

2018 Detroit Crime Report



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WorldCapital Integrated Solutions, LLC.

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SUMMARY

The 2018 Detroit Crime Report was created to provide a comprehensive analysis of incidents reported by the City of Detroit. The analysis facilitates data science techniques used in data cleansing, exploratory data analysis (EDA), and visualization using heatmaps. The goal of the 2018 Detroit Crime Report is providing Detroit citizens a creative visual representation of crimes in each neighborhood, over the course of the day, and across each month in the city. By design this report is intended to be readable and accessible to all. The data from this analysis can be found at Detroit Open Portal, [DPD: All Crime Incidents, December 6, 2016 - Present](#).

The All Crime Incidents data reflects reported criminal offenses that have occurred in the City of Detroit 2018. Offense data was extracted from the Detroit Police Department's records management system. This data set contains the most recent data available and is updated by DPD which sends official crime records contributing to the Michigan Incident Crime Reporting (MICR) or the National Incident Based Reporting systems. Accordingly, the data describes offenses associated with all reported incidents. See the Note on Anonymized Addresses in Appendix for more information. [1]

The layout of the report follows an initial introduction, analysis for the section, and section summary. The initial introduction to each section will have a brief explanation with cited sources followed by an accompanied analysis of Field Statistics from the All Crime Incidents crime data. The numbers in square brackets (ex. [1]) represents the associated source from the reference page. Each section of the report is identified by all caps. Each section will conclude with a summary and highlights of key statistics. Total Crimes by Offense Description and Charge Description can be found in the Appendix on page 77 and 79, respectively.



TABLE OF CONTENTS

INTRODUCTION	5
All Crimes Incident Report	6
Incident Report Summary	6
ANALYSIS.....	7
Crimes by Hour of Day (24h)	7
Crimes by Day of Week	8
Crimes by Offense Category	9
Crimes by Precinct Number	10
Crimes by Month.....	11
Crimes by Neighborhood	16
Crimes by Neighborhood Bar Graphs	19
Analysis Summary	70
VISUALIZATION.....	71
Homicide Heatmap.....	71
OUIL (Drunk Driving) Heatmap.....	72
Arson Heatmap.....	73
Sex Offenses Heatmap	74
Runaway Heatmap	76
Visualization Summary	74
CONCLUSION.....	77
APPENDIX.....	77
Crimes by Offense Description	77
Crimes by Charge Description	79
Pie Charts of Individual Offense Categories.....	81
Note on Anonymized Addresses	83
REFERENCES	84



INTRODUCTION



The City of Detroit was founded in 1701, and with over 300 years the city has become synonymous with crime. Throughout the 2000s until present, Detroit has ranked among the most violent cities and murder capital of America several times. The number of homicides peaked in 1974 at 714 and again in 1991 with 615. By the end of 2010, the homicide count fell to 308 for the year with an estimated population of just over 900,000, the lowest count and rate since 1967. By 2012, however, the murder count had rebounded to 411. In 2013, Detroit's number of criminal homicides was 333, a reduction of 14% compared to 2012. [3]

To put the All Crimes Incident Report into perspective, there were 81,254 total incidents reported across 200+ neighborhoods in 2018. These crimes range from arson and homicide to the most common crimes of larceny and assault. The following Analysis section will cover crimes by: Hour of day, day of week, months, police precincts, and neighborhoods. The Visualization section will present heatmaps used to identify crime concentrations based on color intensity. The heatmaps of crimes are: Homicides, OUILs (drunk driving), sex offenses, and runaways.



*Image above: Hart Plaza (Downtown) – Detroit, MI.



All Crimes Incident Report

Offense Description	Offense Category	Charge Description	Offense Code	State Offense Code	Incident Date & Time	Incident Time (24h)	Day of Week (Sunday is 1)	Hour of Day	Scout Car Area	Precinct Number	Neighborhood	Council District	Longitude	Latitude	IBR Report Date	unique
AGGRAVATED / FELONIOUS ASSAULT	AGGRAVATED ASSAULT	AGGRAVATED / FELONIOUS ASSAULT	13002	1302	12/31/2018 23:59	2359	2	23	1109	11	Grant	3	-83.040205	42.430461	1/17/2019 11:35	175411
DAMAGE TO PROPERTY	DAMAGE TO PROPERTY	DAMAGE TO PROPERTY	29000	2900	12/31/2018 23:59	2359	2	23	910	9	Outer Drive-Hayes	4	-82.972464	42.407665	1/8/2019 11:55	172275
AGGRAVATED / FELONIOUS ASSAULT	AGGRAVATED ASSAULT	AGGRAVATED / FELONIOUS ASSAULT	13002	1302	12/31/2018 23:57	2357	2	23	707	7	Gratiot-Grand	5	-83.021472	42.363361	2/1/2019 17:38	172204
OBSTRUCTING JUSTICE	OBSTRUCTING JUDICIARY	OBSTRUCTING JUSTICE	50000	5001	12/31/2018 23:50	2350	2	23	201	2	Harmony Village	2	-83.179567	42.412832	1/8/2019 11:55	172197
WEAPONS OFFENSE - CONCEALED	WEAPONS OFFENSES	WEAPONS OFFENSE - CONCEALED	52001	5201	12/31/2018 23:41	2341	2	23	707	7	Gratiot Town/Kettering	5	-83.020984	42.369448	1/2/2019 10:53	172211

Figure 1. Data structure used for report analysis.

Incident Report - Fields Breakdown

Field Statistics	Type	Description
Crime ID	text	Numeric offense identifier in Record Management System
Report #	text	Unique ID in Record Management System (YYYYMMDD Report Number)
Incident Address	text	Location of incident (see Note on Anonymized Addresses for more information)
Offense Description	text	Detail about the offense reported
Offense Category	text	Type of offense described in the report, categorized
State Offense Code	text	Michigan State Police offense code
Incident Date & Time	datetime	Date and time of incident
Incident Time (24h)	text	Time of incident, based on 24-hour clock
Day of Week (Sunday is 1)	number	Numeric code for the day of the week, where Sunday = 1, Monday = 2, etc.
Hour of Day	number	Time of incident, based on the hour
Scout Car Area	text	DPD Scout Car Area, a geography within a precinct
Precinct Number	number	DPD Precinct
IBR Report Date	datetime	The date and time that DPD sent official crime records to the Michigan systems Incident Crime Reporting (MICR) and the National Incident Based Reporting.
Neighborhood	text	The neighborhood of the original XY coordinate, using the neighborhood file on the City's Open Data Portal.
Council District	text	The Detroit City Council District of the original XY coordinate.

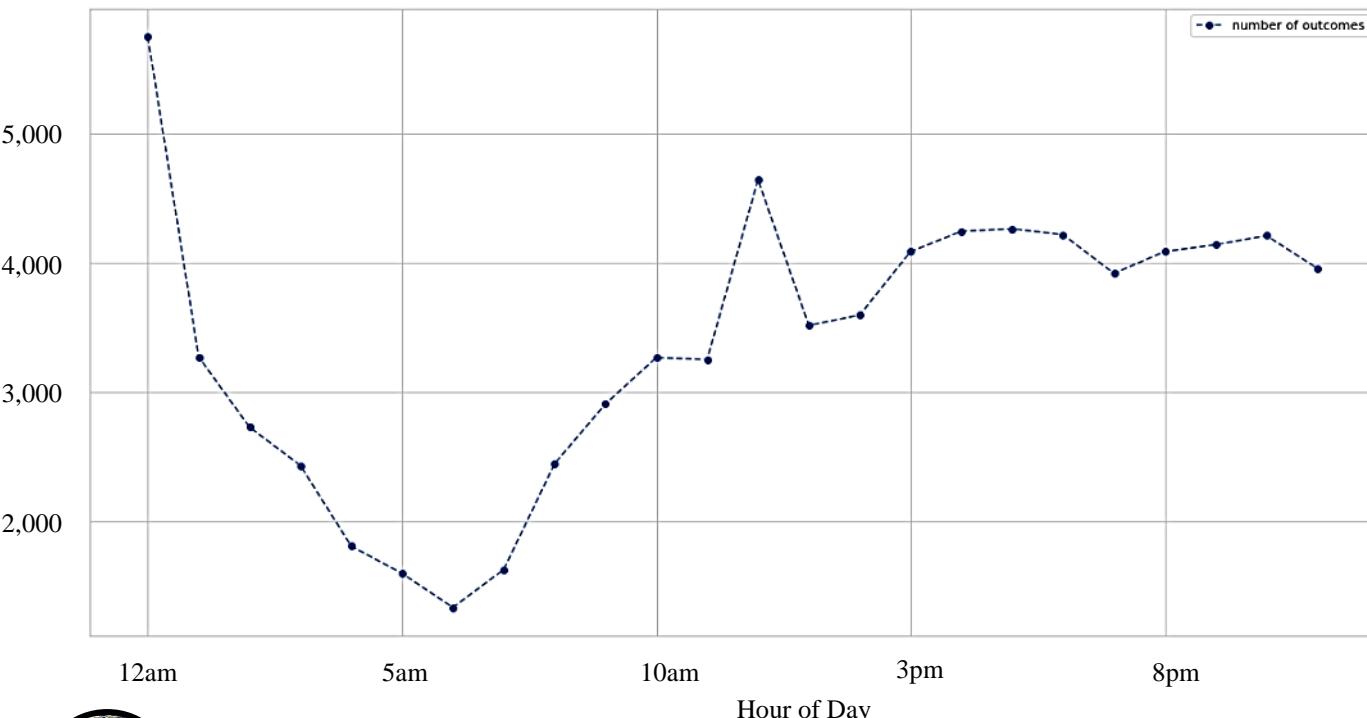
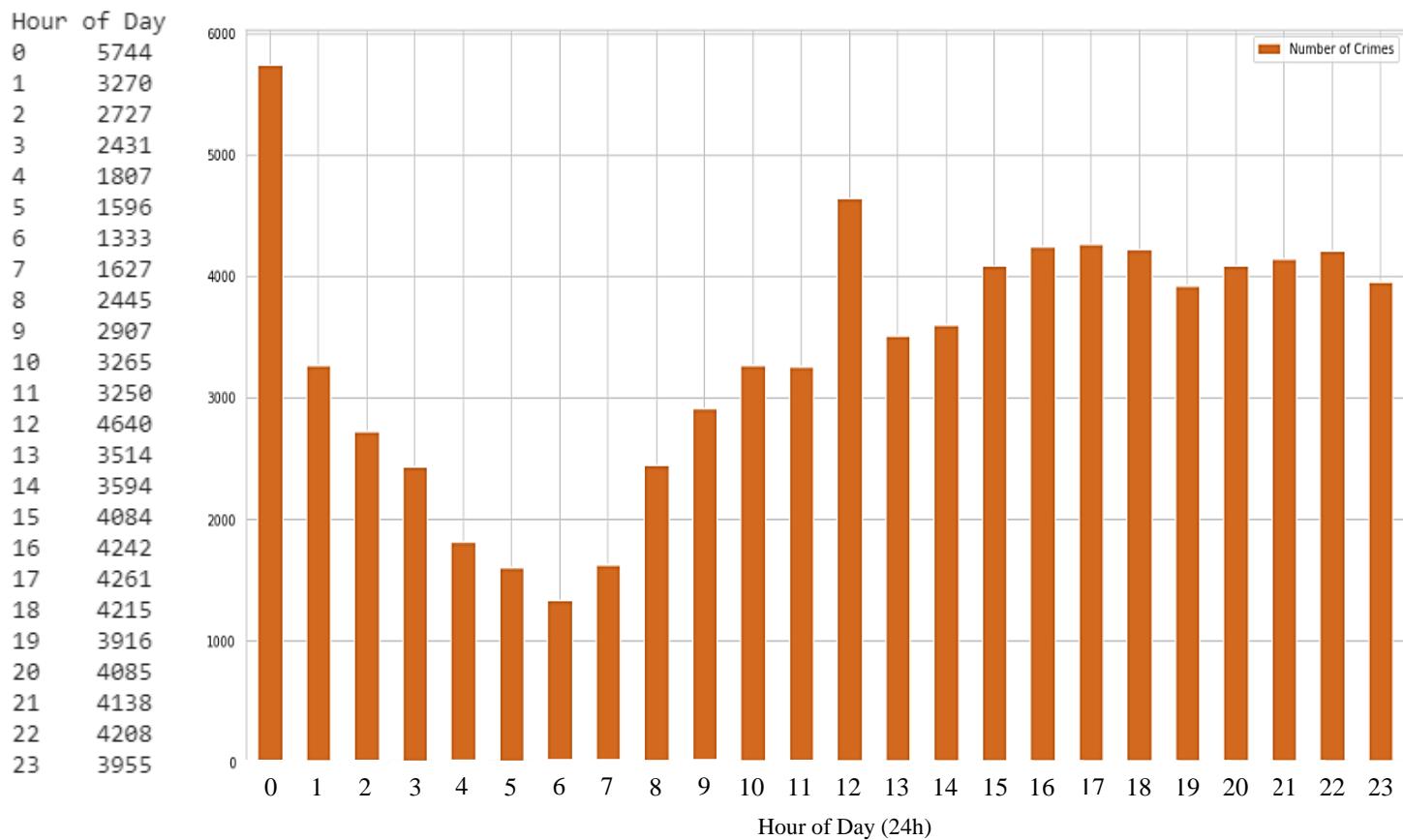
Incident Report Summary

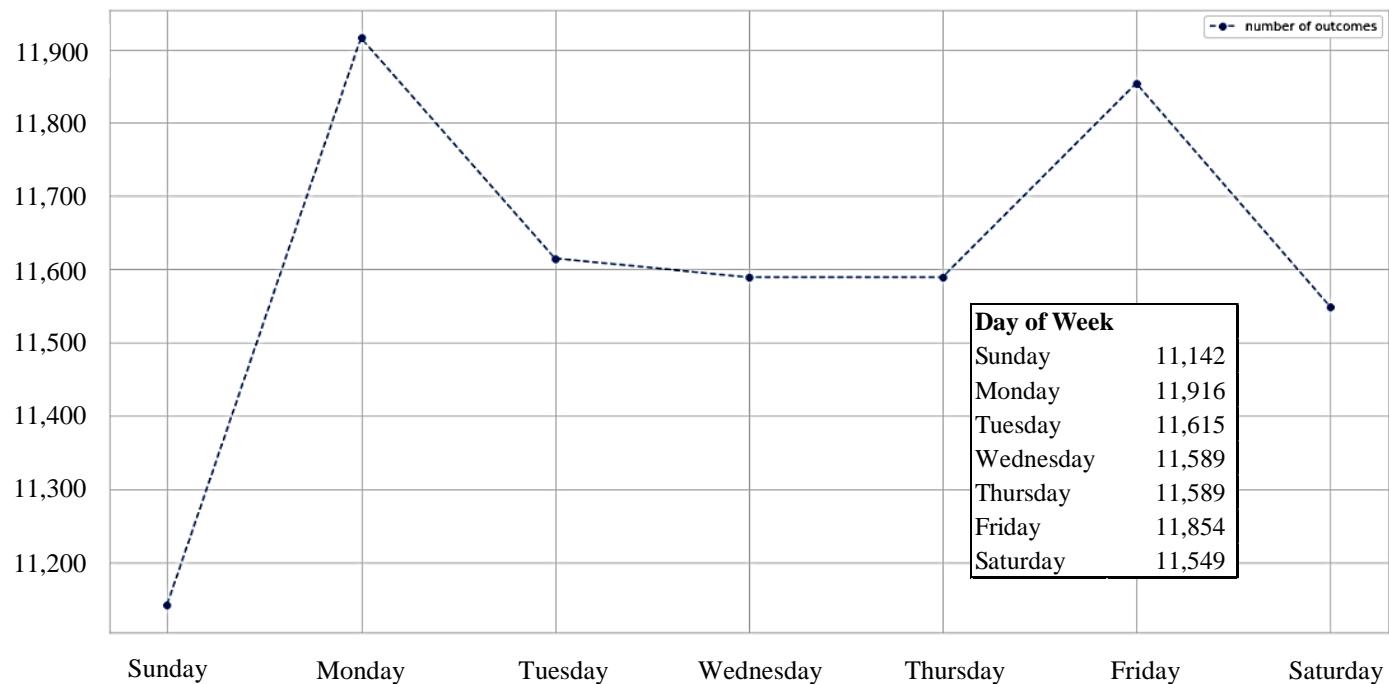
The incident report was cleansed by removing unnecessary rows and columns that were empty fields. The trimmed data can be found at fig 1. Each Field Statistic description is identified in the Fields Breakdown above.



