

# Los Angeles Crime Trends

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a study of changes in reported crime by date and region



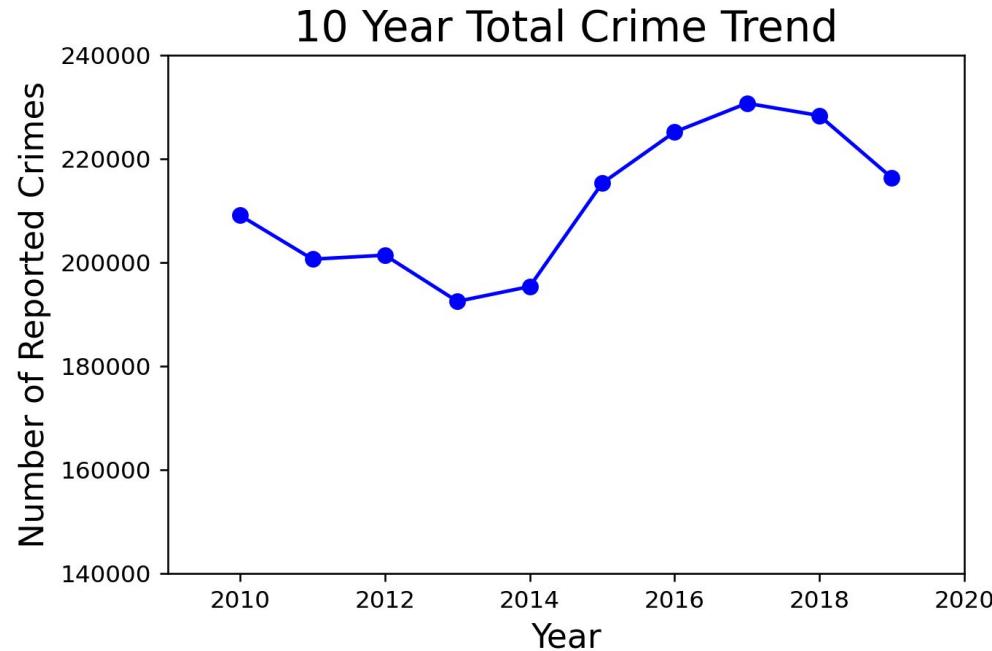
# Summary

- Thorough analysis of crime reporting is vital for law enforcement to adapt effectively
- An accurate assessment of the number and types of crimes being committed is necessary to evaluate existing policies and inform new approaches
- Understanding how crime changes through time and by region is essential for appropriate response



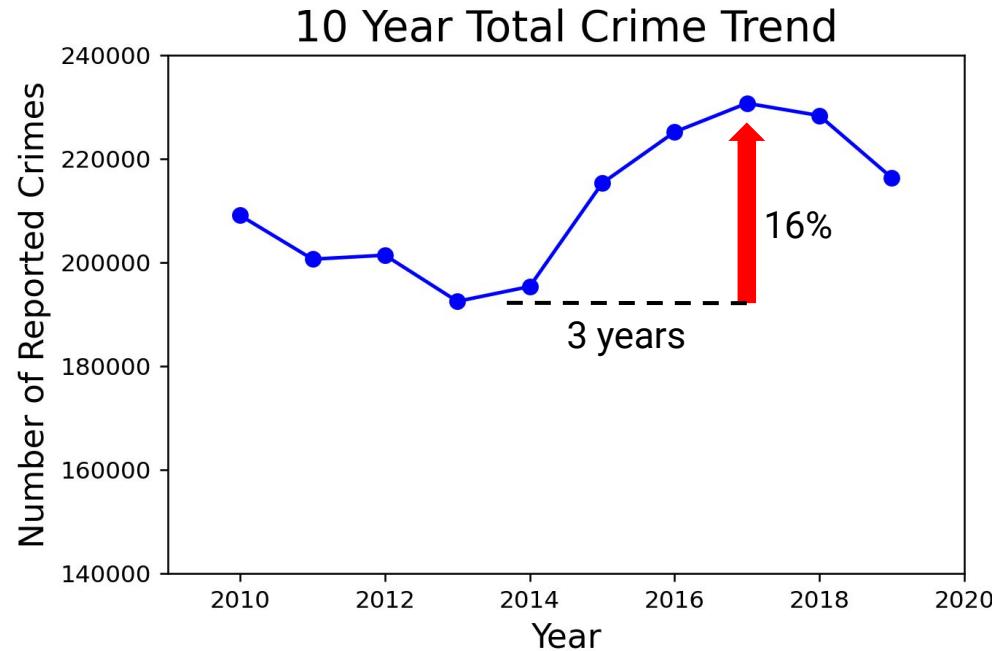
# About the data

- The data used in this investigation comes from the LAPD reported crime database
- The files consist of an archival record from 2010-2019 and an actively updated record for 2020
- This study focuses on dates, locations, and types of crimes reported

