

# Los Angeles Crime Report – Analysis of Reported Crimes from 2010-2019

## (0) Executive Summary

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This document summarizes an exploratory data analysis on Crime Data in Los Angeles from 2010 to 2019. Insights are drawn on the development of crime during that time frame as well as where, when and to whom crimes happen, by crime type as well as recommendations for further analysis. This document shall be a starting point to further develop courses of action.

## (1) Background

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The qualitative and quantitative study of crime and law enforcement data together with socio-demographic and geo-spatial factors is among others used to understand criminal behavior, prevent crime, and evaluate organizational procedures. In this document, we are analyzing crimes happening in the City of Los Angeles, USA between 2010 and 2019 reported to the Los Angeles Police Department since 2010.

## (2) Objective

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The purpose of this report is to give a comprehensive overview of the state of crime in Los Angeles with a focus on:

- Development of crime 2010-2019
- When, where and to whom do crimes happen

The analysis conducted provides valuable insights from which further analysis and possibly actions for crime prevention and detection can be inferred for both the City of LA as well as for other Cities.

## (3) Approach

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We performed an exploratory data analysis on a dataset provided by the City of Los Angeles. The underlying dataset is publicly available and contains 2.2MM reported crimes and 28 dimensions (variables). The Dataset is updated on a weekly basis and was pulled with last update as of February 10, 2021. Given the large scale of the dataset, we chose to perform the Analysis using Spark which is a unified analytics engine for large-scale data processing. The analyses were written mainly in PySpark and are available in the adjacent Jupyter notebook.

The dataset contained four main types of features: date-related, location-related, crime-related and victim-related features. The analysis was organized along the following steps for all four of these feature types:

**(a) Cleaning-Up the Data:** the data is transcribed from original crime reports that are typed on paper and therefore some inaccuracies were possible. A few fields contained missing data, such as age or gender of the victim, which were hence flagged as well as inaccuracies corrected. Further, variables were transformed to represent correct datatypes.

**(b) Creating new features:** we created several new features for further analysis, such as extracting date/time data from timestamps.

**(c) Performing Exploratory Data Analysis:** using exploratory data analysis, we identified patterns and relationships in and between the data to derive meaningful insights.

## (4) Results

The following presents main insights derived from the analysis of the crime dataset. We start with a general overview of how crime has developed from 2010 to 2019, overall and by crime type. This is then followed by a deeper look at the victims of crimes, crime locations and timing of crimes. Final, the analysis will be concluded by assessing the time between a crime occurring and reporting the crime.

### (4.1) Crime Development 2010 – 2019

#### 4.1.1 All Crimes

The number of crimes per 100k inhabitants in the City of Los Angeles had been decreasing between 2010 and 2013/14 and since then increased again until 2017 (*Figure 1*). Current figures indicate that the crime rate for 2018 and 2019 is at a lower level than previous years; however, we assume that some of these crimes have not yet been reported to the police and thus especially 2019 figures might still increase slightly in the months to come.

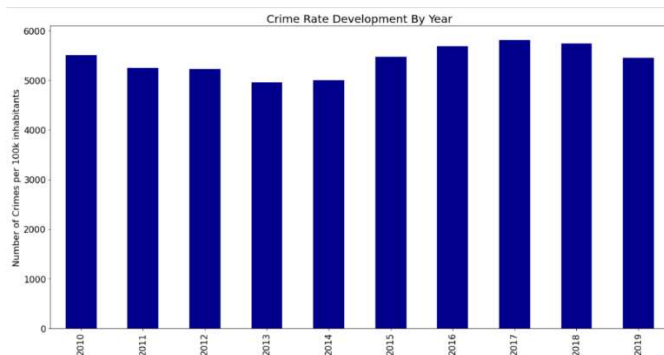


Figure 1: Number of crimes per 100k inhabitants, 2010-2019

#### 4.1.2 By Crime Types

An analysis of the yearly development by crime type reveals that Property Crimes and Violent Crimes have been increasing by 6% respectively 8% since 2010 while Part II<sup>1</sup> crimes have decreased by 5%. In the past 5 years only, Property Crimes have been increasing by 14% and Violent Crimes by 16% while Part II crimes have remained fairly stable. (*Figure 2*)

Development of Crime Types by year (based on Classification 1):