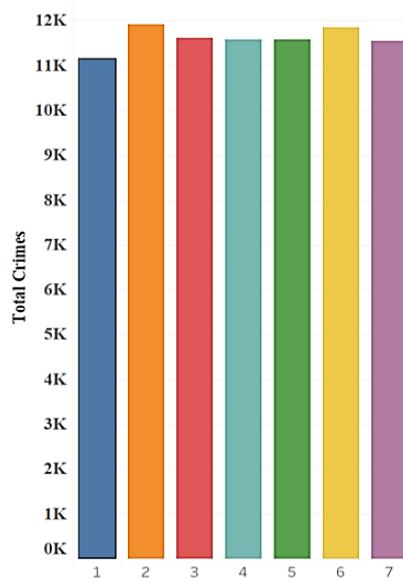
ANALYSIS

Crimes by Hour of Day (24h)



Crimes by Day of Week

Total # of Crimes by Day of Week (Sunday is 1)



Treemap for Total # of Crimes by Day of Week (Sunday is 1)

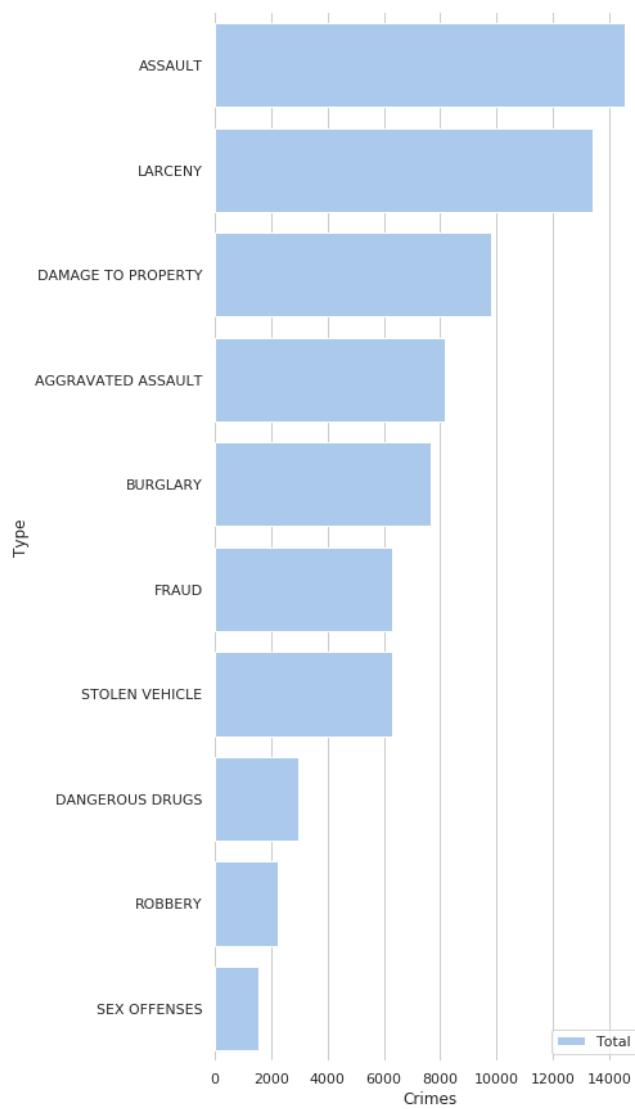


Day of Week Treemap: Darker colors indicate more crimes.

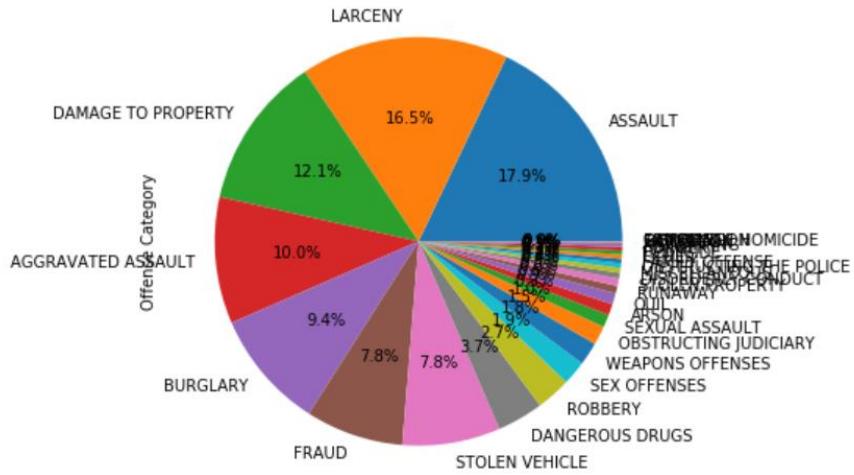


Crimes by Offense Category

ASSAULT	14547
LARCENY	13416
DAMAGE TO PROPERTY	9824
AGGRAVATED ASSAULT	8143
BURGLARY	7664
FRAUD	6314
STOLEN VEHICLE	6305
DANGEROUS DRUGS	2984
ROBBERY	2231
SEX OFFENSES	1545
WEAPONS OFFENSES	1484
OBSTRUCTING JUDICIARY	1207
SEXUAL ASSAULT	819
ARSON	728
OUIL	714
RUNAWAY	478
STOLEN PROPERTY	472
DISORDERLY CONDUCT	368
MISCELLANEOUS	316
OBSTRUCTING THE POLICE	301
FAMILY OFFENSE	288
OTHER	268
HOMICIDE	255
FORGERY	234
KIDNAPPING	211
LIQUOR	73
EXTORTION	44
JUSTIFIABLE HOMICIDE	14
SOLICITATION	5
GAMBLING	2



% of Total Crimes by Offense Category

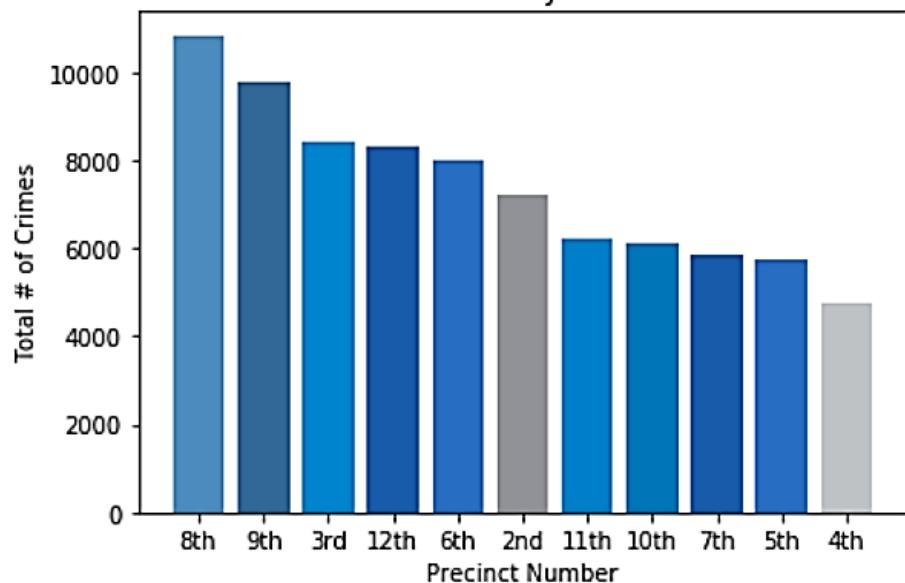


Crimes by Precinct Number

Precinct Number

8	10,846
9	9,769
3	8,419
12	8,309
6	8,008
2	7,239
11	6,201
10	6,097
7	5,834
5	5,740
4	4,772

Total # of Crimes by Police Precinct



% of Total Crimes by Precinct Number

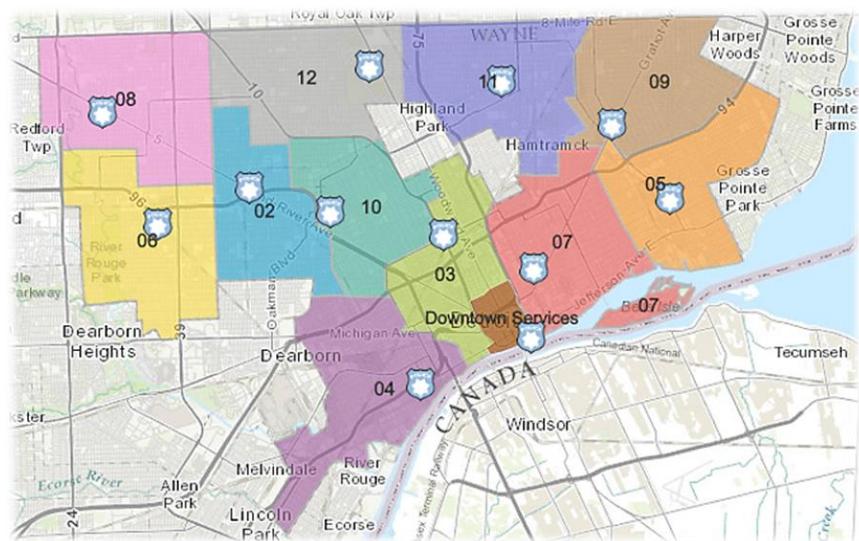
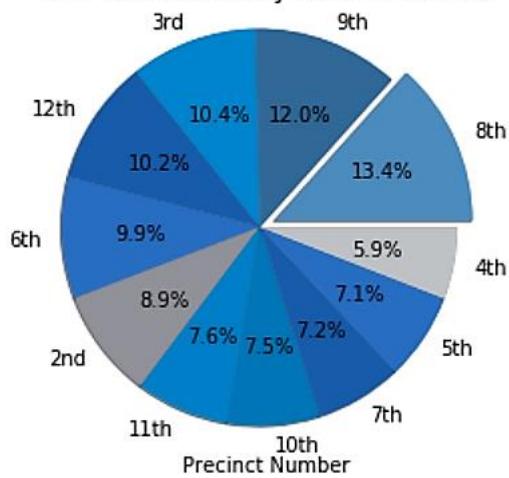
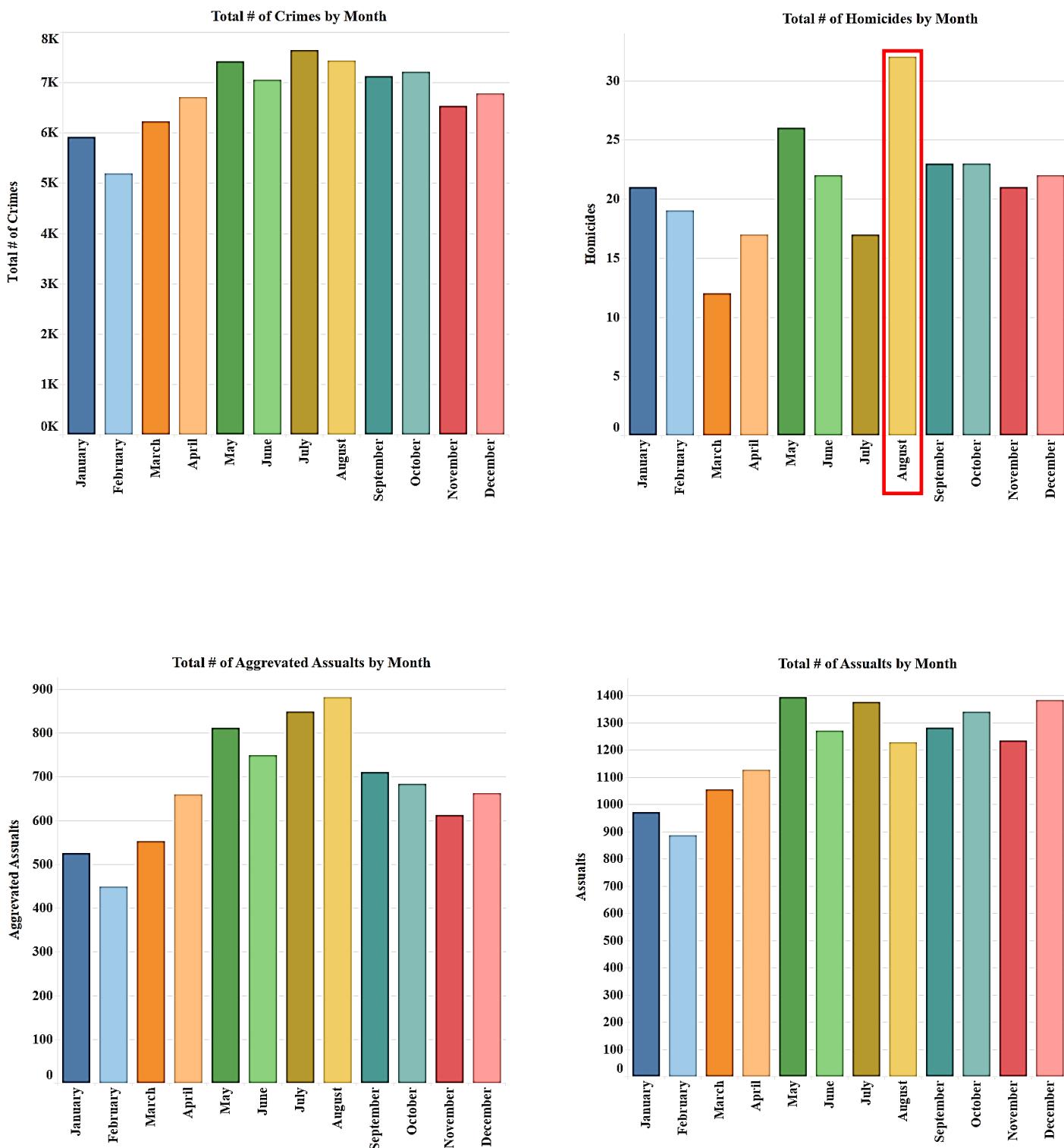
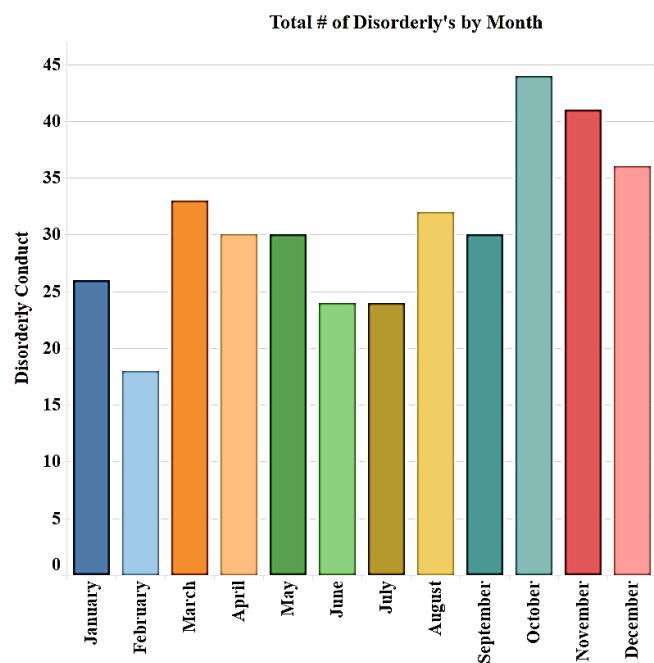
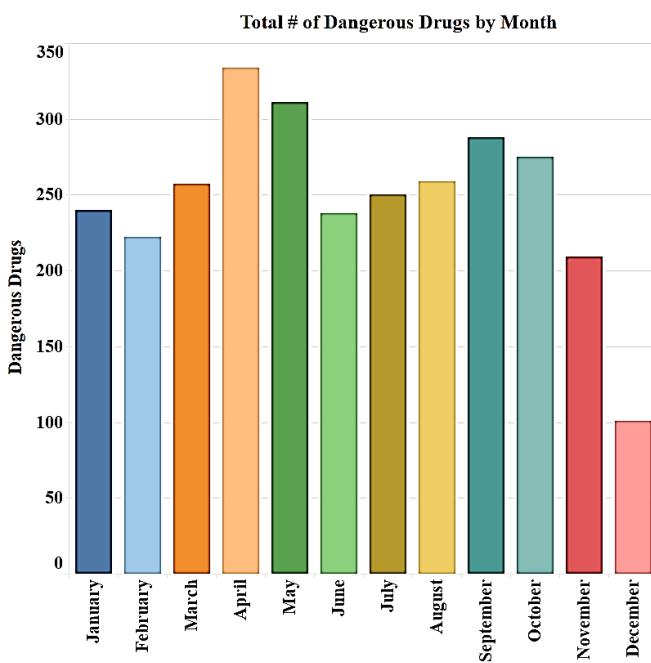
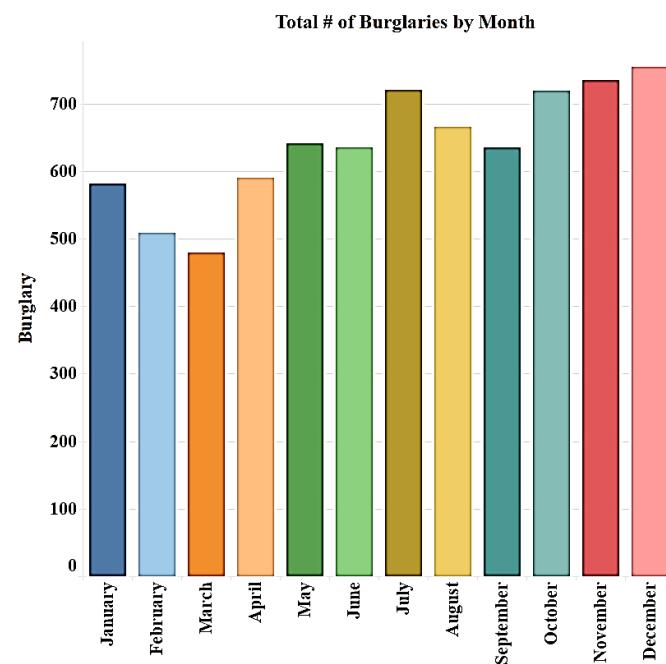
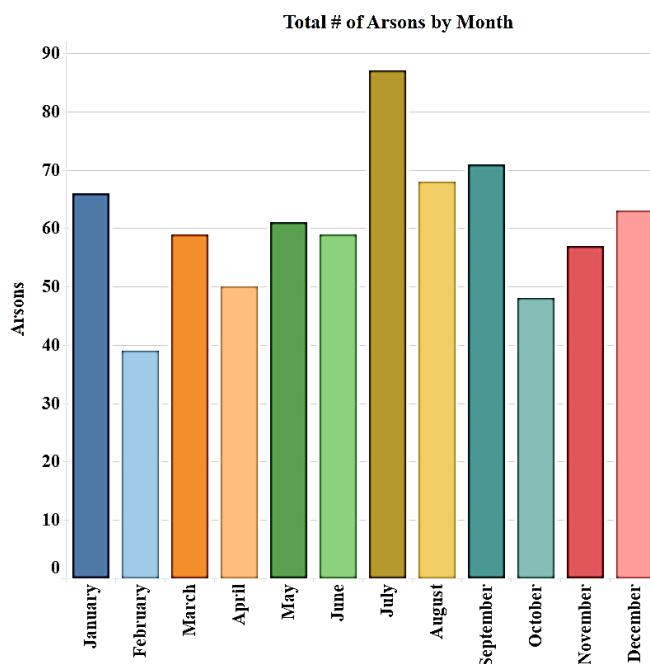