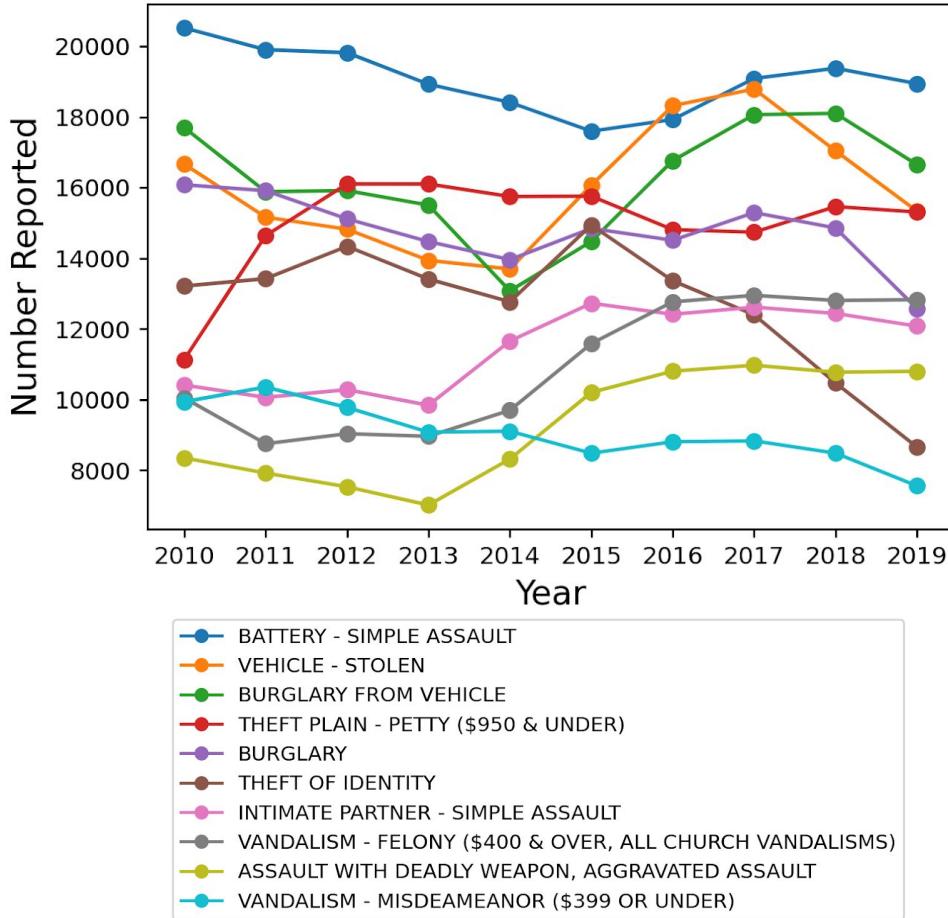


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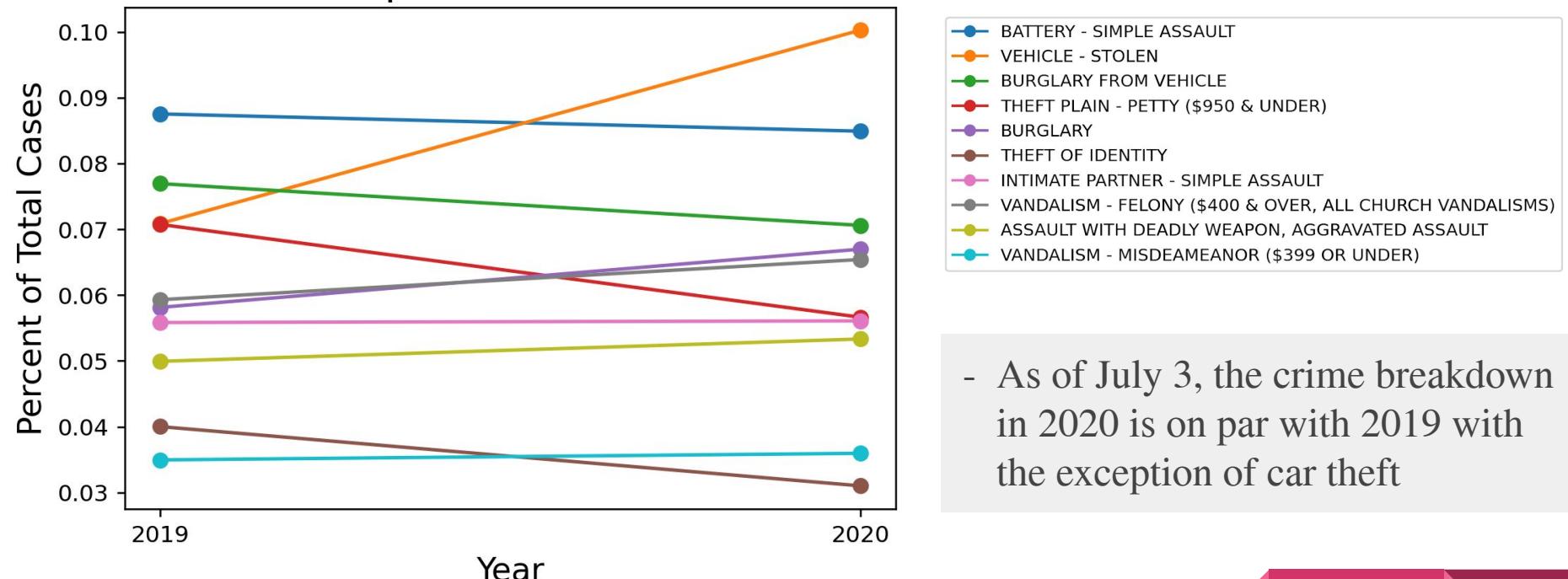


## Most Reported Crimes: 10 Year Trends



- Battery/Simple Assault is the most commonly reported crime but shows some fluctuation
- Identity theft shows a sudden drop off beginning in 2015
- Several crimes show an uptick in 2013 and 2014 but appear to flatten out by 2017

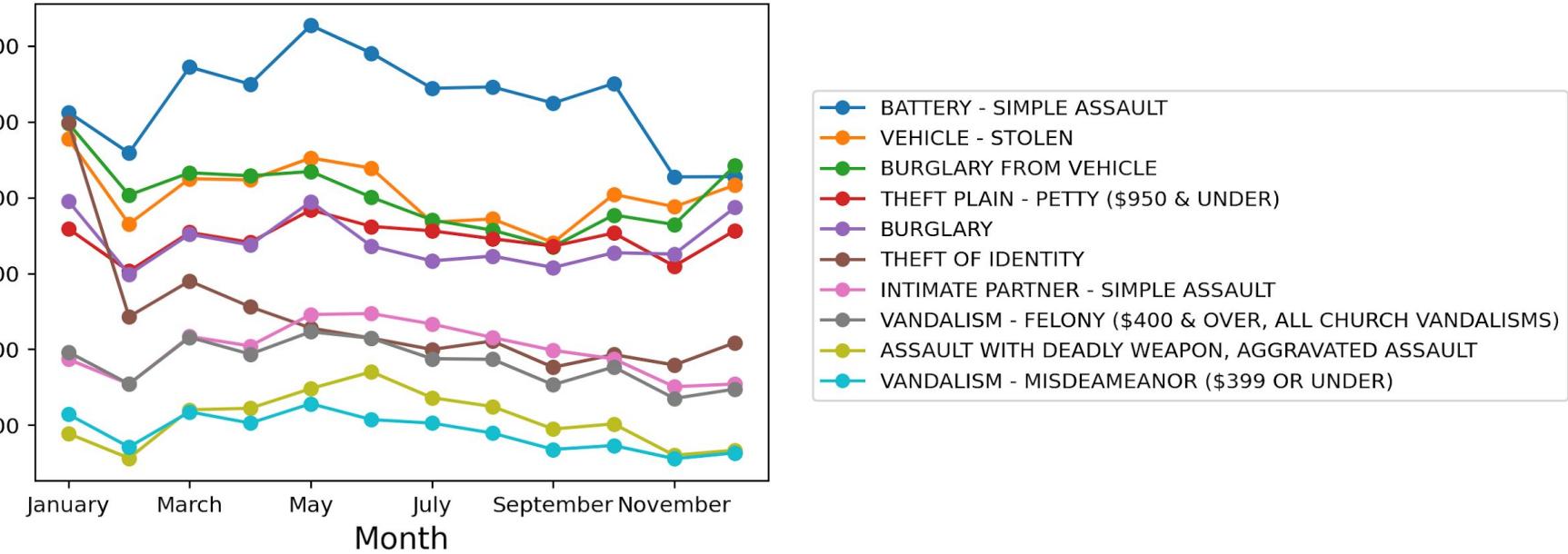
## 2020 Reported Crime Trends



- As of July 3, the crime breakdown in 2020 is on par with 2019 with the exception of car theft