Classification_1	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1y_growth	5y_growth	9y_growth
Property Crimes	89678	85944	87512	85465	83335	93621	98982	101615	101367	95013	-0.06	0.14	0.06
Violent Crimes	63134	60199	58734	54816	58900	64094	67252	70308	70356	68471	-0.03	0.16	0.08
Part II Crime	56322	54514	55189	52246	53161	57654	59051	58935	56868	53503	-0.06	0.01	-0.05

Figure 2: Development of Crime Types by year, 2010-2019

Figure 3 indicates that within **Violent Crimes**, crimes related to (1) “Aggravated Assault - Domestic Violence” have doubled in the past 5 years, almost quadrupled in the past 9 years, and (2) “Aggravated Assault” outside of Domestic Violence (DV) has increased by 29% in the past 5 years (+26% past 9 years). While both figures are highly concerning, further analysis

<sup>1</sup> The LA Police Department classifies crimes into either Part I or Part II crimes: Part I crimes are violent or property crimes, Part II Crimes are (among others) Fraud, Embezzlement, Vandalism, Weapons, Prostitution, Drug Abuse, Gambling, DUI, Liquor Laws, Disorderly Conduct, Suspicion, Runaways, etc..

is required in order to understand whether there has been truly an increase especially in DV or whether policies to encourage reporting DV are increasing the number of incidents being reported. We further observe a decrease in homicide rates (5 years: -1%, 9 years: -13%) however an increase in rape figures over the past 9 years (+15%). Assuming that still not all rapes of 2019 have been reported, we assume that the currently displayed 5 years decrease of -3% is unlikely to hold up.

Figure 3 further shows us that within **Property Crimes**, burglaries/theft from motor vehicles is driving the increase of overall increase in Property Crimes with a 5-year increase of +28% (9years: +12%).

Part I Crimes: Development of Crime Types by year (based on Classification 2):

Classification_1	Classification_2	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1y_growth	5y_growth	9y_growth
Violent Crimes	Agg. Assault - Domestic Violence	1293	1270	1272	1354	2034	3914	4874	5655	5946	6114	0.03	2.01	3.73
Violent Crimes	Homicide	296	298	298	251	260	283	296	282	260	257	-0.01	-0.01	-0.13
Violent Crimes	Simple Assault - Domestic Violence	18990	18058	18082	16906	18842	19486	19235	19418	19381	18707	-0.03	-0.01	-0.01
Violent Crimes	Robbery	10924	10055	8967	7868	7942	9004	10309	10823	10326	9633	-0.07	0.21	-0.12
Violent Crimes	Agg. Assault	8802	8335	7849	7278	8618	10499	11128	11310	11065	11105	0.0	0.29	0.26
Violent Crimes	Simple Assault	21334	20841	20790	19746	19425	18847	19222	20678	21327	20936	-0.02	0.08	-0.02
Violent Crimes	Rape	1495	1342	1476	1413	1779	2061	2188	2142	2051	1719	-0.16	-0.03	0.15
Property Crimes	Other Theft	26204	26264	28072	27856	28543	31011	31145	30728	32532	32503	0.0	0.14	0.24
Property Crimes	Personal Theft	1289	1434	1531	1591	1388	1622	1854	2279	2298	2082	-0.09	0.5	0.62
Property Crimes	Burglary	17477	17270	16402	15686	15130	16168	15757	16672	16020	13640	-0.15	-0.1	-0.22
Property Crimes	MVT (GTA)	17073	15513	15199	14271	13982	16479	18818	19210	17452	15699	-0.1	0.12	-0.08
Property Crimes	BTFV	27635	25463	26308	26061	24292	28341	31408	32726	33065	31089	-0.06	0.28	0.12

Figure 3: Development of Crime Types by year, Part I Crimes (2010-2019)

With regard to Part II Crimes, we observe a strong increase in the category with the highest count of recorded crimes: vandalism (felony), which accounts for 24% of all 2019 Part II Crimes, has been increasing by +32% over the past 5 years (9years: +28%). The second largest category "Theft of Identity" with 17% of all Part II Crimes in 2019, is on the contrary decreasing by -32% since 2014 (-33% since 2010). However, given very low numbers for 2018 and even more so 2019, we are raising the question of whether all identity theft crimes have yet been reported.

