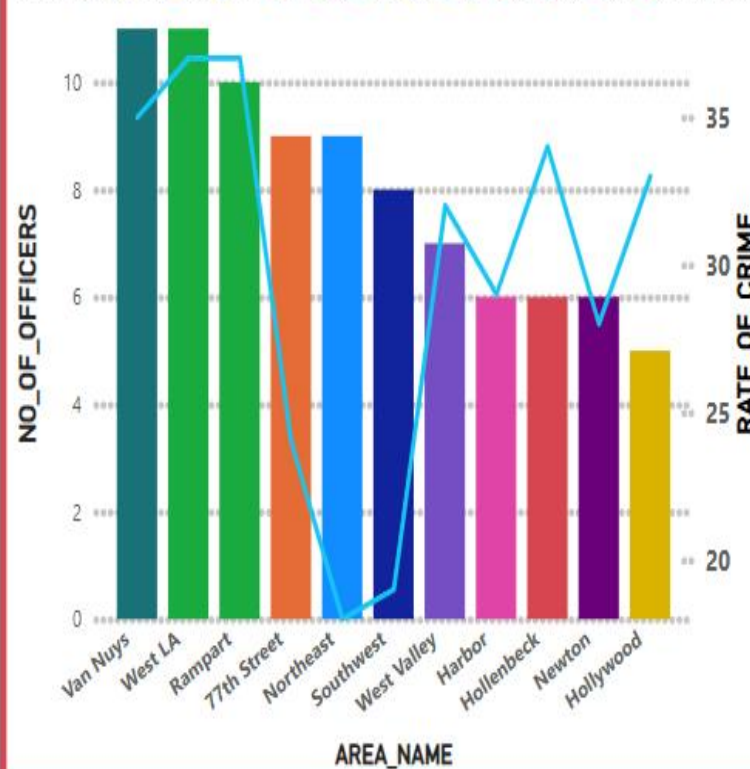
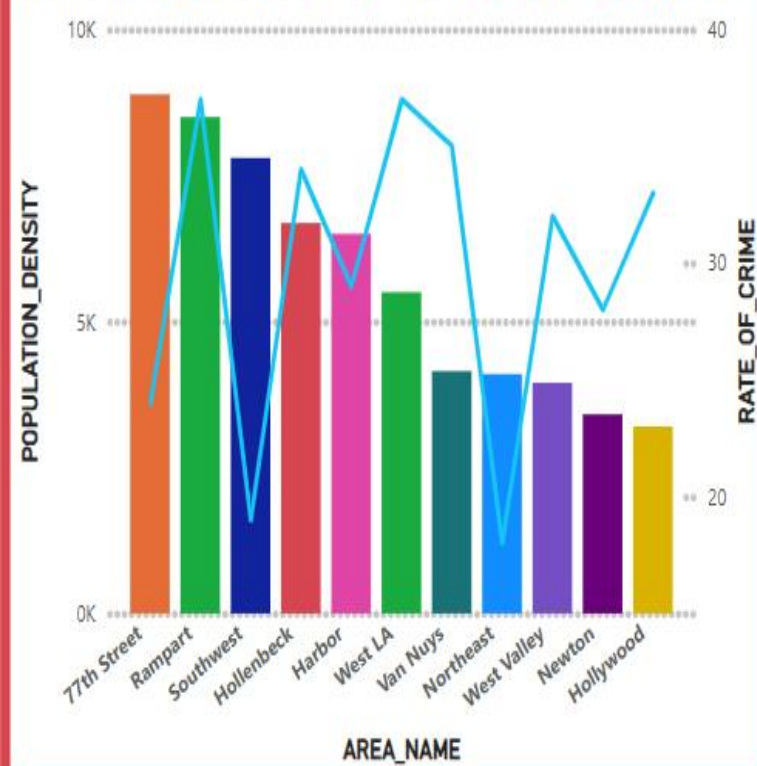# Crime vs. Population & Policing: Understanding the Impact

CRIME RATE VS NO OF POLICE PERSONNEL

NO_OF_CRIMES ● 18 ● 19 ● 24 ● 28 ● 29 ● 32 ● 33 ● 34 ● 35 ● 37 ● Sum of N...
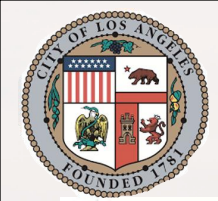

Crime Rates vs. Population Density

NO_OF_CRIMES ● 18 ● 19 ● 24 ● 28 ● 29 ● 32 ● 33 ● 34 ● 35 ● 37 ● Sum of N...