# Monthly Crime Trends

Number of Cases



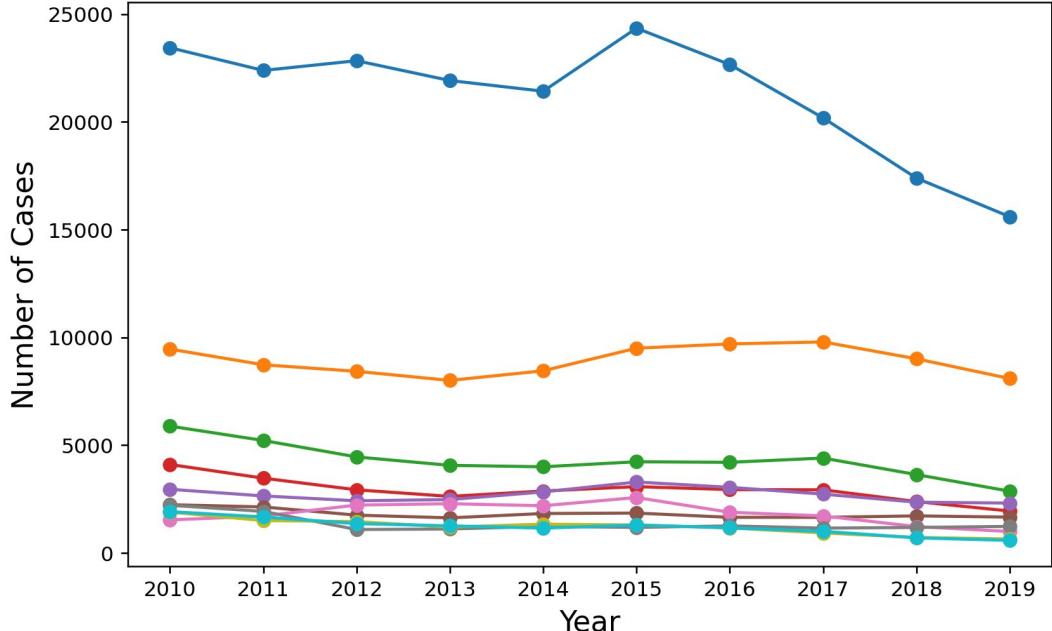
- Stolen vehicle reports are slightly higher in the winter months but not enough to explain the 3% increase observed in the first half of 2020

# Modus Operandi Codes

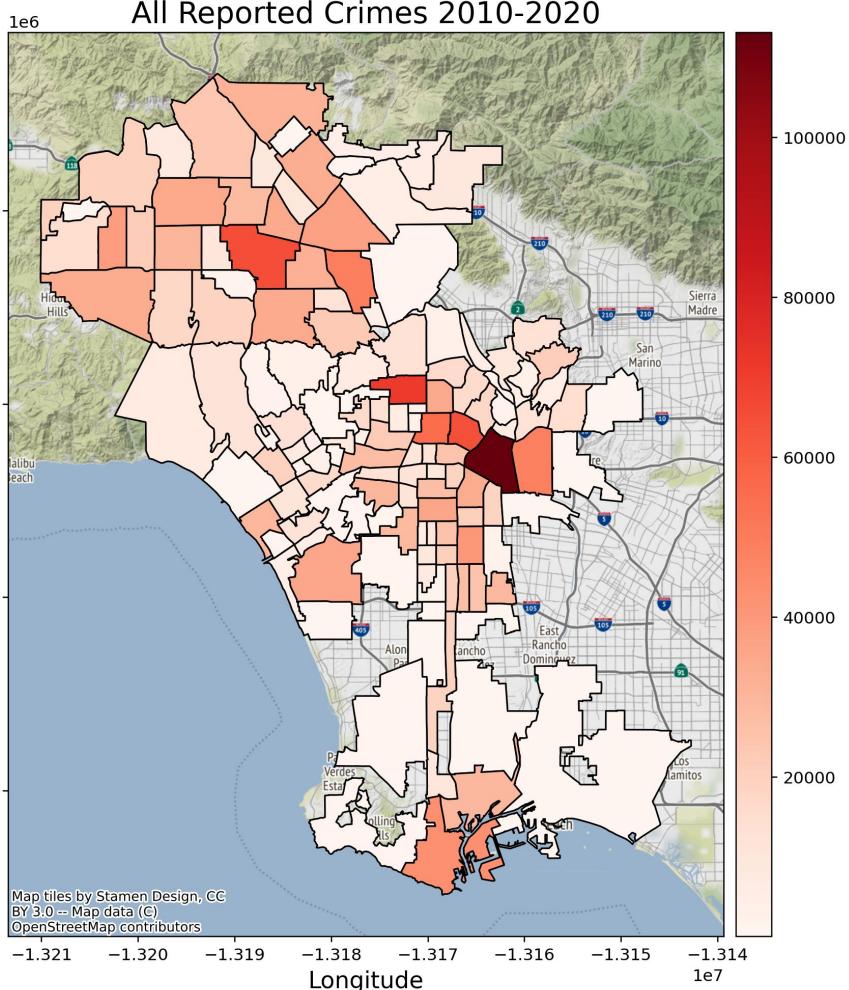
- Modus Operandi (MO) codes are used to characterize the methods or actions of the perpetrator
- The top ten codes reported for 2019-2020 can been seen in the table to the right
- Codes are sometimes used in combination to provide additional context