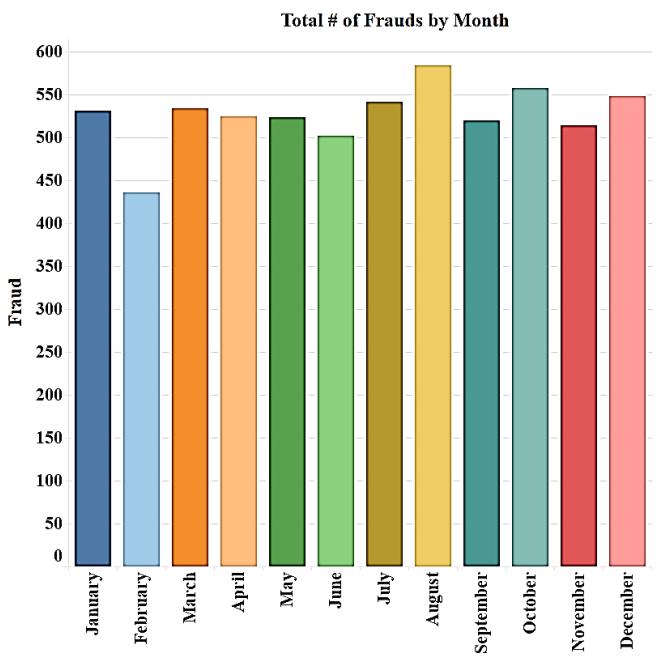
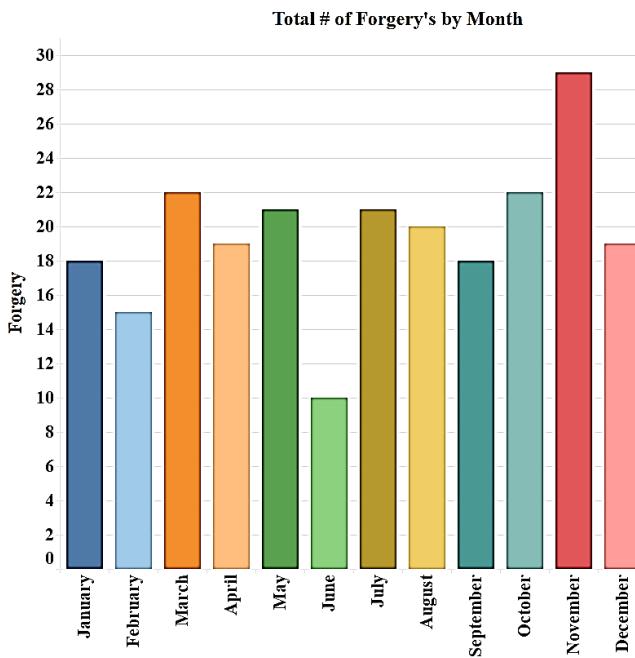
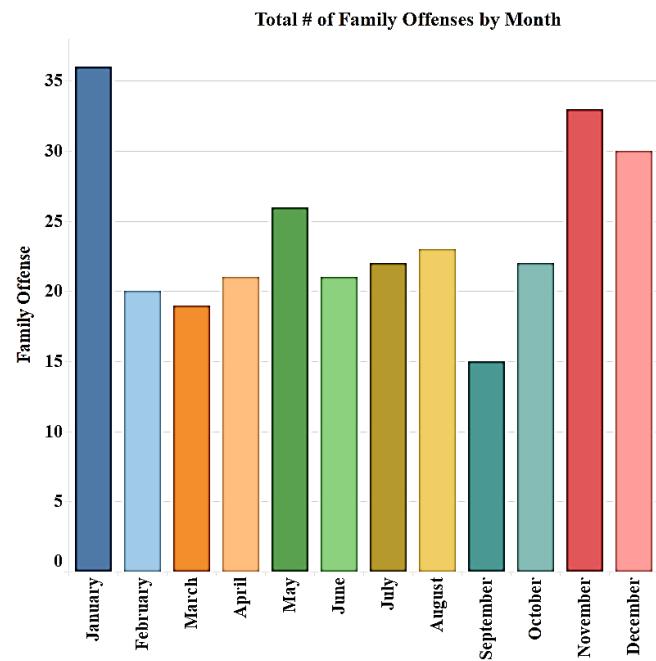
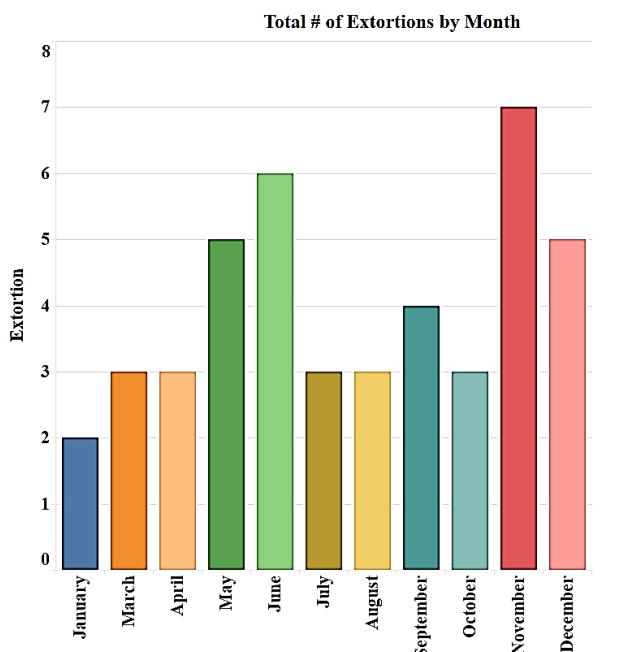
Figure 2. Precinct Map of Detroit. [2]

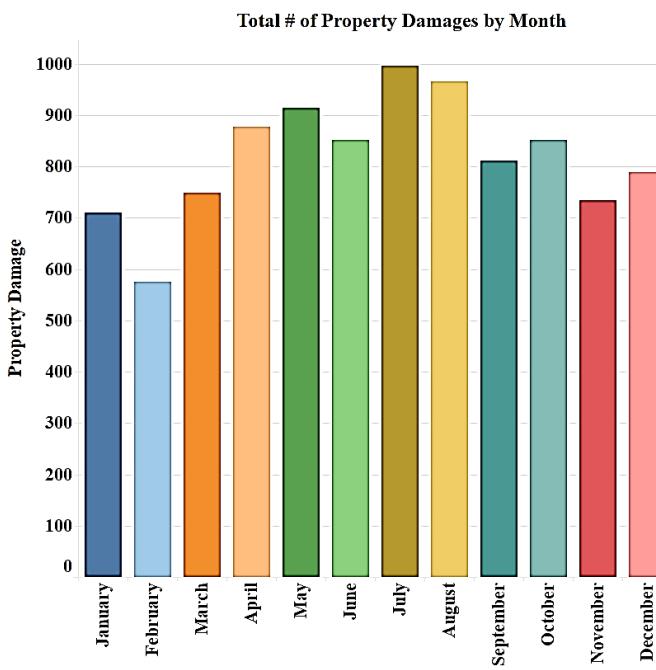
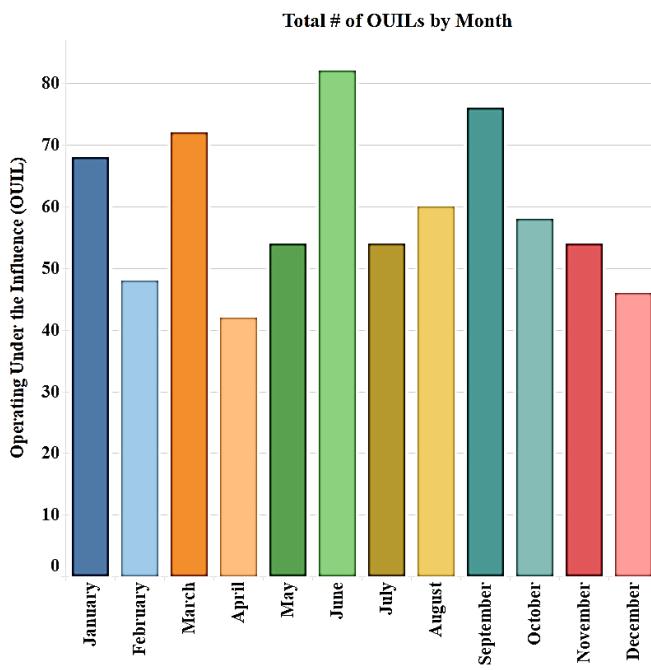
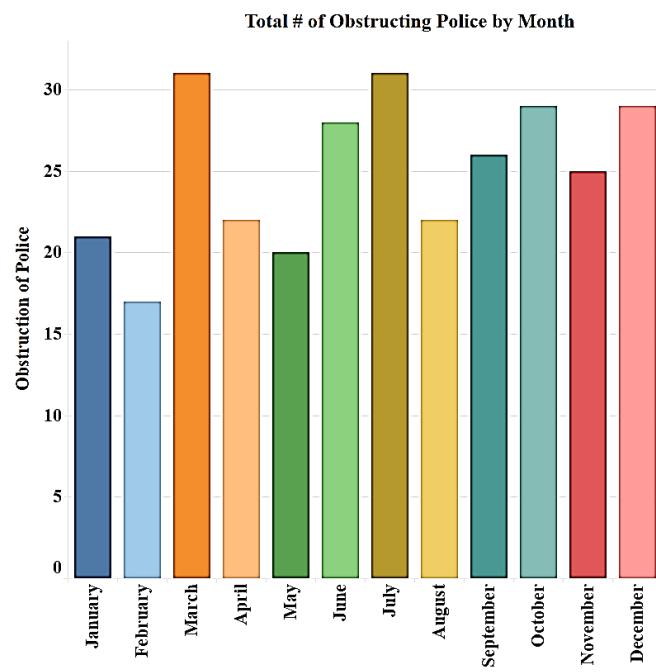
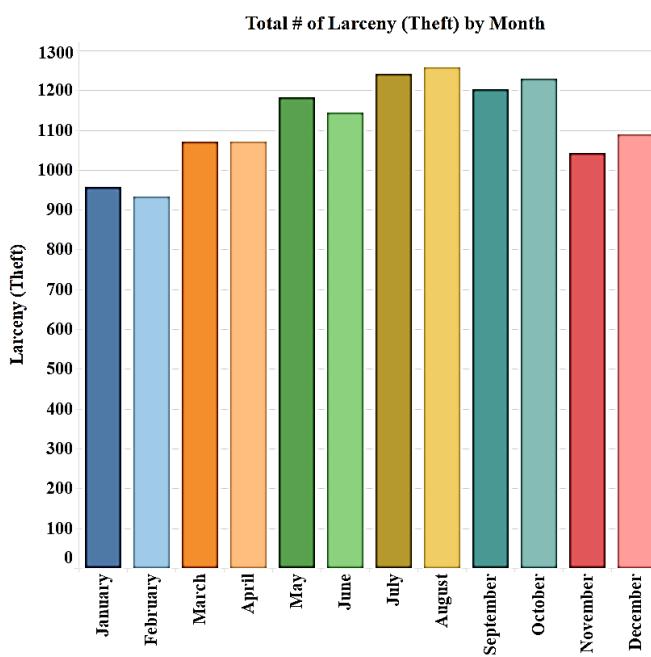