- ✓ **Crime Rate vs. Police Personnel:**
  Areas with a **higher number of police officers do not always have lower crime rates**—for example, **Van Nuys has a high officer count but also a high crime rate**, suggesting that factors beyond police presence, such as socio-economic conditions, may influence crime levels.

- ✓ **Crime Rate vs. Population Density:**
  Areas with **higher population density, such as Rampart and 77th Street, tend to have higher crime rates**, indicating a potential correlation between dense urban environments and increased criminal activity
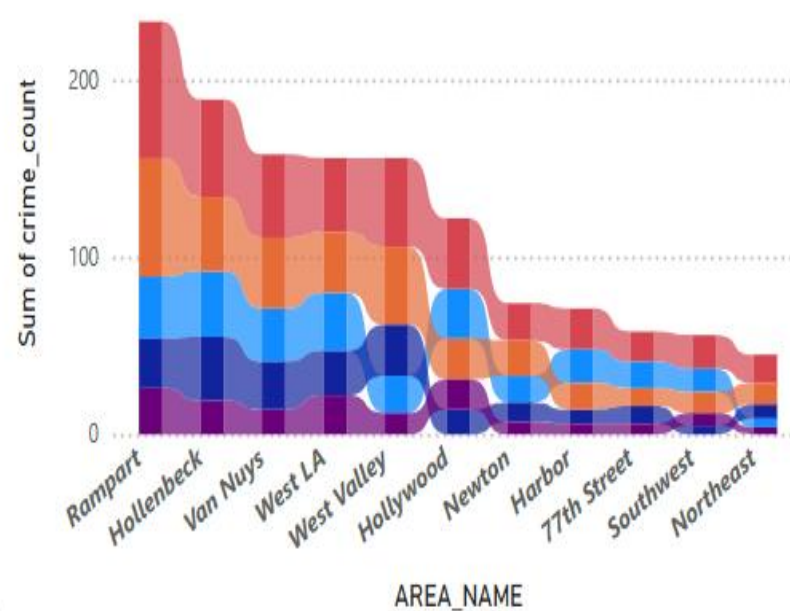
TAKEAWAY: Crime prevention strategies should not rely solely on increasing police personnel but should also **consider urban planning, surveillance, and socio-economic interventions** to effectively reduce crime in high-density areas
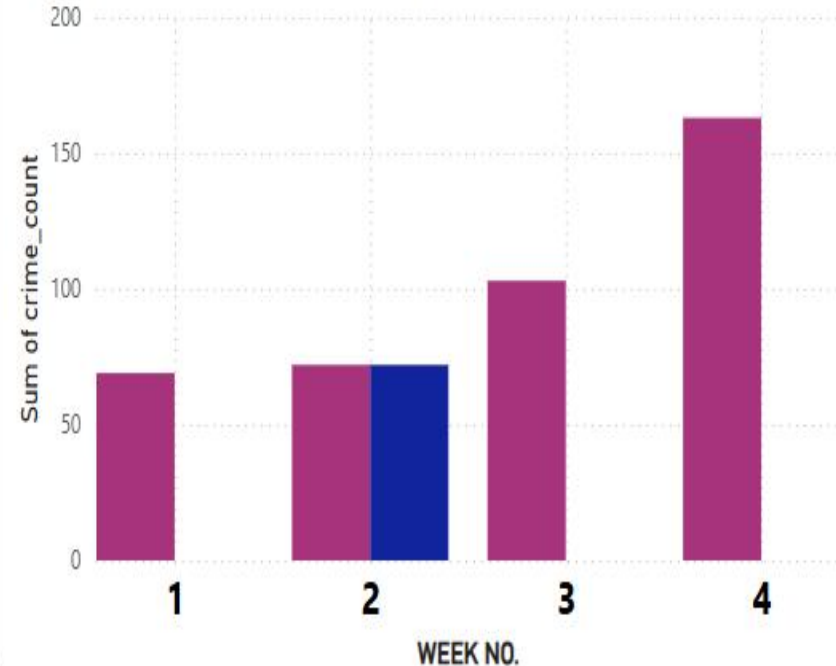
Crime Prevalence: Where & When Crimes Peak