Part II Crimes: Development of Crime Types by year:

crim_cd_desc	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1y_growth	5y_growth	9y_growth
VANDALISM - FELONY (\$400 & OVER, ALL CHURCH VANDALISMS)	10051	8752	9036	8962	9696	11586	12768	12953	12804	12839	0.0	0.32	0.28
THEFT OF IDENTITY	13225	13435	14350	13438	12790	14988	13411	12454	10566	8872	-0.16	-0.31	-0.33
VANDALISM - MISDEMEANOR (\$399 OR UNDER)	9941	10357	9778	9079	9105	8484	8807	8832	8486	7561	-0.11	-0.17	-0.24
TRESPASSING	1413	1390	1612	1684	1617	2210	2520	2787	3216	3142	-0.02	0.94	1.22
VIOLATION OF RESTRAINING ORDER	1417	1382	1525	1760	1964	1752	2086	2373	2508	2560	0.02	0.3	0.81
LETTERS, LEWD - TELEPHONE CALLS, LEWD	2758	2595	2443	2022	1957	1877	1736	1892	2008	1941	-0.03	-0.01	-0.3
BUNCO, GRAND THEFT	232	337	402	435	854	860	1247	1288	1605	1863	0.16	1.18	7.03
OTHER MISCELLANEOUS CRIME	2987	2466	2317	2044	2010	1821	1676	1800	1878	1702	-0.09	-0.15	-0.43
VIOLATION OF COURT ORDER	2608	2493	2209	1954	2191	1590	1813	1779	1719	1683	-0.02	-0.23	-0.35
DOCUMENT FORGERY / STOLEN FELONY	2468	2445	2581	2680	2348	2421	2655	2211	1647	1378	-0.16	-0.41	-0.44

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Figure 4: Development of Crime Types by year, Part II Crimes (2010-2019)

#### 4.1.3 By Crime Description

We can also get an overview of the LA crime landscape by looking at the words most often used for describing the crimes committed in the dataset. A wordcloud indicates the frequency or significance of a word through its size. A wordcloud for the 2010-2019 LA crime data set indicates that crimes in one way or another related to the words "Sexual", "Grand", and "Theft" are most frequent, followed by "Calls", "Illegal", "Firearms", "Shots" etc.



#### 4.2.1 By Gender

Development of the gender of victims (abslute and in %):

vict_sex	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010_ratio	2013_ratio	2015_ratio	2017_ratio	2019_ratio
M	98311	94107	94510	90191	91167	100553	102502	104516	102717	96270	0.45	0.42	0.46	0.48	0.44
F	90073	87695	87963	83789	84852	90495	92857	93521	92164	85996	0.42	0.39	0.42	0.43	0.41
None	20750	18855	18962	18547	19377	24321	29926	32821	33710	34721	0.1	0.09	0.11	0.15	0.16

While overall men and women seem to be almost equally likely to become a victim of a crime, this ratio differs significantly for different crime types (*Figure 7*). We observe for 2019 that women are more often a victim of domestic violence, rape and homicide than men whereas men are more often victims of aggravated and simple assaults as well as of robberies and most types of theft/burglary or stealing from a vehicle. Further, in the majority of cases of vehicle theft (MVT(GTA)) the gender of the victim is not noted down. Men and women appear to become a victim of a Part II Crimes almost equally often.

Victims' gender distribution for different Crime types (in % of total crimes)

Classification_1	Classification_2	F	M	None
Violent Crimes	Rape	0.71	0.08	0.0
Violent Crimes	Homicide	0.02	0.1	null
Violent Crimes	Simple Assault - Domestic Violence	5.81	2.74	0.07
Violent Crimes	Robbery	1.25	2.67	0.52
Violent Crimes	Agg. Assault	1.38	3.66	0.08
Violent Crimes	Simple Assault	4.37	15.1	0.17
Violent Crimes	Agg. Assault - Domestic Violence	1.56	1.22	0.03
Property Crimes	Other Theft	15.07	17.48	2.44
Property Crimes	Personal Theft	0.58	0.38	0.01
Property Crimes	MVT (STA)	0.05	0.13	7.06
Property Crimes	BTFV	15.14	17.08	2.11
Property Crimes	Burglary	2.14	3.3	0.85
Part II Crime	Part II Crime	11.56	10.42	2.67

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### 4.2.1 By Age

On average, victims of different crime types are in an age range between their 30s and 40s with rape victims being on average 29 years old.