MO Code	Description
<b>0344</b>	Removed victim's property
<b>0329</b>	Vandalized
<b>1501</b>	Other MO
<b>0416</b>	Hit/hit with weapon
<b>0325</b>	Took merchandise
<b>0329, 1300</b>	Vandalized, vehicle involved
<b>1822</b>	Stranger
<b>0344, 1300</b>	Removed victim's property, vehicle involved
<b>0400</b>	Force used
<b>0377</b>	Takes victim's ID/driver license

## Ten Year MO Code Trends



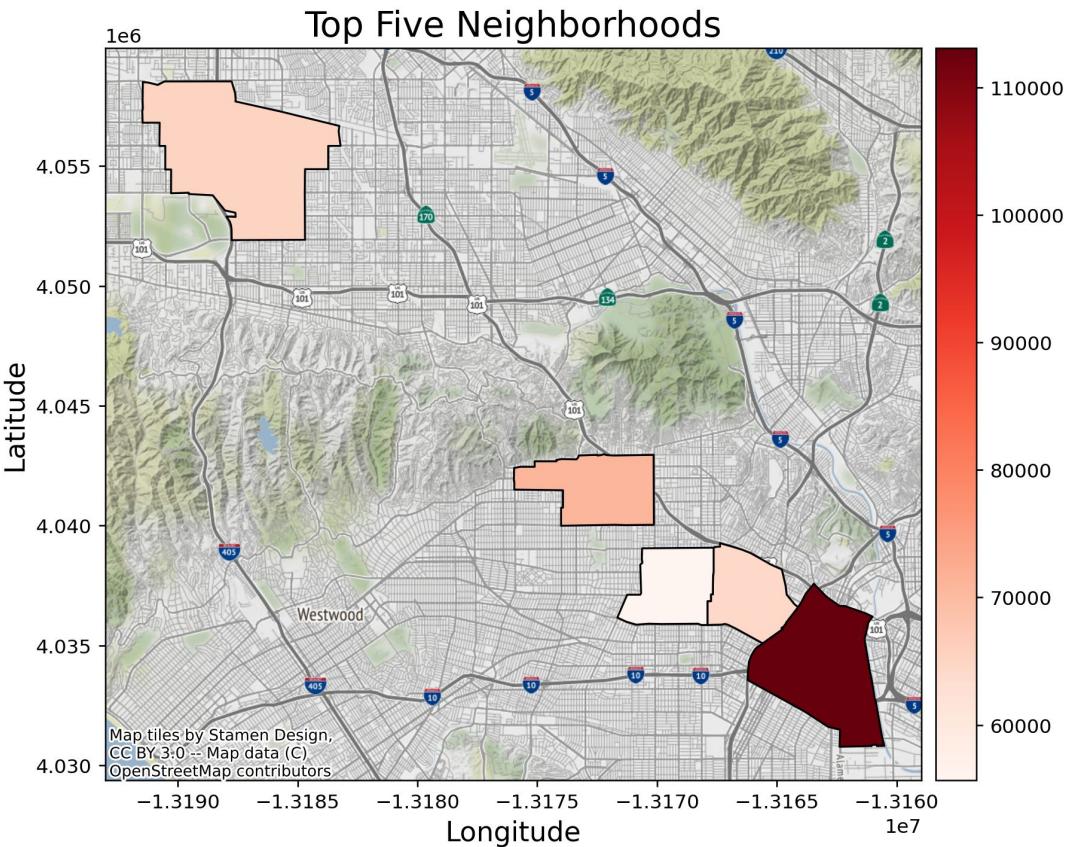
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## Regional Distribution

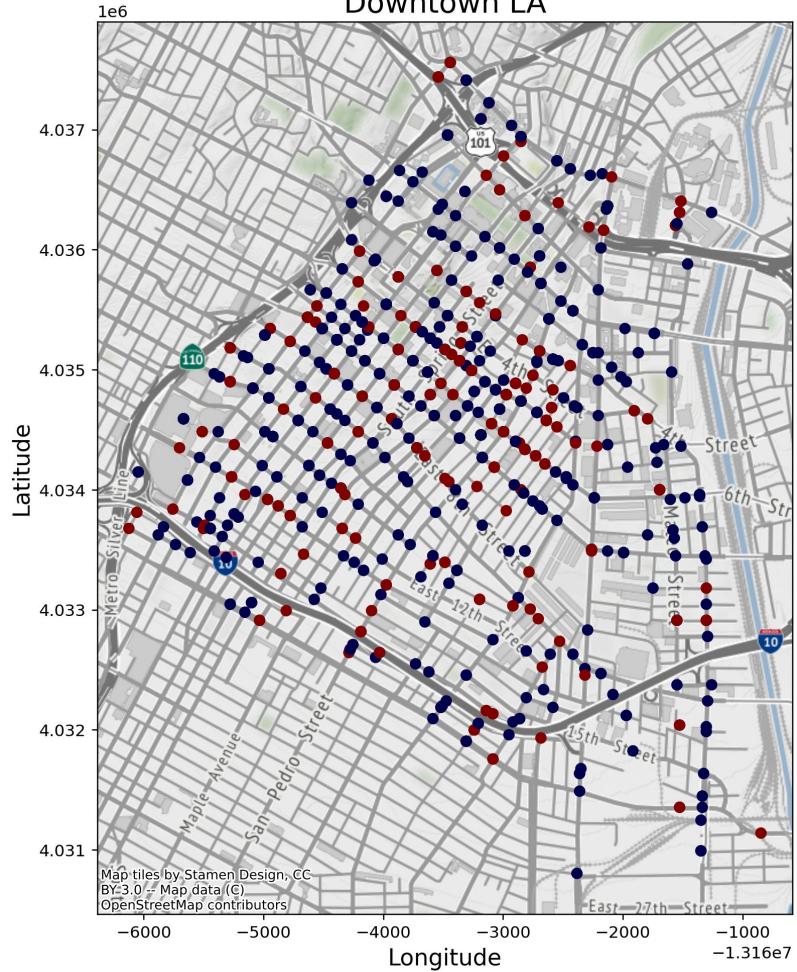
- The dataset includes the latitude-longitude coordinates of each reported incident
  - Crime reports come from outside of Los Angeles city limits as well
  - The distribution roughly correlates to population density

# Regional Distribution



- 17% of reported crimes come from just five neighborhoods
- Downtown
- Koreatown
- Westlake
- Hollywood
- Van Nuys