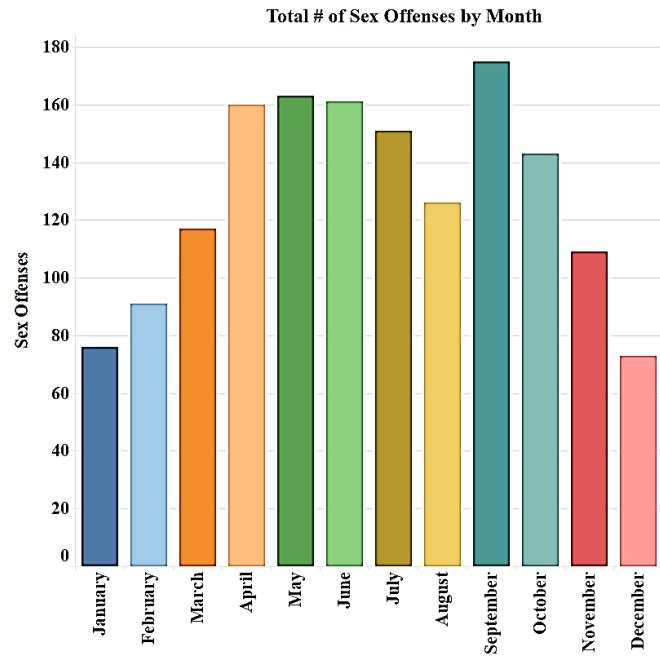
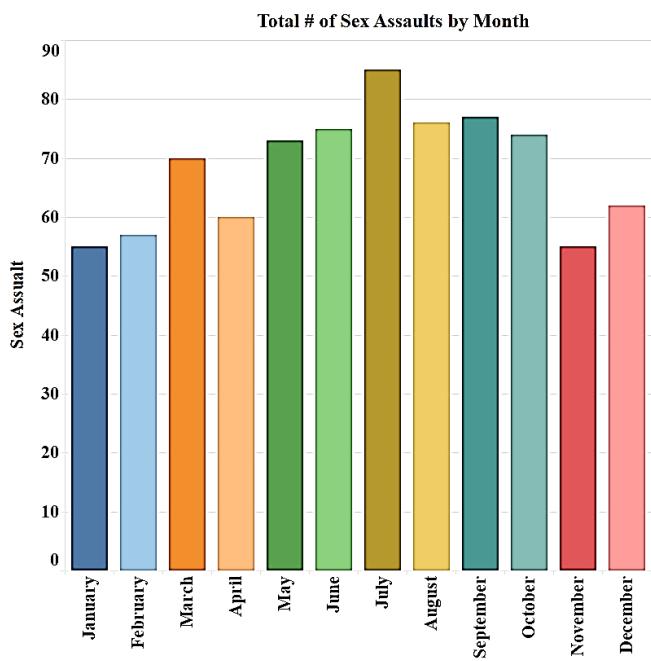
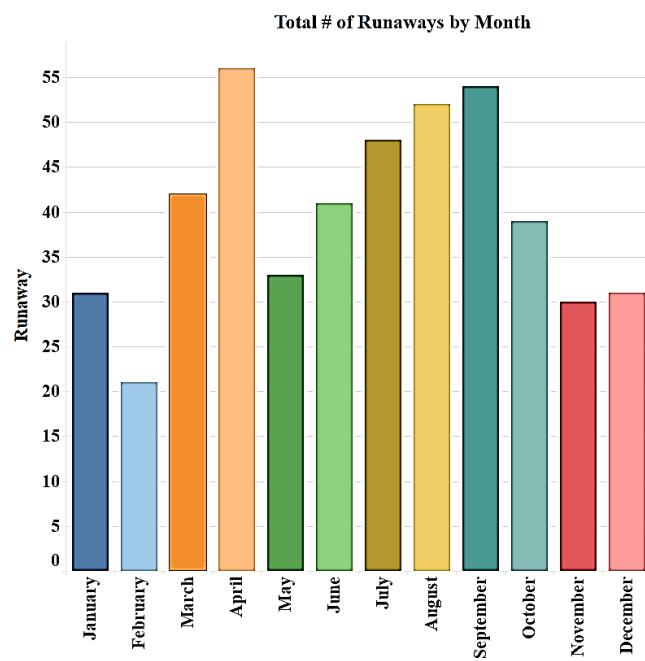
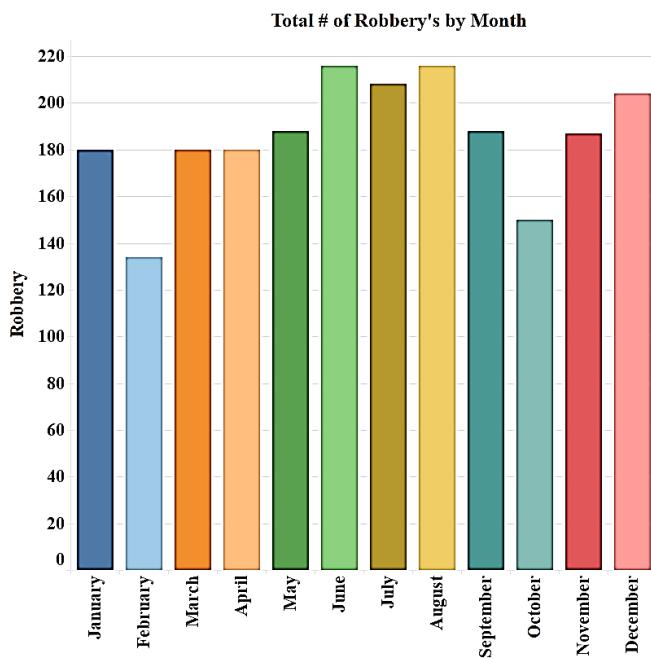
Crimes by Month

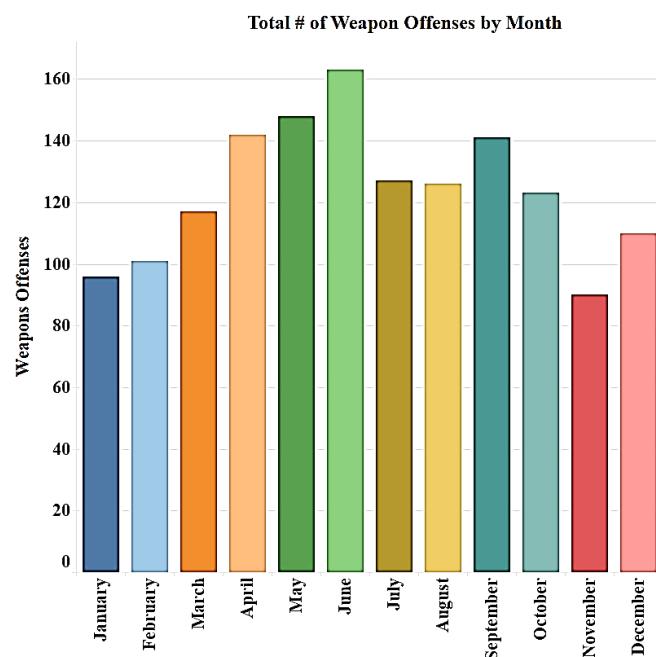
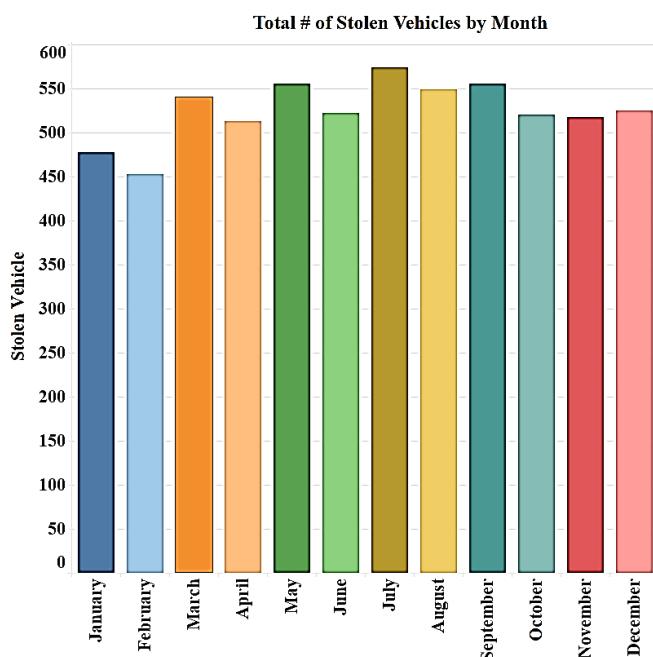












Crimes by Neighborhood

Warrendale

2273



Downtown	1945
Midtown	1582
Franklin Park	1528
Barton-McFarland	1339
Outer Drive-Hayes	1270
Regent Park	1229
Claytown	1208
Cornerstone Village	1177
Brightmoor	1157

Dexter-Linwood	1151
Morningside	1140
Bethune Community	1131
Nolan	1112
Midwest	1092
Oakman Blvd Community	1076
Central Southwest	1053
Bagley	1033
Springwells	1008
Warren Ave Community	962
Crary/St Marys	958
College Park	926
Fitzgerald/Marygrove	907
Schulze	895
Greenfield	881
Moross-Morang	875
Mapleridge	867
Holcomb Community	867
Winship	836
Airport Sub	832
Evergreen Lahser 7/8	819
Farwell	805
Evergreen-Outer Drive	782
Joy Community	717



Islandview	715	Wayne State	322
Elmwood Park	695	Buffalo Charles	321
Pulaski	680	Gratiot Town/Ketterring	314
Plymouth-Hubbell	658	Berg-Lahser	312
O'Hair Park	638	Gratiot-Grand	312
Nortown	616	Rosedale Park	305
Schoolcraft Southfield	593	Mount Olivet	305
Yorkshire Woods	586	Davison	303
Conner Creek	582	The Eye	295
East Village	575	LaSalle College Park	289
Von Steuben	569	University District	286
Harmony Village	561	Henry Ford	286
Grand River-I96	540	Pershing	282
Chadsey Condon	534	Belmont	281
Jefferson Chalmers	524	Martin Park	279
Hubbell-Lyndon	519	Palmer Park	278
Boynton	508	Garden Homes	276
East English Village	506	Grant	267
Nardin Park	504	Pride Area Community	265
Riverbend	488		
Eastern Market	467		
Franklin	459		
Denby	442		
West End	436		
Greektown	432		
North End	425		
Rivertown	422		
Five Points	421		
Krainz Woods	420		
Schaefer 7/8 Lodge	418	Brush Park	256
North Rosedale Park	408	Grandmont	251
Mohican Regent	408	Cadillac Heights	248
Corktown	401	Forest Park	248
Chandler Park	397	Chalfonte	248
Lafayette Park	396	McDowell	247
Oak Grove	396	Weatherby	247
Wade	385	Butler	244
Hubbell-Puritan	380	Northeast Central District	237
Seven Mile-Rouge	366	Aviation Sub	231
Russell Woods	366	Delray	230
We Care Community	363	Cultural Center	226
Gratiot-Findlay	361	New Center Commons	224
Pilgrim Village	358	Riverdale	220
Fox Creek	357	Fiskhorn	219
Greenfield-Grand River	346	Woodbridge	216
Medical Center	334	Poletown East	210
McDougall-Hunt	332	Conner Creek Industrial	208
Grand River-St Marys	329	Littlefield Community	207
Grixdale Farms	328	Far West Detroit	206
Petoskey-Otsego	326	Gratiot Woods	205
Eden Gardens	324	Gold Coast	201
Ravendale	322	Miller Grove	197

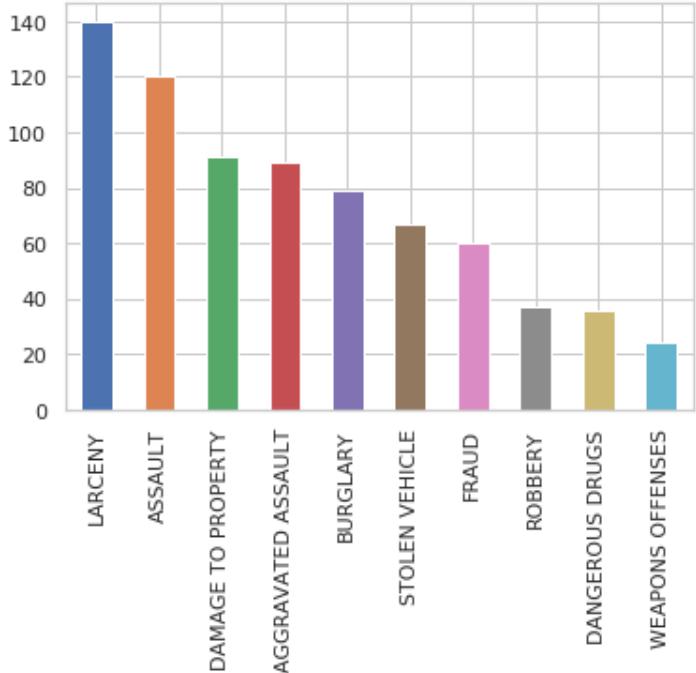


Eliza Howell	195	Michigan-Martin	122
Core City	194	San Bernardo	122
Gateway Community	191	Garden View	119
North Corktown	190	Conant Gardens	118
Plymouth-I96	189	Pingree Park	115
Campau/Banglatown	189	Paveway	114
West Village	187	Wildemere Park	110
Sherwood	187	West Side Industrial	104
Piety Hill	186	Brewster Homes	103
Greenwich	185	Indian Village	91
Elijah McCoy	181	Herman Kiefer	90
New Center	179	Minock Park	88
Davison-Schoolcraft	171	West Outer Drive	86
Green Acres	170	Hubbard Richard	80
Castle Rouge	169	Southfield Plymouth	77
North LaSalle	169	Rouge Park	72
Blackstone Park	169	Old Redford	68
Greenfield Park	168	Mexicantown	66
South of Six	166	Palmer Woods	65
Hawthorne Park	165	Russell Industrial	62
NW Goldberg	164	Marina District	62
Boston Edison	163	Seven Mile Lodge	61
Joy-Schaefer	162	Happy Homes	60
State Fair	161	Tech Town	57
North Campau	156	East Canfield	56
Milwaukee Junction	153	Historic Atkinson	46
McNichols Evergreen	152	Medbury Park	42
Sherwood Forest	152	Tri-Point	41
LaSalle Gardens	150	Carbon Works	39
Cadillac Community	149	Detroit Golf	33
Chandler Park-Chalmers	148	Oakwood Heights	31
Jeffries	148	West Virginia Park	30
Jamison	148	Joseph Berry Sub	29
Northwest Community	144	Melvern Hill	24
Westwood Park	139	Arden Park	22
Grandmont #1	138	Virginia Park	18
Dexter-Fenkell	136	Waterworks Park	12
Penrose	134	Belle Isle	6
Hubbard Farms	131	Douglass	5
Pembroke	127		