Victims' mean, min and max age for different Crime types (2019)

Classification_1	Classification_2	mean age	min age	max age
Violent Crimes	Rape	28.63	12	186
Violent Crimes	Agg. Assault - Domestic Violence	36.41	12	193
Violent Crimes	Homicide	36.28	12	184
Violent Crimes	Simple Assault - Domestic Violence	34.6	12	197
Violent Crimes	Simple Assault	39.72	12	198
Violent Crimes	Agg. Assault	36.94	12	197
Violent Crimes	Robbery	35.84	14	195
Property Crimes	Personal Theft	37.73	13	196
Property Crimes	Other Theft	39.19	12	198
Property Crimes	MVT (GTA)	43.21	18	187
Property Crimes	Burglary	46.98	13	198
Property Crimes	BTFV	39.61	12	198
Part II Crime	Part II Crime	40.98	12	198

Figure 8: Victims' mean, min and max age (2019)

If we look at the most vulnerable groups (figures for 2019), children are most often victims of crimes involving violence (such as domestic violence and assault) as well as diverse crimes against children and child neglect. Adolescents (children 10 years and older) are most often victims of simple assaults, thefts and robberies. *Figure 9.*

Victims by Age Category and Crime Type (2019):

Classification_1	Classification_2	Adolescent	Adult	Child
Part II Crime	Part II Crime	2799	41938	532
Violent Crimes	Simple Assault - Domestic Violence	1220	16652	412
Violent Crimes	Agg. Assault	758	9770	106
Violent Crimes	Simple Assault	1386	18544	194
Violent Crimes	Rape	319	1296	91
Property Crimes	Other Theft	1330	24127	24
Violent Crimes	Agg. Assault - Domestic Violence	241	5724	18
Property Crimes	Personal Theft	169	1878	19
Property Crimes	Burglary	213	10583	18
Violent Crimes	Robbery	932	7225	17
Violent Crimes	Homicide	18	231	13
Property Crimes	BTFV	199	26046	13
Property Crimes	MVT (GTA)	13	332	11

Part II Crimes: Victims by Age Category and Crime Type (2019):

orm_cd_desc	Adolescent	Adult	Child
CRM AGNST CHLD (13 OR UNDER) (14-15 & SUSP 10 YRS OLDER)	299	4	177
CHILD NEGLECT (SEE 300 W.I.C.)	67	1	138
CHILD ANNOYING (17YRS & UNDER)	287	1	155
VIOLATION OF COURT ORDER	40	1581	19
VIOLATION OF RESTRAINING ORDER	150	2439	19
THEFT OF IDENTITY	87	8592	16
BATTERY WITH SEXUAL CONTACT	236	1903	14
KIDNAPPING	17	1104	13
LEWD/LASCIVIOUS ACTS WITH CHILD	19	5	13
KIDNAPPING - GRAND ATTEMPT	18	21	11
INDECENT EXPOSURE	57	319	16
DISTURBING THE PEACE	13	351	16
VANDALISM - FELONY (\$400 & OVER, ALL CHURCH VANDALISMS)	258	10060	5
OTHER MISCELLANEOUS CRIME	127	1042	5
CHILD STEALING	19	162	14

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Figure 9: Victims by age Category and Crime Types (2019)

## (4.3) Where do crimes take place

### 4.3.1 By neighborhood

77<sup>th</sup> Street remains the neighborhood with the highest number of crimes with barely any change in the past 5 years (+1% in number of crimes) and 9 years (-2%). *Figure 10*