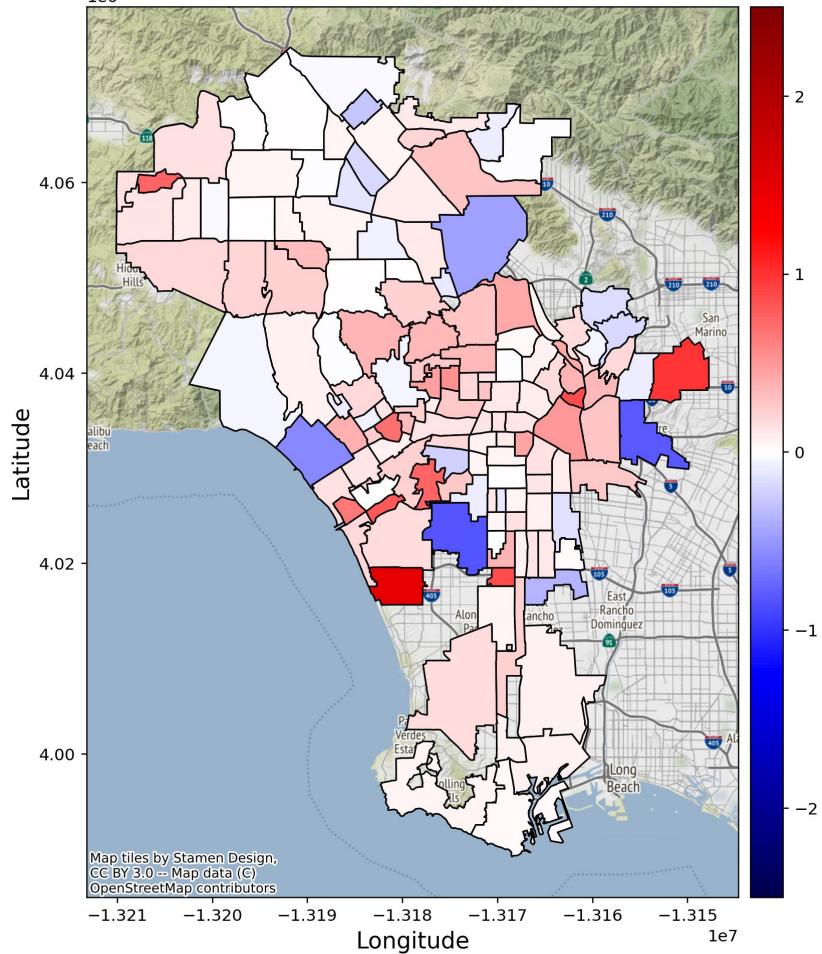
## Downtown LA



# Regional Distribution

- The data presented at left is from the month of March in 2019
- Red points indicate violent crime, blue points indicate property crime
- The location resolution is about at the intersection scale

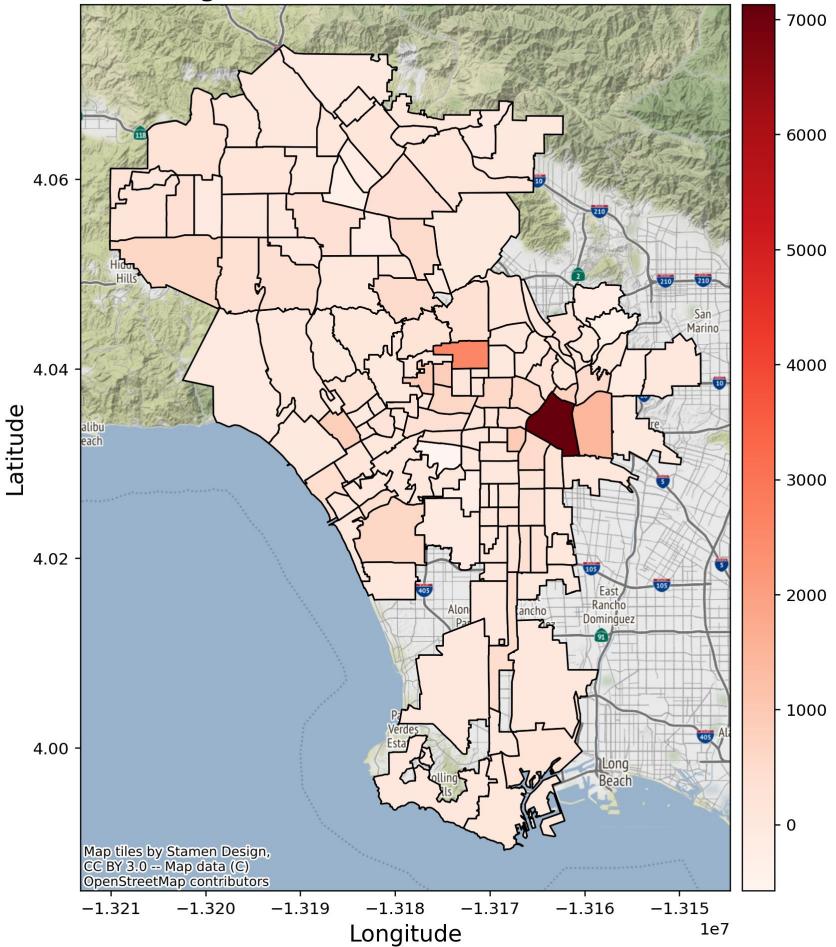
## Crime Growth 2015-2019



# Regional trends

- For a five year growth trend I added the cumulative annual growth percentage
- In this formulation, the percentage is proportional to the number of reported crimes in that neighborhood

## Weighted Crime Growth 2015-2019



# Regional trends

- When each neighborhood is weighted by it's 2019 crime totals, a few distinct regions jump out
- On this map the color scale represents the additional crimes reported this year relative to the last