Time periods where crime is at its peak in the different localities

Time_period ● Afternoon ● Evening ● Midnight ● Morning ● Night

Time periods where crime rate is at its peak
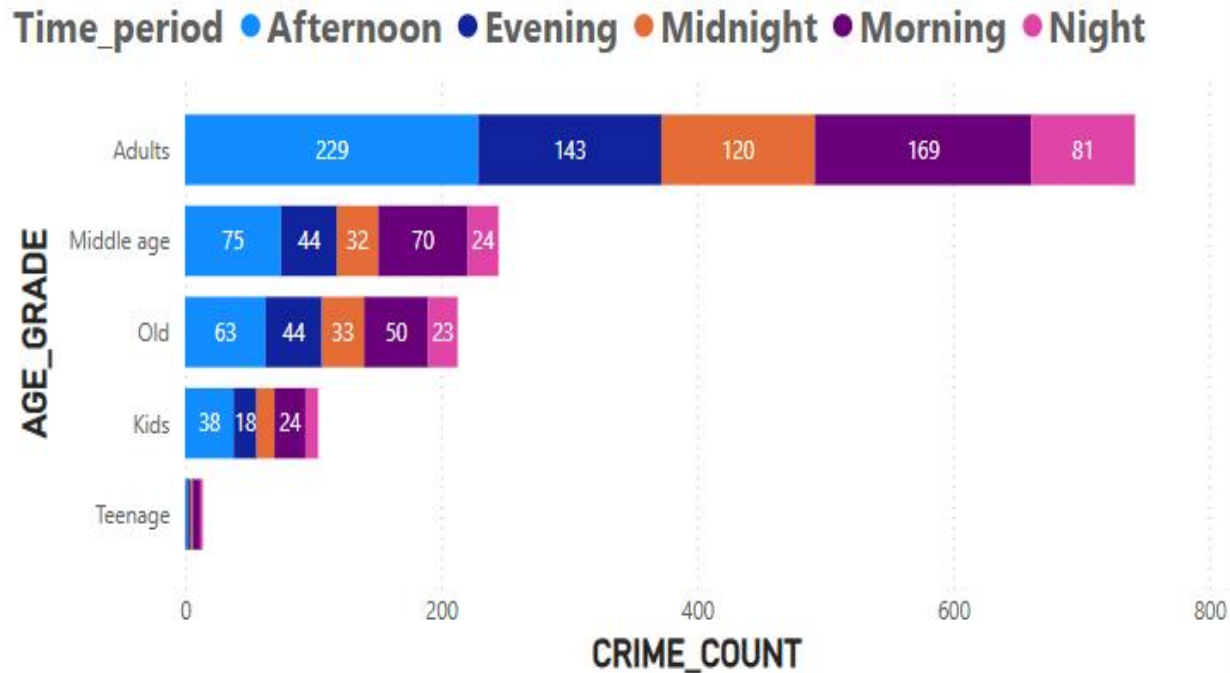
Time_period ● Afternoon ● Morning

☑ **The locality records the highest crime rates**, predominantly during the **afternoon and evening**, when public activity is highest.

- ☑ **Crime rate is at its peak from Wk 1 - Wk 4** in the **afternoon too.**

Focused policing and surveillance should be adjusted to crime peak hours across localities to reduce risk and improve public safety

Crime Vulnerability by Age Group & Time of Day

Points in the day where different age grade are most vulnerable to crimes

Time_period ● Afternoon ● Evening ● Midnight ● Morning ● Night

- ☑ **Adults** are most vulnerable in the **afternoon** and **morning** likely due to work commutes and public activity

.

- ☑ **Middle-aged individuals** face higher crime risks in the **afternoon** and **morning ,**suggesting exposure during daily routines.

- ☑ **Elderly individuals** experience crime more frequently in the **afternoon** and **morning ,** possibly due to outdoor errands or lower mobility.