Numbers of crimes by area and year:													
area_name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1y_growth	5y_growth	9y_growth
77th Street	14438	14247	14283	13733	14048	14640	15394	15486	14918	14144	-0.05	0.01	-0.02
Central	7145	7166	8074	7589	8395	10368	10938	11909	13190	13541	0.03	0.61	0.9
Southwest	13649	12925	13108	12711	12972	13890	14173	14273	14342	13440	-0.06	0.04	-0.02
Pacific	11088	10372	10306	10102	10750	11721	11773	12066	12167	12213	0.0	0.14	0.1
Southeast	11069	11043	10588	10175	10549	11095	11501	11848	11943	11685	-0.02	0.11	0.06
Hollywood	9202	9240	9313	8542	8563	9784	10606	11276	11397	11118	-0.02	0.3	0.21
N Hollywood	11351	10691	11277	10942	10389	11799	12055	12400	12015	11036	-0.08	0.06	-0.03
Newton	9985	9340	8881	8613	9206	9645	11033	11745	10877	10700	-0.02	0.16	0.07
Wilshire	8178	8276	8038	7829	7918	8350	9074	9862	10728	10383	-0.03	0.31	0.27
Olympic	8754	7977	8519	8285	9142	9836	10564	11127	10977	10174	-0.07	0.11	0.16
Topanga	9913	9107	8921	9092	8774	9888	11002	10793	10544	9605	-0.09	0.09	-0.03
Northeast	10626	9830	9844	9269	9688	10257	10391	10515	10282	9595	-0.07	-0.01	-0.1
Van Nuys	10084	9530	9648	9376	9449	10469	10477	10788	10434	9510	-0.09	0.01	-0.06
Rampart	8698	8423	8601	8135	8536	9278	9195	9634	9642	9476	-0.02	0.11	0.09
West LA	8190	8600	8577	8165	8183	9709	9392	9022	10067	9184	-0.09	0.12	0.12

Figure 10: Number of crimes by area and year (2010-2019)

We observe however with concern the increase in crimes in the area of Central, where number of crimes have been rising by 61%/+5,146 crimes in the past 5 years and +90%/+6,396 crimes in past 10 years. Central is now the neighborhood with the second largest number of crimes (2019: 13,541 crimes) driven by an increase across all major crime categories in the past 5 years of at least 30%, most notably +137%/+1,033 crimes in *Burglaries from vehicles*, +141%/+421 crimes of *Vandalism* and +60%/+1,118 crimes in *Other Thefts*.

This increase in the overall number of crimes for area Central can also be observed in a visual mapping of the crimes committed in Central in 2010 vs. 2019 (Figures 11 and 12), with especially the central area of the map increasing in density from 2010 (left) to. 2019 (right):

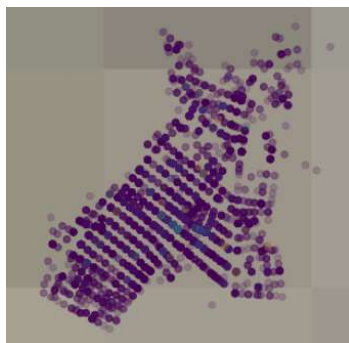


Figure 11: Crimes in Central, 2010



Figure 12: Crimes in Central, 2019

#### 4.3.2 By location type

Over the past 5 years, there has been a decrease in crimes occurring in single- or in multi-family dwellings by 4%, respectively 9%, while in the same time frame Streets have become the location type with most crimes occurring (+23%). (Figure 13)

premis_desc	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	5y_abs_growth	9y_abs_growth
STREET	148554	144713	143441	141109	140757	146116	151428	154068	152377	150299	0.23	10.04
SINGLE FAMILY DWELLING	147262	145429	144066	141470	141107	142724	142604	142691	142308	139580	-0.04	-0.16
MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)	127399	126781	127784	126198	126457	127417	127017	126775	125828	124127	-0.09	-0.12
PARKING LOT	113974	113126	113957	113817	113199	114947	116844	117084	117246	115741	0.19	10.13
SIDEWALK	19773	19881	10271	19460	10141	11258	10959	11210	11470	11398	0.12	10.17
OTHER BUSINESS	110089	19450	19151	18774	19033	19972	19995	10128	10059	10024	0.11	-0.01
VEHICLE, PASSENGER/TRUCK	18160	17289	17418	16880	17694	18309	18725	19068	18338	17872	0.02	-0.04
DRIVEWAY	14061	14106	14095	13585	13582	14678	14960	14977	14508	13993	0.11	-0.02
GARAGE/CARPORT	13411	13360	13571	13671	13466	14098	14205	13899	14146	13741	0.08	10.1
RESTAURANT/FAST FOOD	12230	12319	12363	12344	12541	13244	13497	13741	13519	13285	0.29	10.47

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Figure 13: Crimes by Location Type and Year (2010-2019)

As a consequence, by 2019, 23% of the crimes in Los Angeles are taking place on the Street. (Figure 14). These are mainly vehicle -related crimes (Burglary from a vehicle as well as stealing of vehicles), which account for 55% of all Street-related crimes, followed by Part II Crimes (12%) and Aggravated Assault (7%). Further major crime spots are Single and Multi-family dwellings, where mainly Domestic Violence crimes are taking place (20%), Burglary (14%) and Identity Theft (14% of crimes in dwellings).