# Crimes by Category

## Part I – Property Crimes

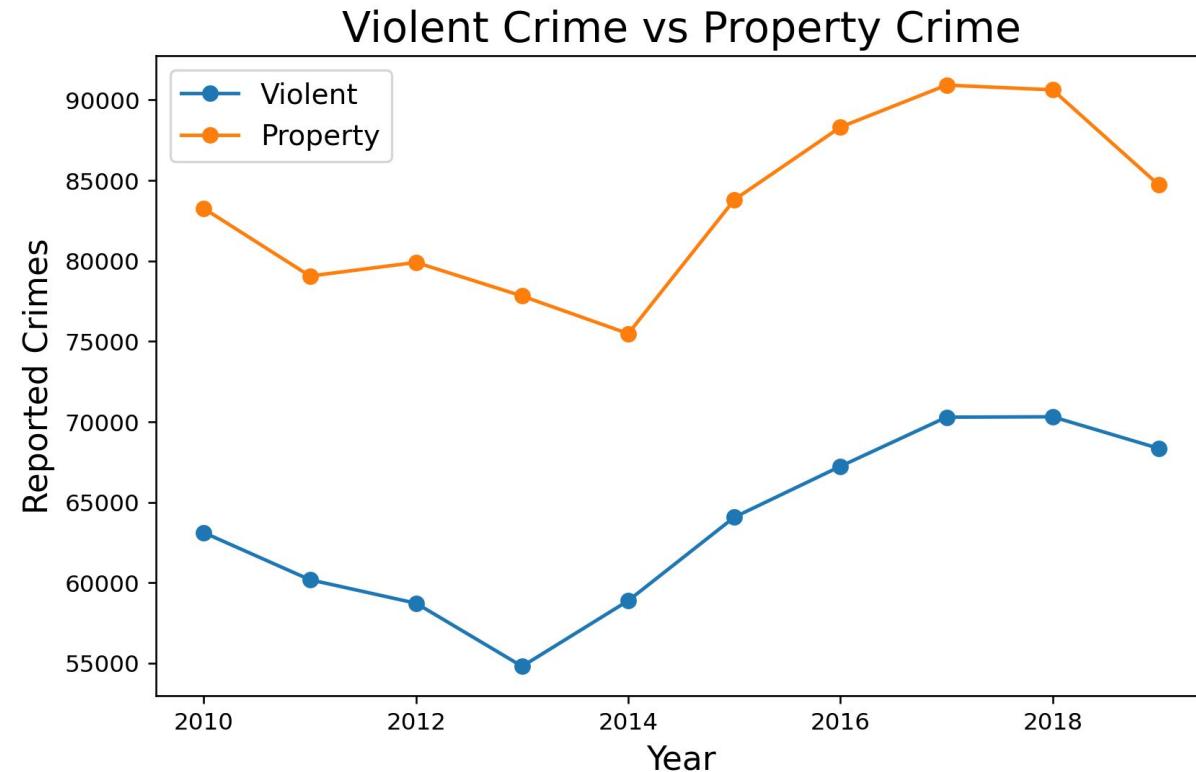
BURGLARY	310 (Burglary) 320 (Burglary - attempted)
MVT (GTA)**	510 (Stolen Vehicle) 520 (Stolen Vehicle - attempted) 433 DWOC
BTBV	330 (Burg from Vehicle) 331 (Theft from vehicle - \$950.01 & over) 410 (Burg from Vehicle - attempted) 420 (Theft from vehicle - \$950 & under) 421 (Theft from vehicle attempted)
PERSONAL THFT	350 (Theft from person) 351 (Pursesnatch) 352 (Pickpocket) 353 (Drunkroll) 450 (Theft from person - attempted) 451 (Pursesnatch - attempted) 452 (Pickpocket - attempted) 453 (Drunkroll - attempted)
OTHER THEFT	341 (Theft - \$950.01 & over) 343 (Shoplifting - \$950.01 & over) 345 (Dishonest employee - grand theft) 440 (Theft - \$950 & under) 441 (Theft - attempted) 442 (Shoplifting - \$950 & under) 443 (Shoplifting - attempted) 444 (Dishonest employee - petty theft) 445 (Dishonest Employee - attempted) 470 (Till Tap - \$950.01 & over) 471 (Till Tap - \$950 & under) 472 (Till Tap - attempted) 473 (Theft from coin m/c - \$950.01 & over) 474 (Theft from coin m/c - \$950 & under) 475 (Theft from coin m/c - attempted) 480 (Bicycle - stolen) 485 (Bicycle - attempted stolen) 487 (Boat - stolen) 491 (Boat - attempted stolen)

## Part I – Violent Crimes

HOMICIDE	110 (Homicide) 113 (Manslaughter)
RAPE	121 (Rape) 122 (Attempted Rape) 815 (Sexual Penetration w/ Foreign Object) 820 (Oral Copulation) 821 (Sodomy)
ROBBERY	210 (Robbery) 220 (Robbery - attempted)
AGG. ASSAULTS	230 (ADW) 231 (ADW against LAPD Police Officer) 235 (Child beating) 236 (Spousal beating) 250 (Shots Fired) 251 (Shots fired inhabited dwelling) 761 (Brandishing) 926 (Train Wrecking)
DV*	435 (Lynching) 436 (Lynching - attempted) 437 (Resisting Arrest) 622 (Battery on Firefighter) 623 (Battery on Police Officer) 624 (Battery - misdemeanor) 625 (Other Misd. Assault) 626 (Spousal/Cohab Abuse - Simple Assault) 627 (Child Abuse - Simple Assault) 647 (Throwing substance at vehicle) 763 (Stalking) 928 (Threatening Phone Calls / Letters) 930 (Criminal Threats)
SIMPLE ASSAULT** (Not Incl. in Part I Violent Crime)	

- The LAPD provide added documentation on the city data portal
- Crime reports can be grouped into two main categories and ten sub categories

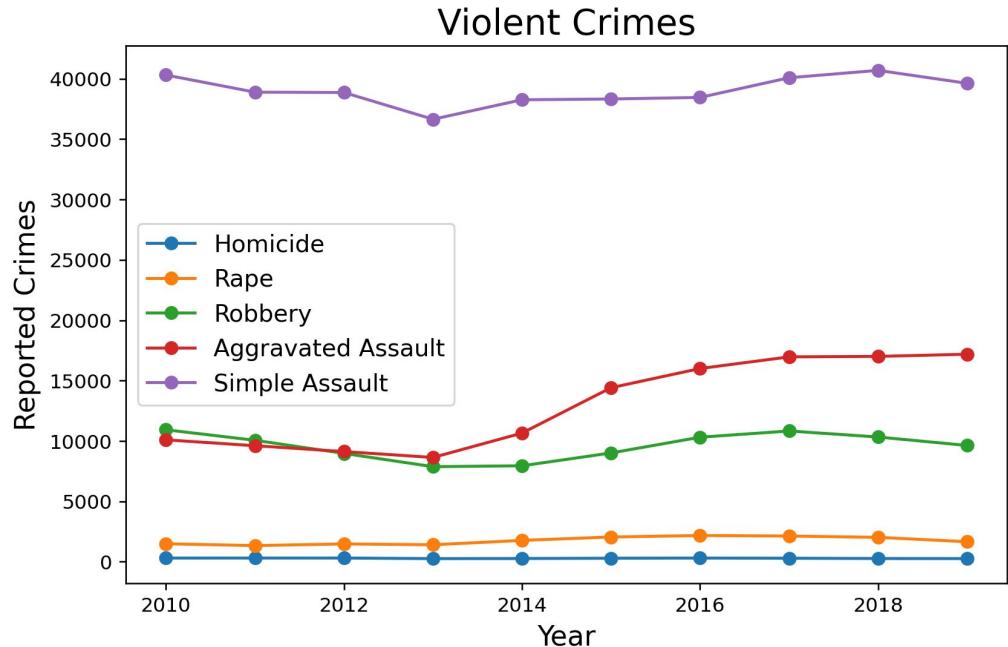
# Crimes by Category



- Both violent crime and property crime experience a surge but the violent crime surge starts a year earlier