- ☑ **Kids** are most vulnerable in the **afternoon** and **midnight**, indicating risks related to school hours and late-night incident
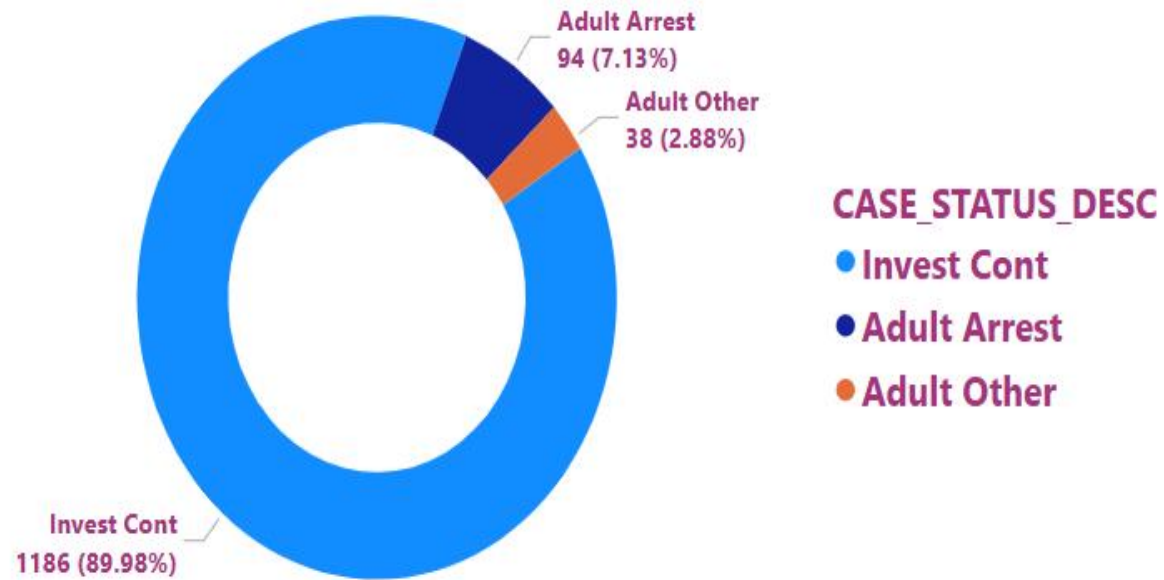
Takeaway: Crime prevention efforts should focus on **afternoon and morning hours, particularly for adults and middle-aged individuals**, while ensuring heightened security for kids during school hours and late nights.

Reported Crimes: Investigation Status & Resolution Rates
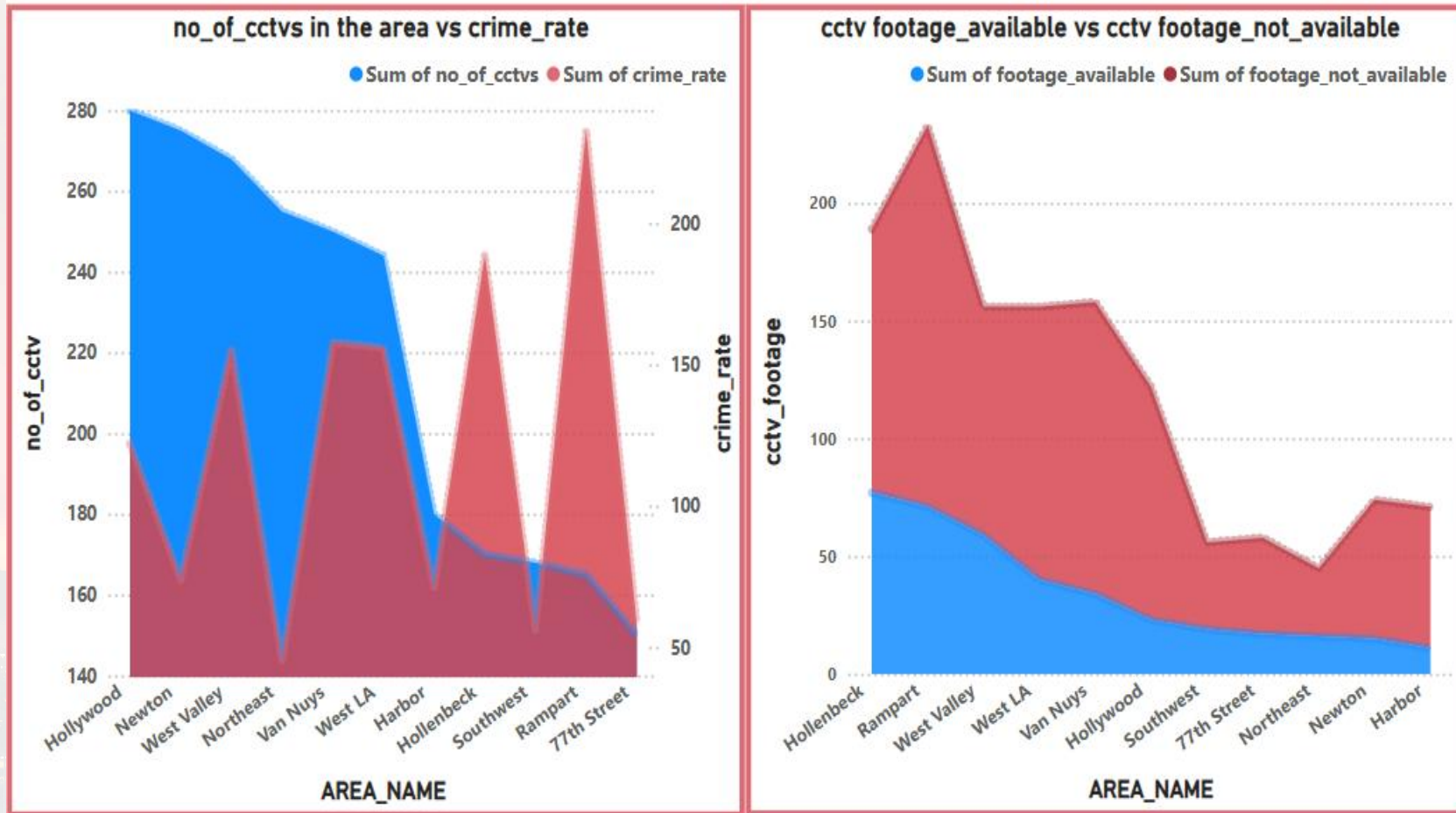
Status of reported crimes