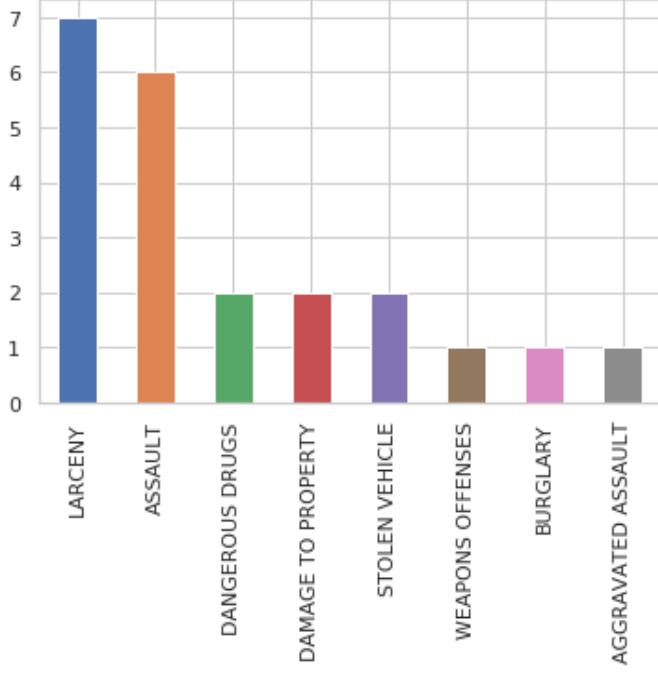


Crime by Neighborhoods Bar Graphs

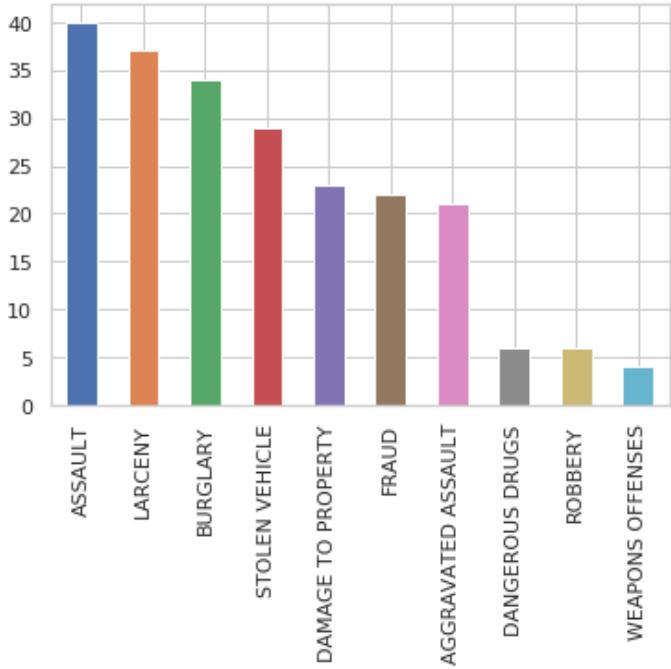
Crimes in Airport Sub



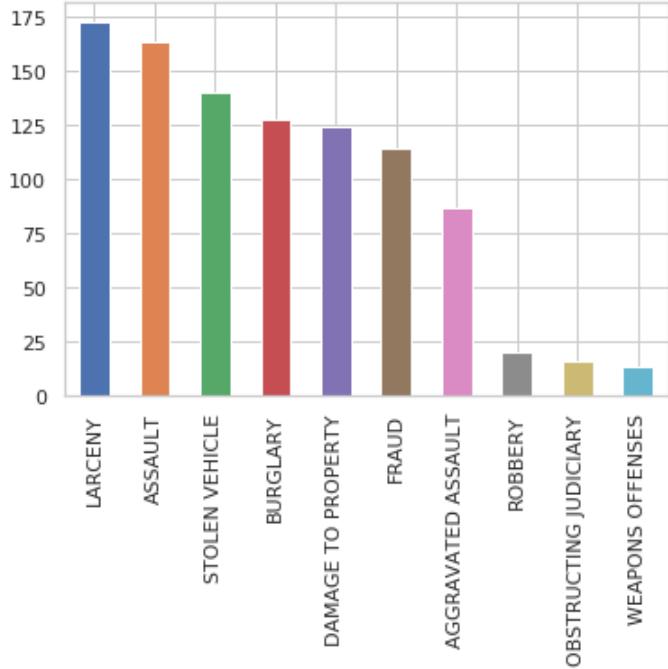
Crimes in Arden Park



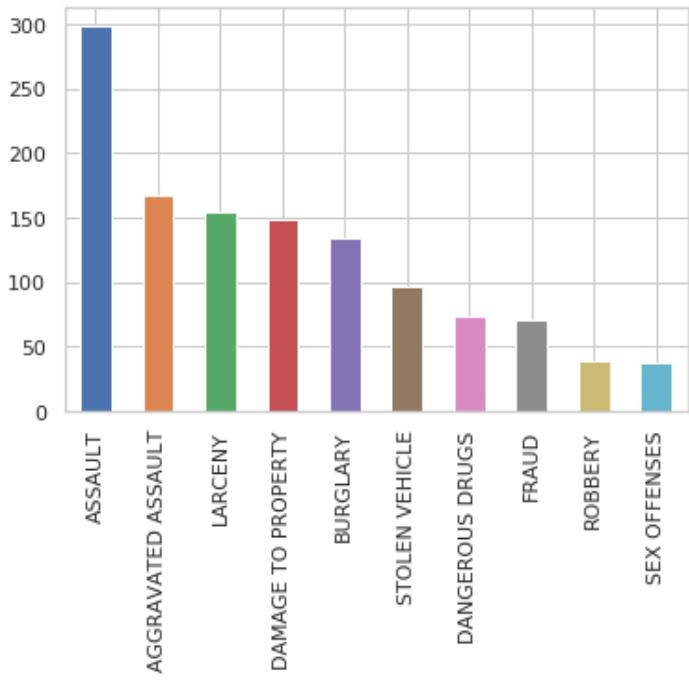
Crimes in Aviation Sub



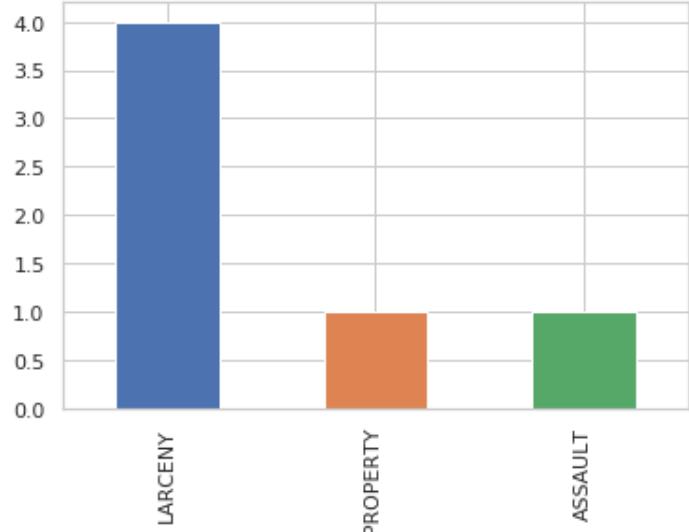
Crimes in Bagley



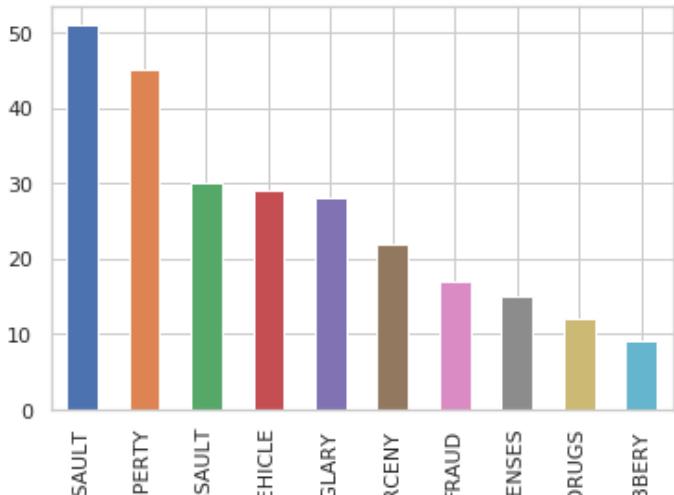
Crimes in Barton-McFarland



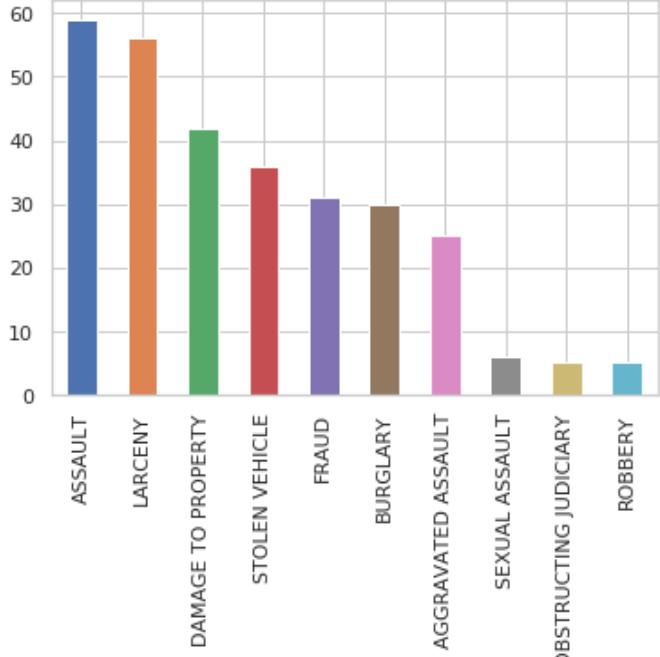
Crimes in Belle Isle



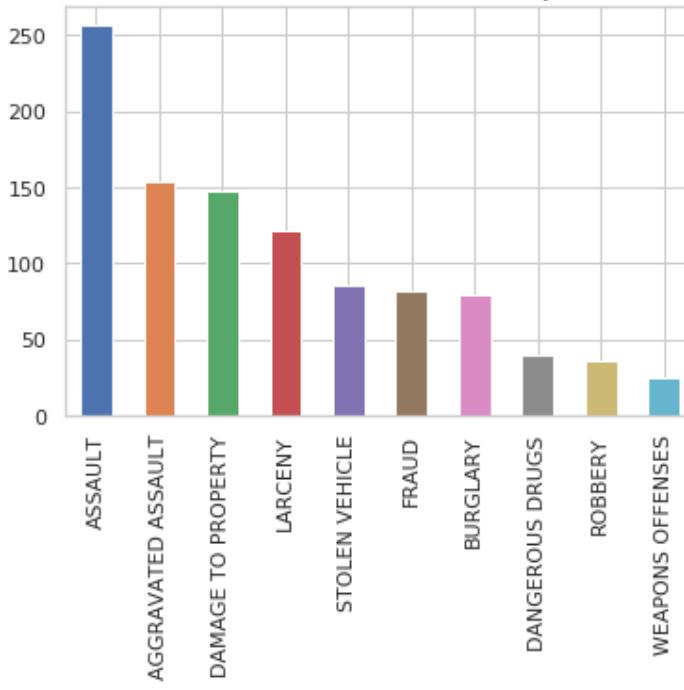
Crimes in Belmont



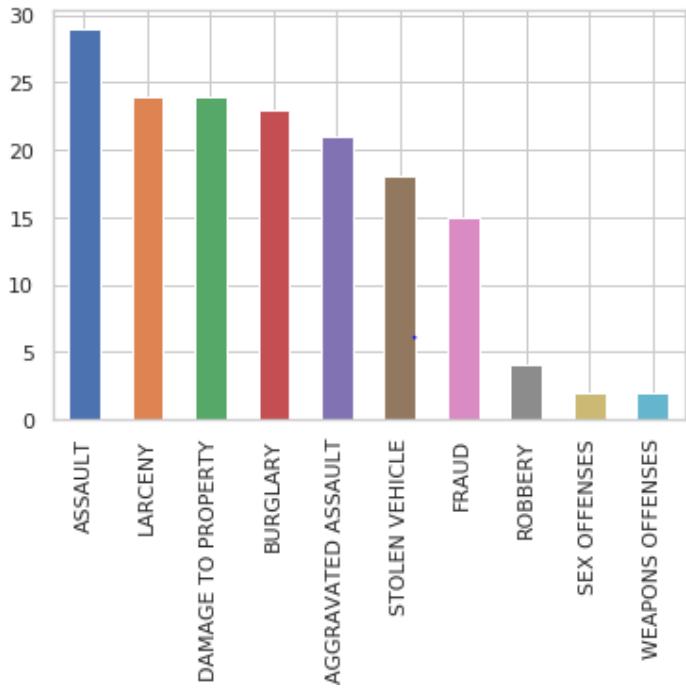