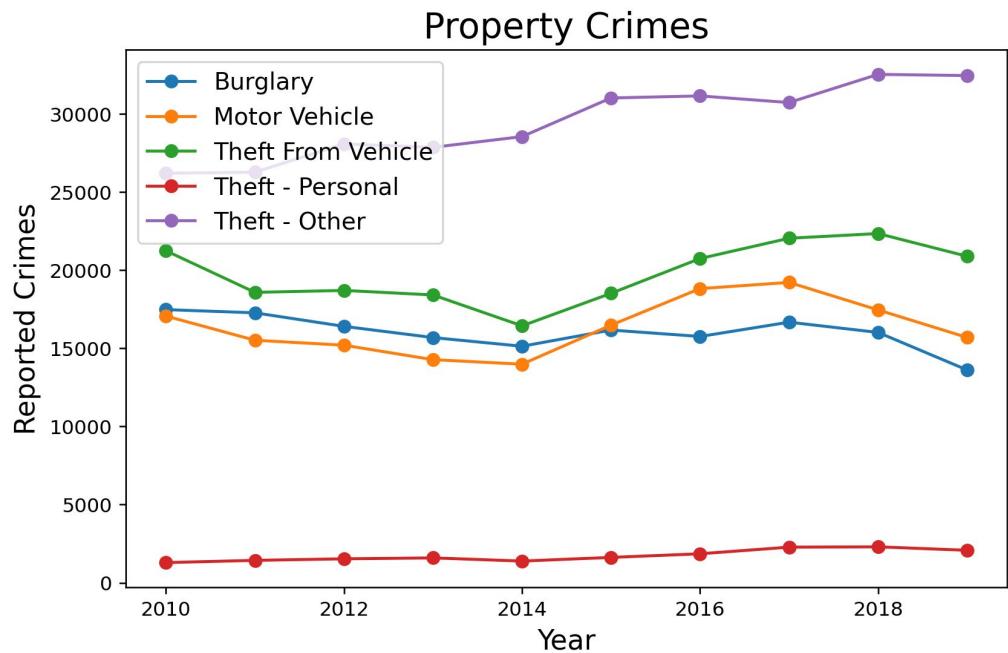
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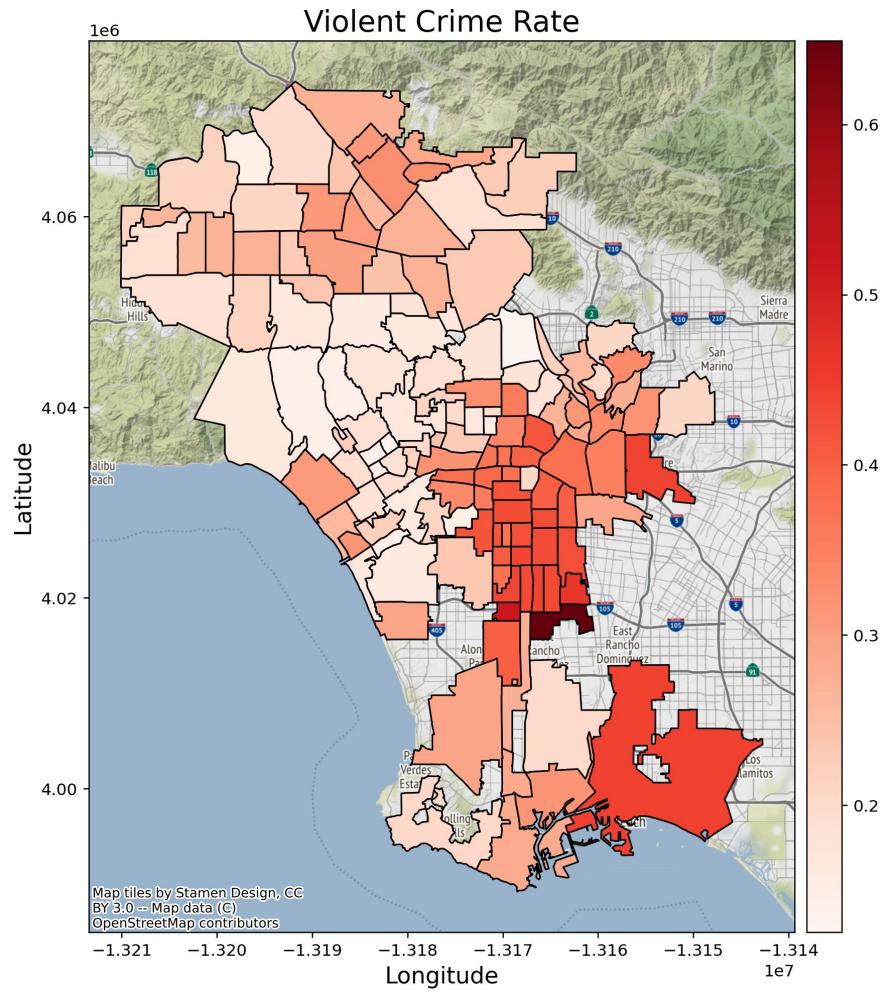
- Violent crimes are broken down into five subcategories
- The most common violent crime is simple assault
- Aggravated assault represents the majority of the growth in violent crime starting in 2013