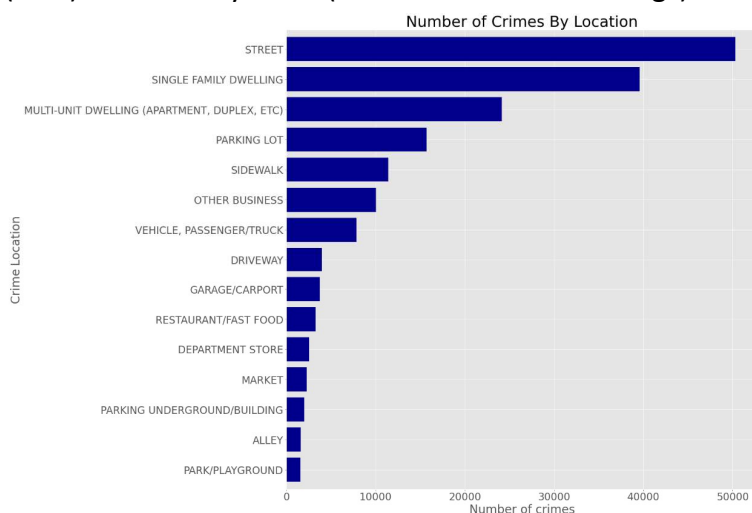


Figure 14: Number of crimes by location (2019)

## 4.4. When do crimes take place

### 4.4.1 During the year

As in previous years, there is little to no seasonality in crimes with crime numbers at similar levels throughout all months, with numbers slightly lower in months with fewer days (February, April, June, ...).

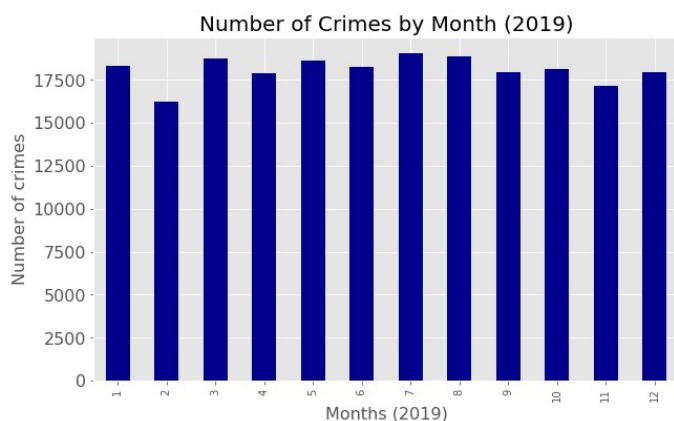


Figure 15: Number of crimes by Months (2019)

#### 4.4.2 During the week and hour

Crimes mostly occur during the later hours of the afternoon and early evening until 8pm with only little crime activity taking place in the very early morning hours. The heaviest crime activity is on Friday evenings around 5pm (mainly theft, burglary, battery, stolen vehicles, vandalism). We can further observe that crime activity on the weekends (Dayofweek 7=Saturday, and 1=Sunday) is higher in the early morning hours until 3am than during weekdays, when crime activity is very low between 1am and 6am.

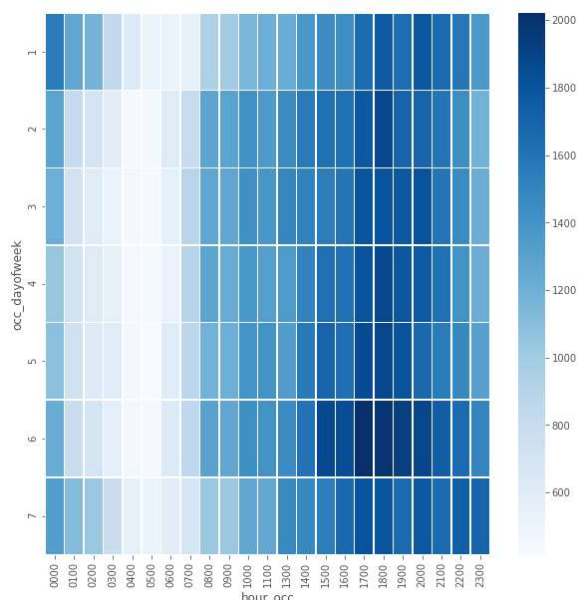


Figure 16: Crime numbers by hours and weekdays (1=Sunday, 7=Saturday)