Adult Arrest
94 (7.13%)

Adult Other
38 (2.88%)

CASE_STATUS_DESC
- Invest Cont
- Adult Arrest
- Adult Other

Invest Cont
1186 (89.98%)

☑ **Most crimes remain under investigation—89.98%** of reported incidents have not yet reached a resolution.

☑ **Only 7.13% of cases have led to an adult arrest**, indicating a relatively low prosecution rate

☑ **Adult-related alternative case outcomes account for 2.88%**, possibly involving settlements or non-arrest resolutions

Takeaway:
High percentage of ongoing investigations highlights **the need for faster case resolution** strategies, improved policing efficiency, **and optimized crime analysis techniques** to enhance public trust and safety

Reported Crimes: Investigation Status & Resolution Rates

no_of_cctvs in the area vs crime_rate
● Sum of no_of_cctvs ● Sum of crime_rate

cctv footage_available vs cctv footage_not_available
● Sum of footage_available ● Sum of footage_not_available

☑ CCTV **cameras do not entirely prevent crimes**, but they assist in investigations by providing surveillance evidence.

☑ The amount of CCTV footage **recovered is significantly lower than expected**, indicating gaps in functionality, accessibility, or storage
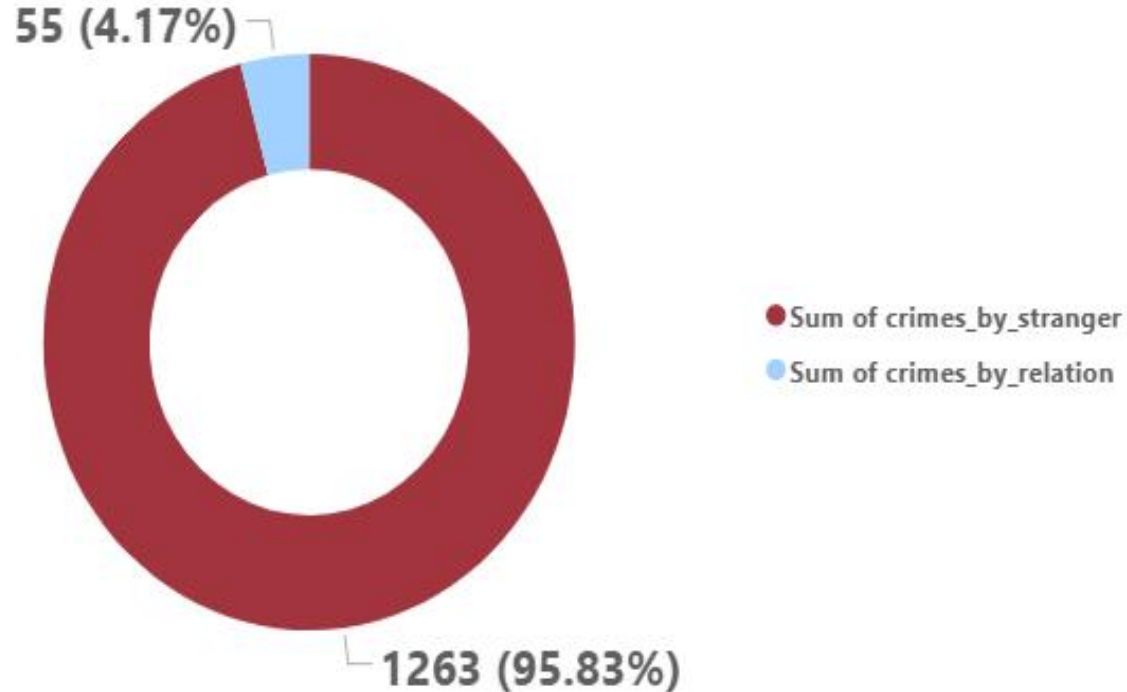
☆**Takeaway:**
While CCTV cameras enhance crime detection and investigation, **their effectiveness in** ~~nting~~