# Crimes by Category

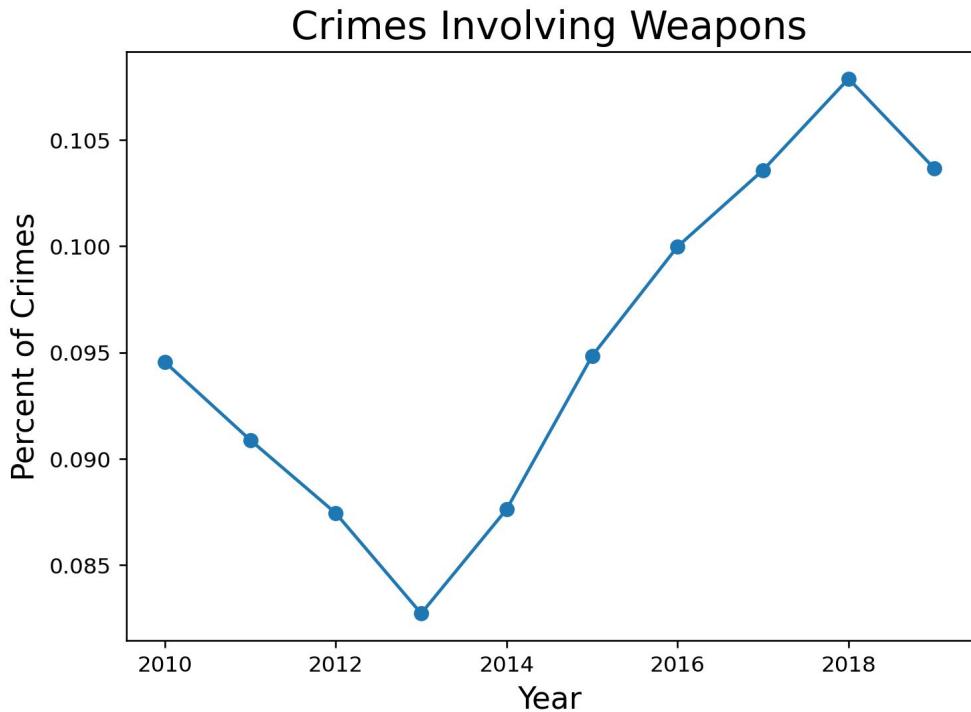
- All categories except personal theft show a slight increase beginning around 2014
- Theft-other shows a steady increase over the whole time range
- Motor vehicle theft and burglary show a slight drop off after 2017





- The violent crime rate is not evenly distributed but shows clear geographic zoning
- Southern Los Angeles and the adjacent regions contain the highest rates of violent crime

# Incidents involving weapons



- The percentage of crimes involving weapons increased steadily between 2013 and 2018
- The change is only about 2% but this is significant considering the peak rate is less than 11%

# Arrests

DRUNK DRIVING ALCOHOL/DRUGS	98452
DRINKING IN PUBLIC	93778
CORPORAL INJURY ON SPOUSE/COHABITANT/ETC	46721
POSSESSION CONTROLLED SUBSTANCE	45127
FTA AFTER WRITTEN PROMISE	31624
POSSESSION NARCOTIC CONTROLLED SUBSTANCE	29340
PROSTITUTION	26812
OPEN ALCOHOLIC BEV IN PUBLIC PARK/PLACE	26056
SIT/LIE/SLEEP SIDEWALK OR STREET	25730
LOS ANGELES MUNICIPAL CODE	24738
GRAND THEFT (OVER \$400)	23455
BURGLARY	22395
ROBBERY	22085
ADW, NOT FIREARM, W/GBI	21948
BATTERY ON PERSON	18625
BATT EX-SPOUSE/FIANCEE/PERSN W/DATING REL	18262
VIOLATION OF PAROLE:FELONY	16548
TAKE VEHICLE W/O OWNER'S CONSENT	15513
SHOPLIFTING	13067
CURFEW - JUV ONLY	12448

# Reported Crimes

BATTERY - SIMPLE ASSAULT	198647
VEHICLE - STOLEN	169428
BURGLARY FROM VEHICLE	168897
THEFT PLAIN - PETTY (\$950 & UNDER)	155224
BURGLARY	154033
THEFT OF IDENTITY	129955
INTIMATE PARTNER - SIMPLE ASSAULT	119891
VANDALISM - FELONY	115682
ASSAULT WITH DEADLY WEAPON	97792
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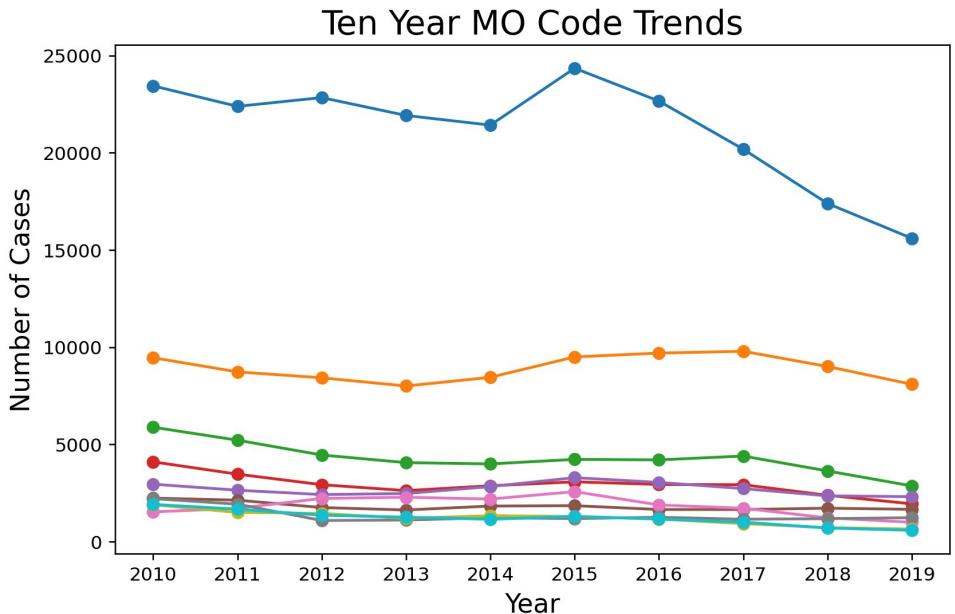
# Conclusions

- There was a 16% increase in reported crimes between 2013-2017 that has since dropped off by about 8%
- Nonviolent property crimes make up the majority of reported crimes
- Reported crime distribution is variable by neighborhood but roughly follows population density



# Future Directions

- Find missing MO Codes that account for the drop off in 0344 - removed victim's property
- Expand to greater detail on individual neighborhood trends
- Accumulate data on LAPD policy changes that could affect crime
- Compare reported crime incidents to arrest data in greater detail



# Thanks!