Crimes in Berg-Lahser



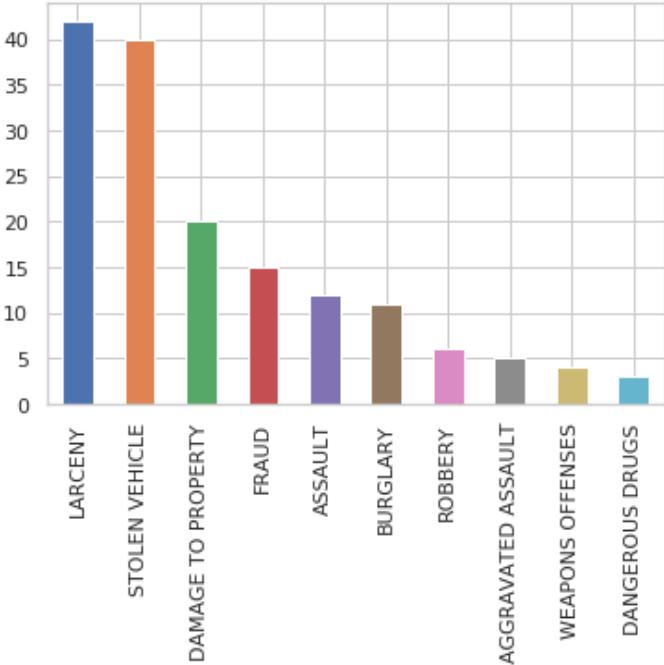
Crimes in Bethune Community



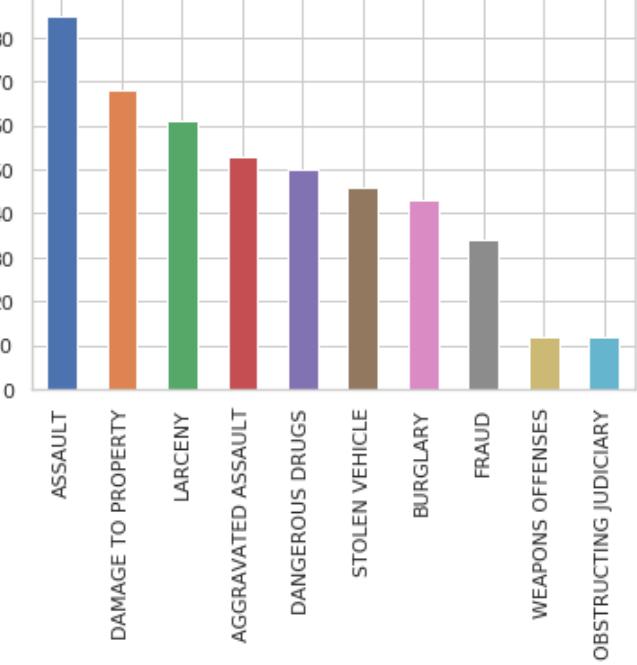
Crimes in Blackstone Park



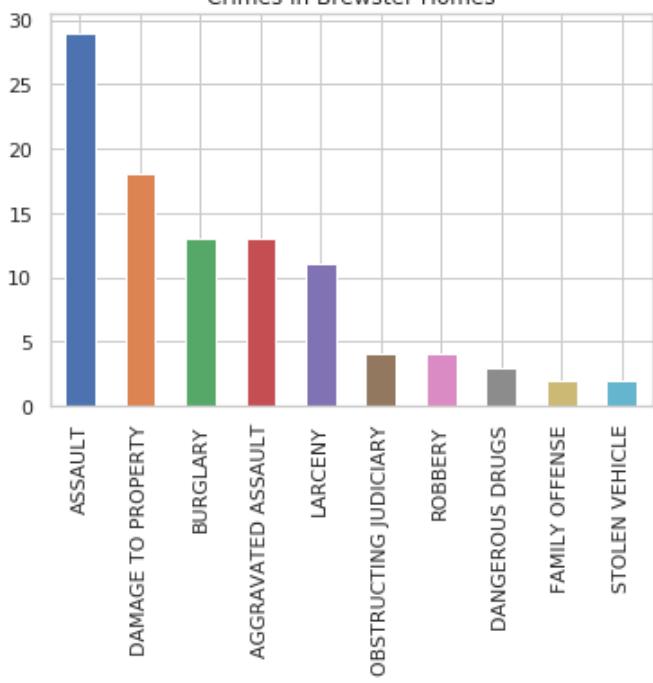
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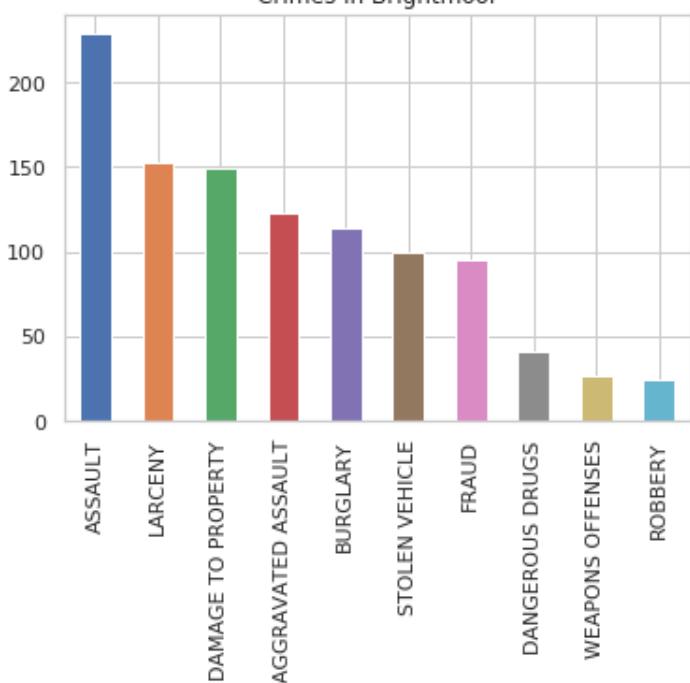
Crimes in Boynton



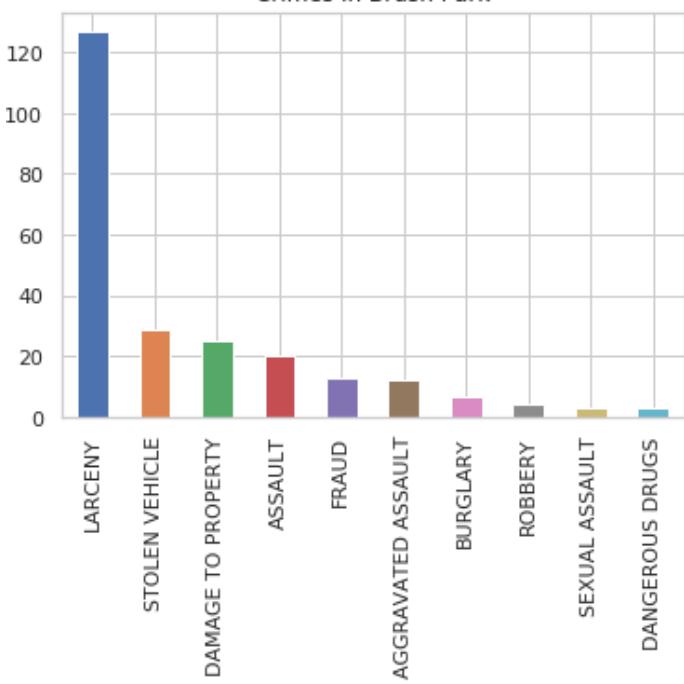
Crimes in Brewster Homes



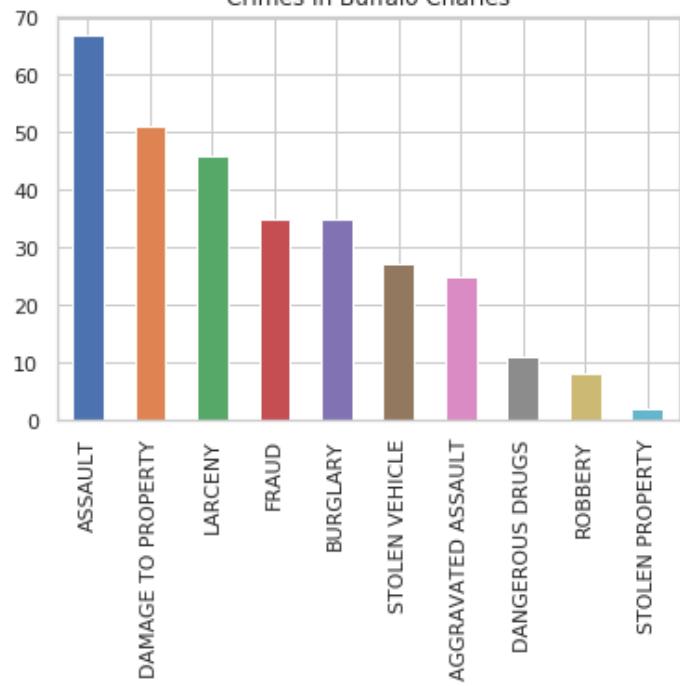
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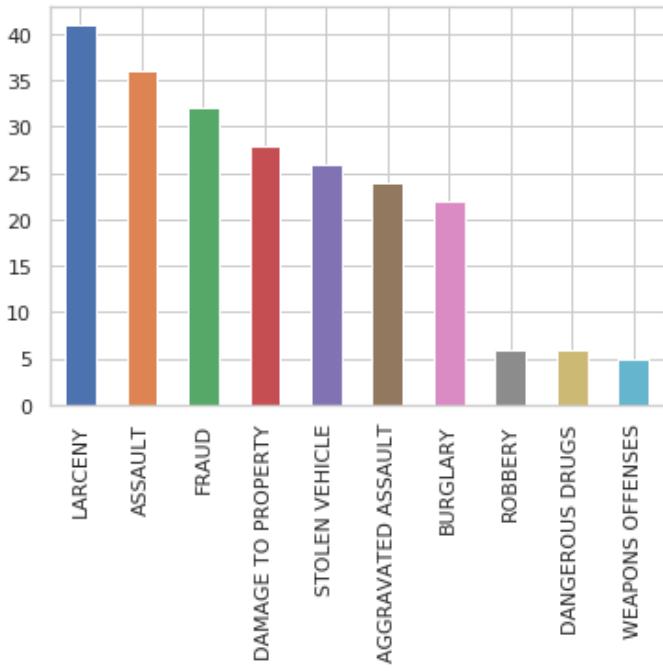
Crimes in Brush Park