#### 4.5. How much time passes between a crime occurring and being reported

The time between a crime is occurring and when a crime is being reported is critical for finding the suspect and bringing forward charges. Nevertheless, a large share of crimes is still reported only a long time after the crime has occurred. (Figure 17)

Mean, min and max Time to report a crime:

occ_year	Mean time to report	Min time to report	Max time to report
2010	34.2	0	13988
2011	30.0	0	13621
2012	26.8	0	13265
2013	24.8	0	12885
2014	22.7	0	12533
2015	19.8	0	12165
2016	15.9	0	11803
2017	13.6	0	11419
2018	10.8	0	11078
2019	7.9	0	1703

Figure 17: Mean, min and max time to report a crime (2010-2019)

In recent years, the mean *time to report* has been steadily decreasing from on average 34 days in 2010 to an average of 8 days in 2019. Nevertheless, these figures need to be considered with caution given that (a) average times to report are strongly influenced by extreme outliers (reports several years later), (b) differ by crime type, and (c) most likely for crimes occurred in recent years there will still be crimes reported in the months to come, thereby increasing crime numbers as well as time to report. Figure 18 shows the extend of late reporting visually for crimes occurring in 2019: There are still (latest: in January 2021) crimes reported that have happened in 2019.



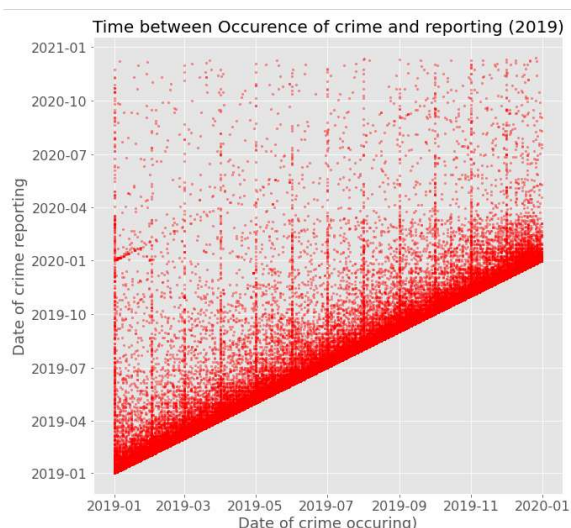


Figure 18: Date of crime occurring vs. date of crime reporting (2019)

By Crime Type, we can see that especially rape and Part II Crimes (related to sexual offenses, crimes against children, etc.) are being reported much later than other crime types. Overall, in the past 5 and 9 years, *time to report* has been significantly decreasing across all categories, especially notable for rape, with one exception: homicides. (Figure 19) Despite a visible reduction in the *time to report* for victims of rape and other sexual offenses/abuses, victims are often still afraid of bringing forward charges especially when the crime is being committed by someone close, such as a family member or friend. A joint effort of the entire justice system is required in order to provide to victims the necessary support and trust in the judiciary system.

Contrary to all other crime types, the *time to report* for homicides has been increasing in recent years (+360% over the past 5 years, +156% over past 9 years), albeit the average time to report is still considerable low at 4.6 days compared to some other crimes. Nevertheless, a possible explanation for this increase in time to report on homicides could be the close link between increasing gang violence and homicides, given that gang-related incidents are not always immediately or at all reported.

Development of Time to report by Crime Types by year (based on Classification 2):