crime outright may depend on additional factors such as visible law enforcement and community engagement. Increasing accessibility to CCTV footage **could improve crime-solving** ~~efficiency~~

Assessing the Relationship Dynamics in Crimes

Crime likelyhood (by stranger vs by relation)

55 (4.17%)

- Sum of crimes_by_stranger
- Sum of crimes_by_relation

1263 (95.83%)

☑ Crimes committed by **strangers are significantly more frequent compared to those committed by individuals** known to the victim. This suggests that random incidents—such as theft or assault—are driving a large portion of reported crimes.

☑ There is **still a notable percentage** of crimes committed by acquaintances or family members, indicating that domestic or personal disputes also contribute to overall crime statistics

Takeaway:
Law enforcement should **prioritize public safety measures against opportunistic crimes** by strangers, while also **implementing community-based initiatives to address conflicts and domestic-related incidents** that involve known perpetrators

Public Crime Reports: Which Method Is Used Most?

CRIME REPORT METHOD

	Sum of crime_count	
Email	62	✉
In-Person	446	🚶
Phone	810	📞

☑ Phone-based reporting is the most frequently used method, indicating that **direct communication remains the preferred way for the public to report crimes quickly**.

☑ Online crime reporting is also widely used, **showing a growing reliance on digital platforms for convenience and accessibility**.

☑ In-person reports are less common, suggesting that **individuals prefer remote reporting options rather than visiting police stations physically**.

📌**Takeaway:**
Law enforcement should ensure **phone-based reporting remains efficient** while improving online systems for accessibility. Additionally, **in-person reporting should be structured for cases that require immediate face-to-face intervention**

Strategic Recommendations for Improved Public Safety

key Recommendations

📌Adaptive Policing

• Align patrol schedules with peak crime times & high-density hotspots

📌Enhanced Surveillance & Investigation

• Upgrade CCTV systems & improve footage recovery
  • Accelerate case resolution

📌Community Engagement & Reporting

• Strengthen phone/online reporting
  • Address crimes by both strangers and acquaintances

📌Data-Driven Strategy

• • Employ regular analytics to refine resource allocation and policies

Action Plan

📌Deploy Adaptive Patrols:

Implement targeted resource allocation during identified high-risk periods.

📌Invest in Surveillance:

Upgrade CCTV technology and retrieval methods.

📌Boost Reporting Platforms:

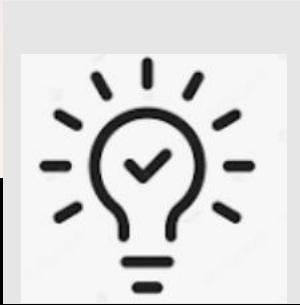Improve accessibility and responsiveness of phone and online systems.

📌Establish Regular Reviews:

Use ongoing analytics to adjust strategies and policies

Conclusion

Our comprehensive evaluation of public safety from crime patterns to reporting and investigation methods has provided a clear picture of where improvements can be made.
By integrating these findings, we can build a public safety ecosystem that is adaptive, responsive, and community-driven.
Transforming these insights into action is our opportunity to create safer communities for everyone

Q&A/Discussion