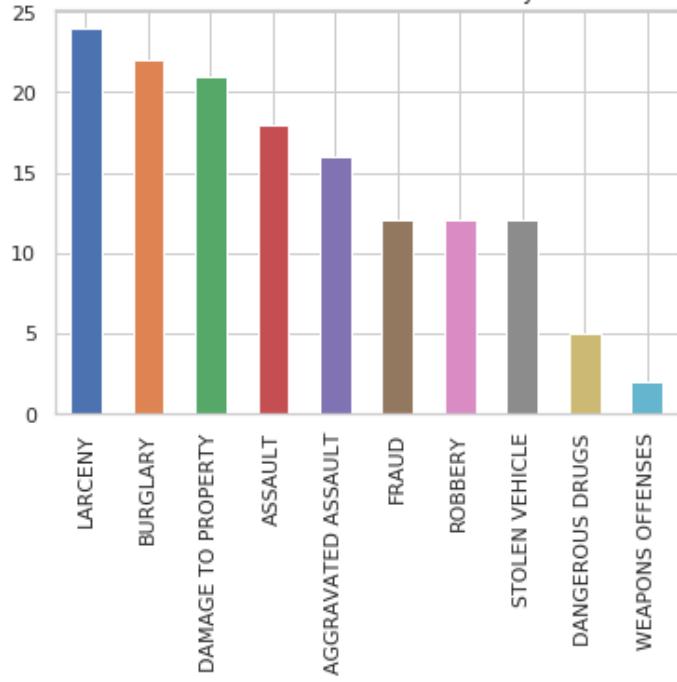
Crimes in Buffalo Charles



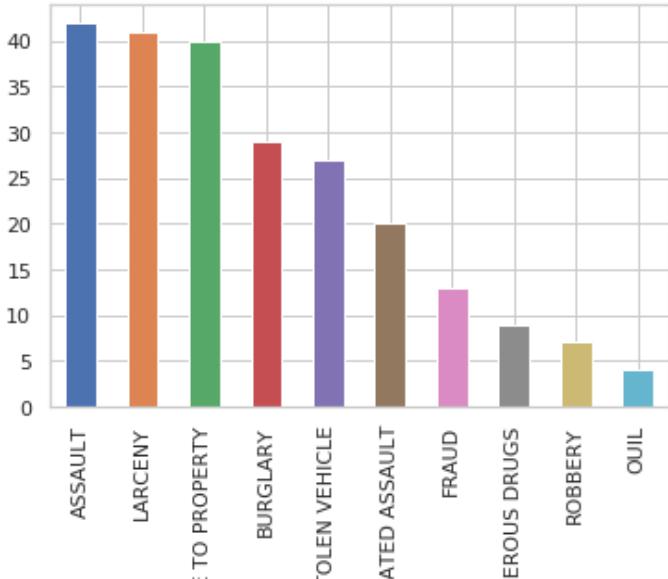
Crimes in Butler



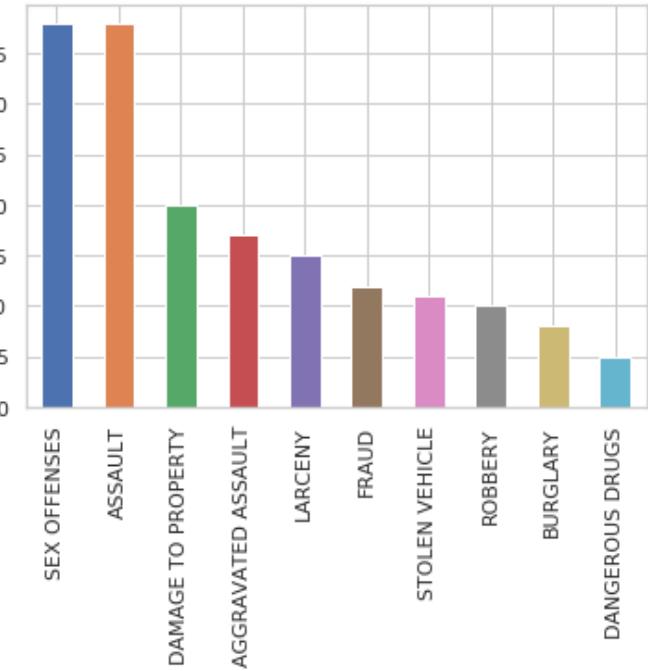
Crimes in Cadillac Community



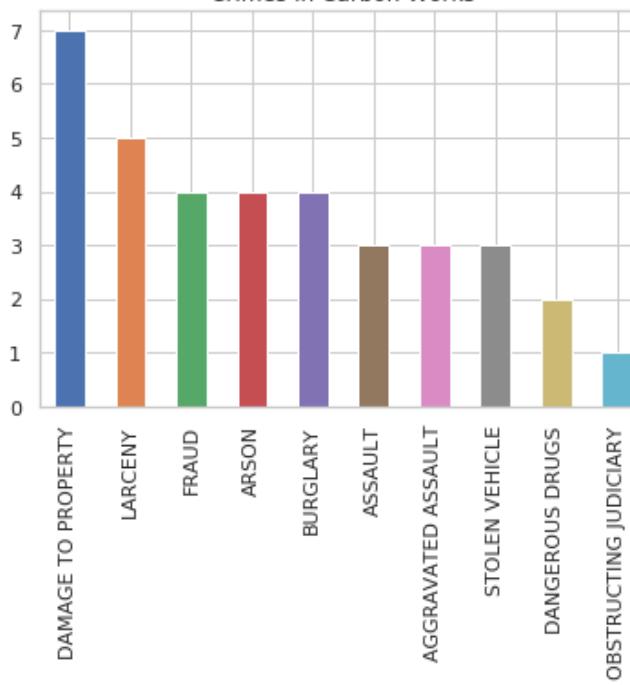
Crimes in Cadillac Heights



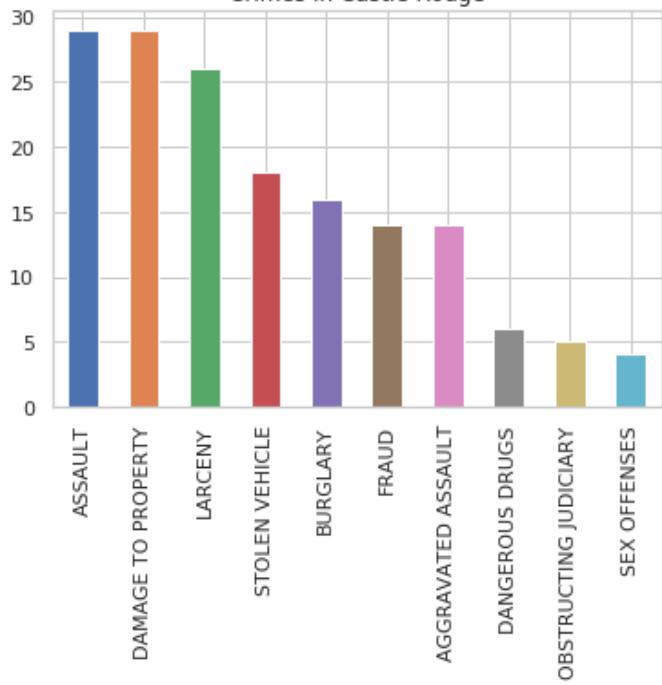
Crimes in Campau/Banglatown



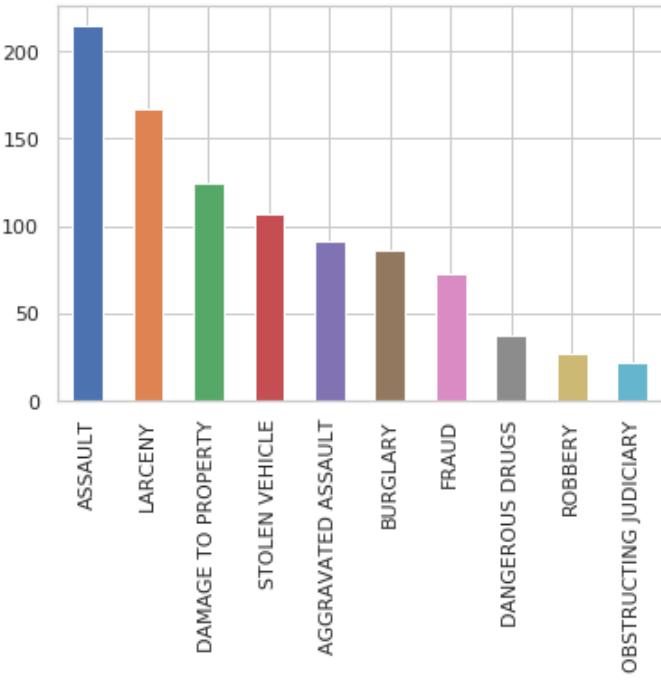
Crimes in Carbon Works



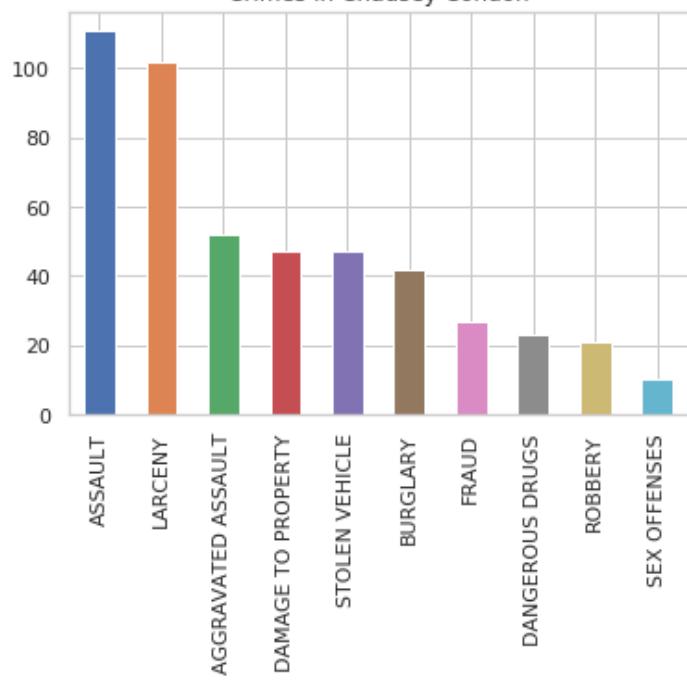
Crimes in Castle Rouge



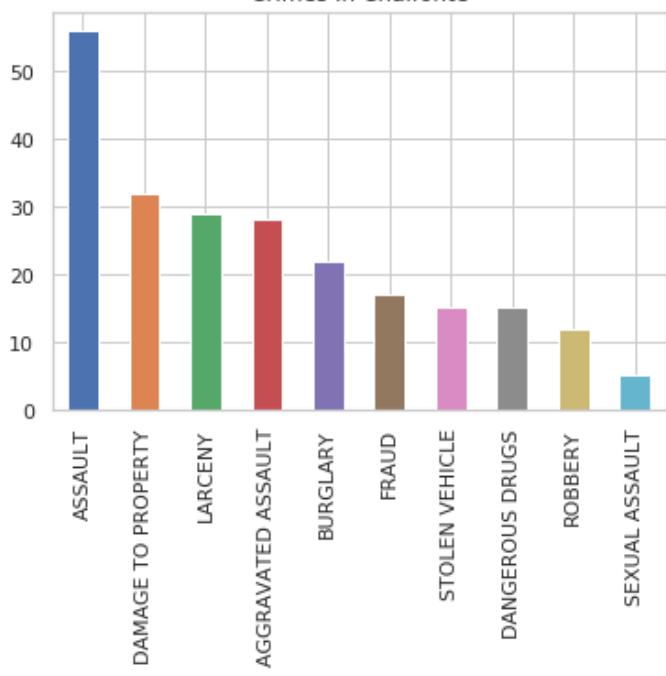
Crimes in Central Southwest



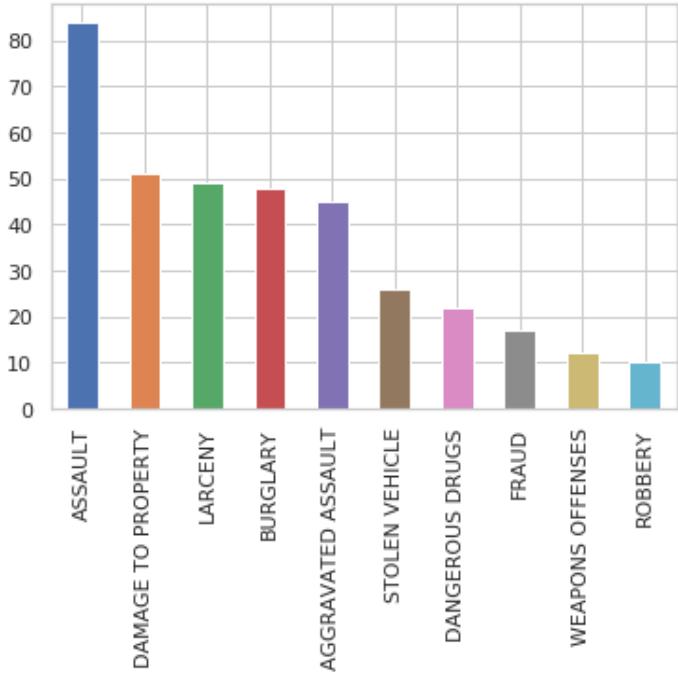
Crimes in Chadsey Condon



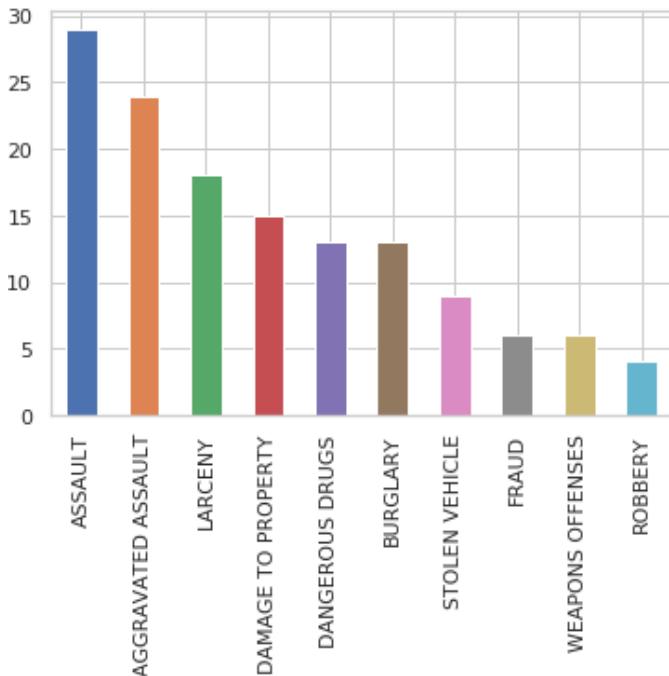
Crimes in Chalfonte



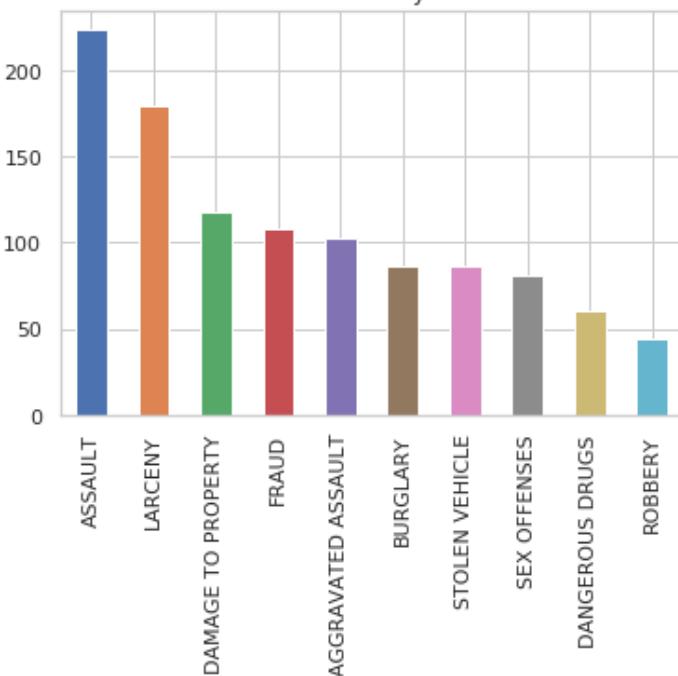
Crimes in Chandler Park



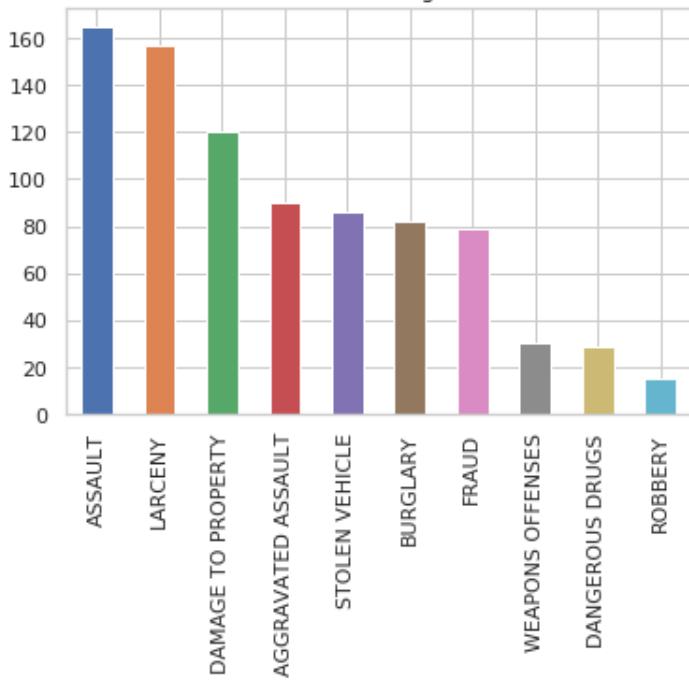
Crimes in Chandler Park-Chalmers



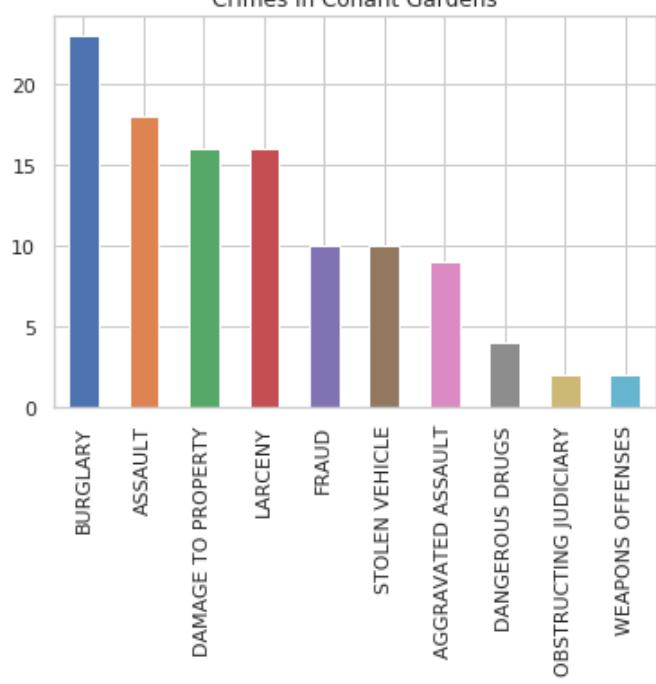