Classification_2	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	5y_abs_growth	9y_abs_growth
Rape	1365.5	1406.6	1311.8	1307.5	1243.7	1168.4	1123.3	1083.0	1066.6	1041.3	-0.83	-0.89
Robbery	12.9	11.8	11.4	11.8	12.7	12.3	11.6	11.8	11.3	10.7	-0.74	-0.76
Part II Crime	185.9	179.1	167.3	162.8	154.4	147.7	139.1	132.4	124.2	117.3	-0.68	-0.8
Simple Assault	15.8	14.5	14.7	13.7	14.8	13.9	13.1	12.9	12.7	11.9	-0.6	-0.67
Agg. Assault - Domestic Violence	28.6	16.7	11.0	11.2	7.0	19.2	15.0	14.3	14.4	12.9	-0.59	-0.9
Personal Theft	17.0	15.1	18.5	13.4	15.1	15.2	12.2	13.7	12.2	12.1	-0.59	-0.7
Simple Assault - Domestic Violence	13.3	18.8	10.4	10.2	10.3	18.7	17.5	17.3	16.3	14.6	-0.55	-0.65
Agg. Assault	16.1	16.5	16.4	15.2	12.9	13.3	12.9	13.1	12.1	11.5	-0.48	-0.75
Other Theft	21.9	16.9	15.7	13.5	14.1	13.2	11.5	11.3	11.9	17.8	-0.45	-0.64
BTFFV	10.4	16.2	15.8	15.3	15.8	15.8	15.2	15.2	15.2	14.1	-0.29	-0.61
MVT (GTA)	11.0	15.7	17.3	15.9	16.2	16.4	15.0	15.3	15.1	14.6	-0.26	-0.58
Burglary	12.0	18.0	18.4	18.7	18.4	19.2	17.5	17.9	17.5	17.0	-0.17	-0.42
Homicide	11.8	10.8	11.9	19.3	11.0	111.0	15.2	10.4	11.3	14.6	3.6	11.56

Part II Crimes: Development of Time to report by Crime Types by year (based on Classification 2):

icrm_cd_desc	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
SEX OFFENDER REGISTRANT OUT OF COMPLIANCE	1337.3	1182.6	92.5	1221.0	271.0	224.1	1160.6	1144.4	1130.0	1113.0
SEX, UNLAWFUL (INC MUTUAL CONSENT, PENETRATION W/ FRGN OBJ)	222.9	203.9	206.4	196.6	200.1	188.4	1191.9	1164.2	1155.2	1109.9
BEASTIALITY, CRIME AGAINST NATURE SEXUAL ASSLT WITH ANIM	3.5	10.0	1.0	2.5	10.5	2.3	114.0	1175.5	116.3	1104.0
CRM AGNST CHLD (13 OR UNDER) (14-15 & SUSP 10 YRS OLDER)	544.0	450.0	416.0	385.7	355.2	323.1	1261.1	1205.3	1127.7	1175.4
CONTRIBUTING	146.9	157.1	162.5	121.5	131.8	115.6	120.4	127.5	119.1	1158.0
EMBEZZLEMENT, GRAND THEFT (\$950.01 & OVER)	139.6	141.8	139.9	144.7	192.2	98.8	1101.7	1184.6	1169.9	1156.2
LEWD/LASCIVIOUS ACTS WITH CHILD	2738.9	2511.0	2636.3	11560.0	1320.4	914.4	1316.2	1133.2	1130.9	1155.6
CHILD PORNOGRAPHY	1111.7	143.2	132.3	134.3	183.6	140.8	194.1	172.9	144.4	143.9
THEFT OF IDENTITY	211.6	200.4	147.4	137.4	128.2	102.9	191.3	176.4	160.6	148.2
FALSE POLICE REPORT	111.7	143.2	132.3	134.3	183.6	140.8	194.1	172.9	144.4	143.9

only showing top 10 rows

Figure 19: Time to report by crime types (2010-2019)

## **(5) Recommendation**

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The above report shows an overview of the current crime landscape in LA and can be used to draw inferences such as who are the most vulnerable victims to protect, which locations require further attention and police surveillance/oversight during which hours of the day and the week.

We recommend the following steps:

- Conducting similar analysis for each type of crime and each area to better understand the underlying dynamics and draw conclusions
- Further analyze how different crimes are related and are influencing each other
- Understand what are driving forces behind crime increases and decreases to better navigate police policies

As concrete recommendations, we suggest to keep up efforts of scrutinized documenting and analysis as well as supporting programs focused on encouraging reporting crimes (timely) and in preventing and reducing crimes.

## **(6) Limitations**

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While this report gives a thorough overview of the state of crime in Los Angeles as of 2019, it is in itself only a starting point but not enough to draw concrete solutions and policies (such as where to direct increased police presence). Crime in itself is complex, it cannot be analyzed in isolation but instead needs to be broken down into its component and analyzed with consideration of socio-economic factors and location.

As outlined above under (5) Recommendations, we strongly recommend further analysis and stress that the underlying analysis is purely descriptive; no inferences on causation shall be drawn from here.