Crimes in Claytown



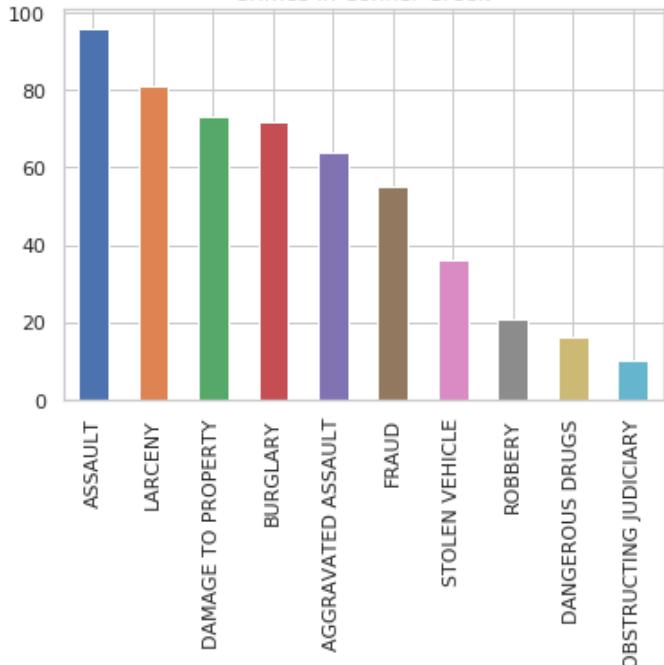
Crimes in College Park



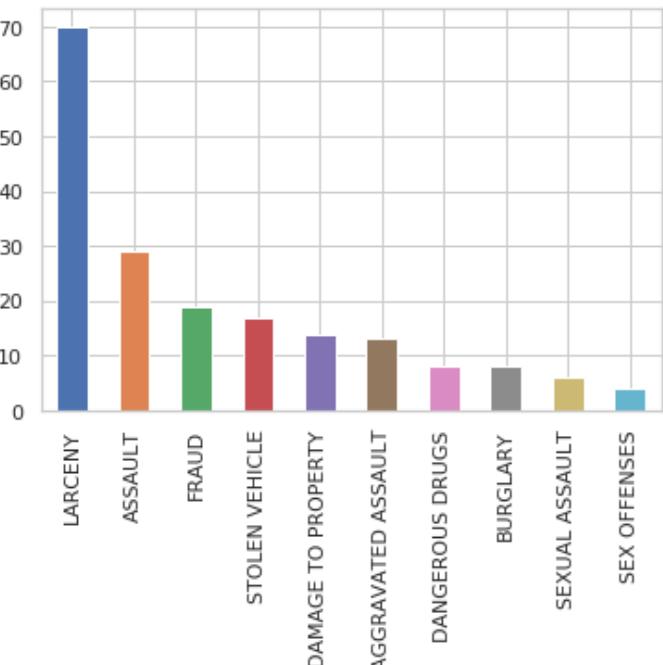
Crimes in Conant Gardens



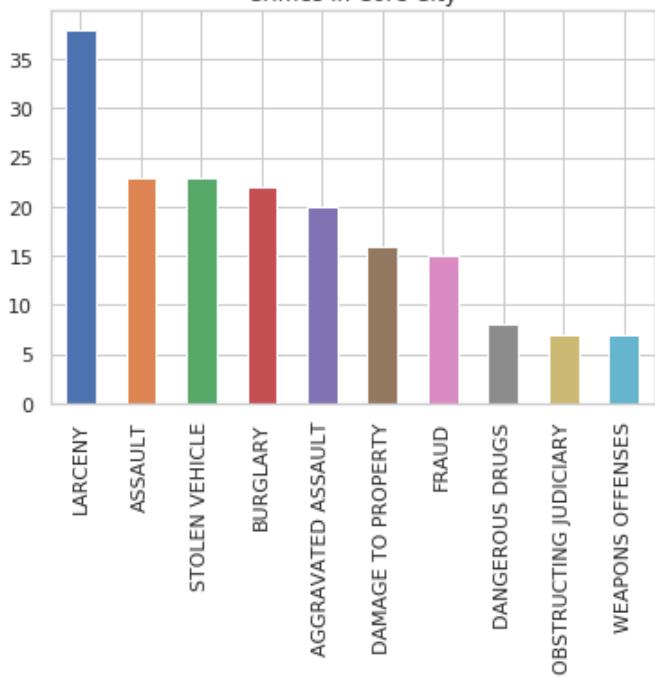
Crimes in Conner Creek



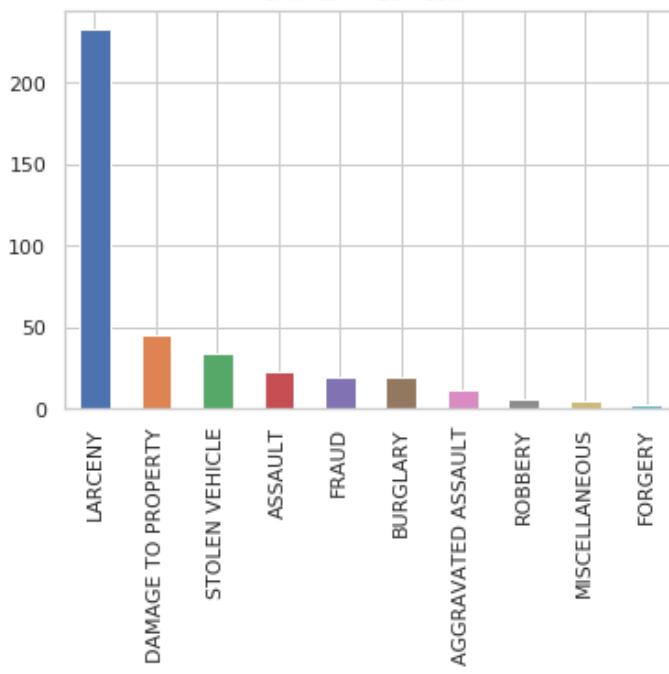
Crimes in Conner Creek Industrial



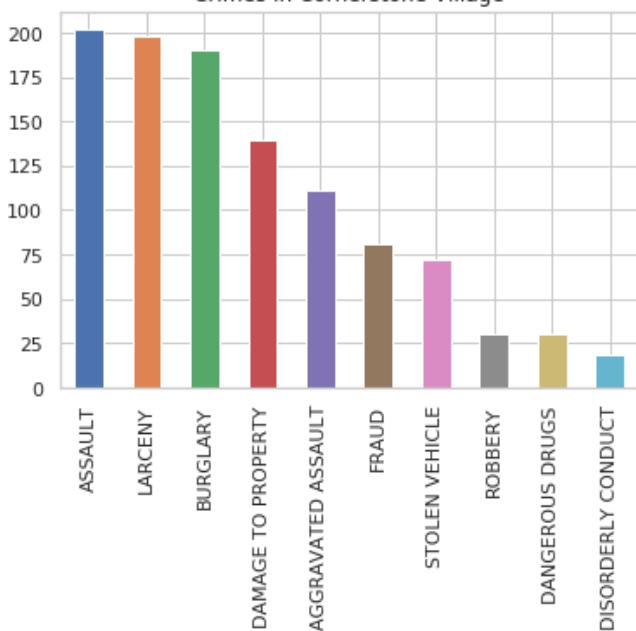
Crimes in Core City



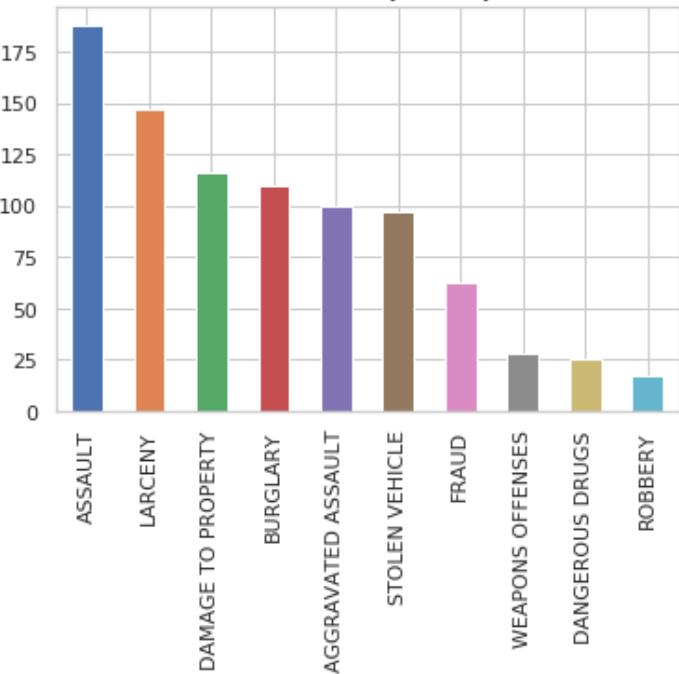
Crimes in Corktown



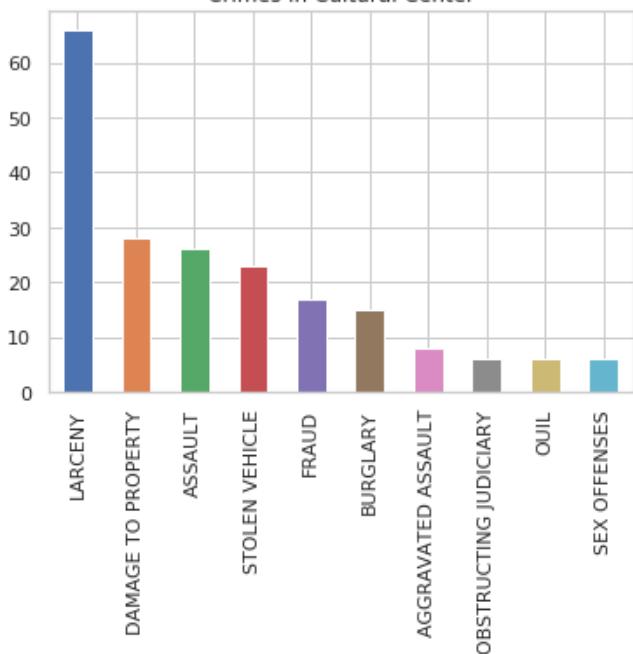
Crimes in Cornerstone Village



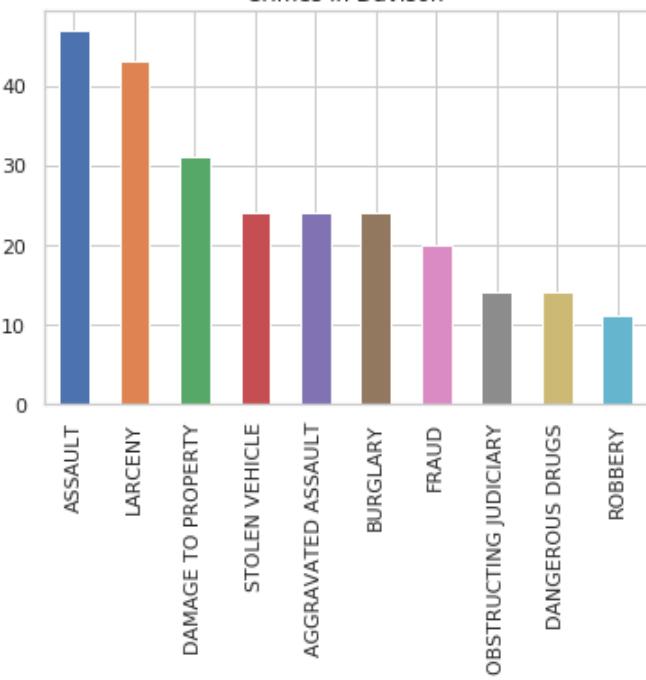
Crimes in Crary/St Marys



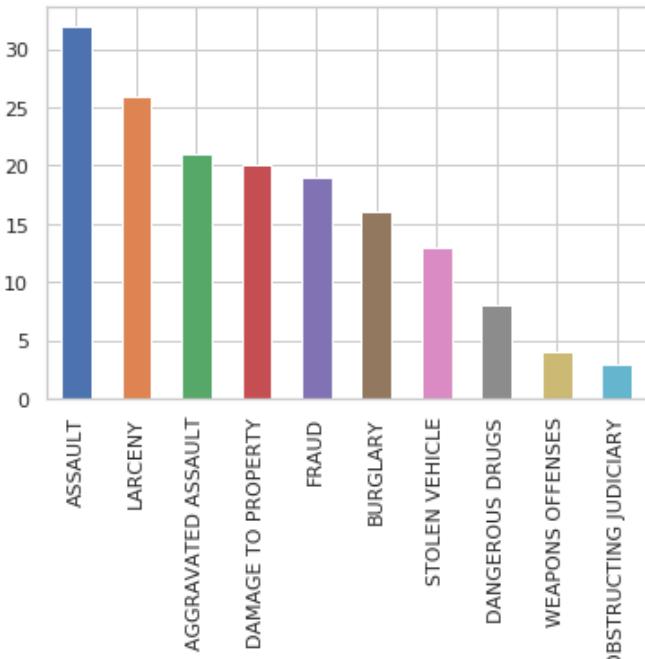
Crimes in Cultural Center



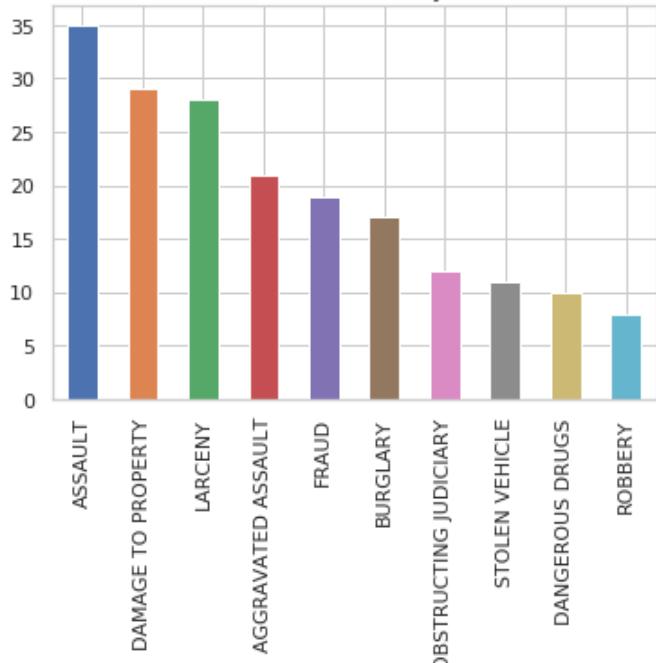
Crimes in Davison



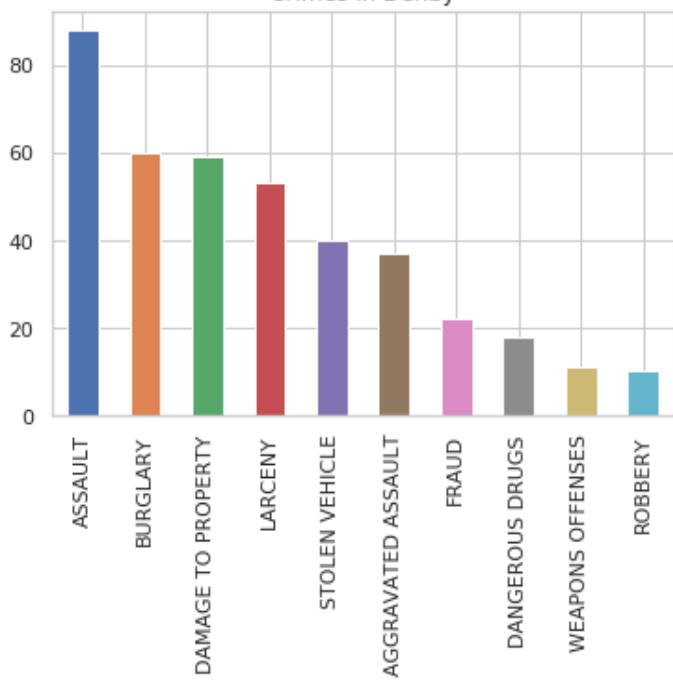
Crimes in Davison-Schoolcraft



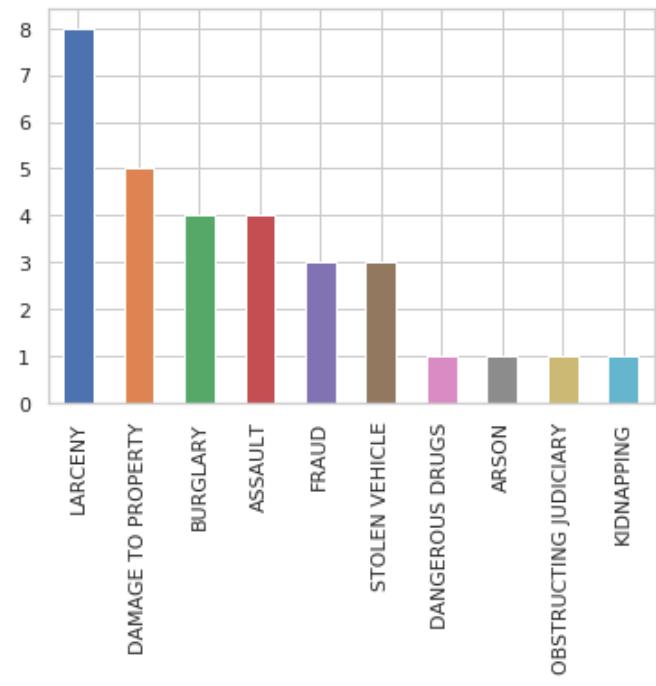
Crimes in Delray



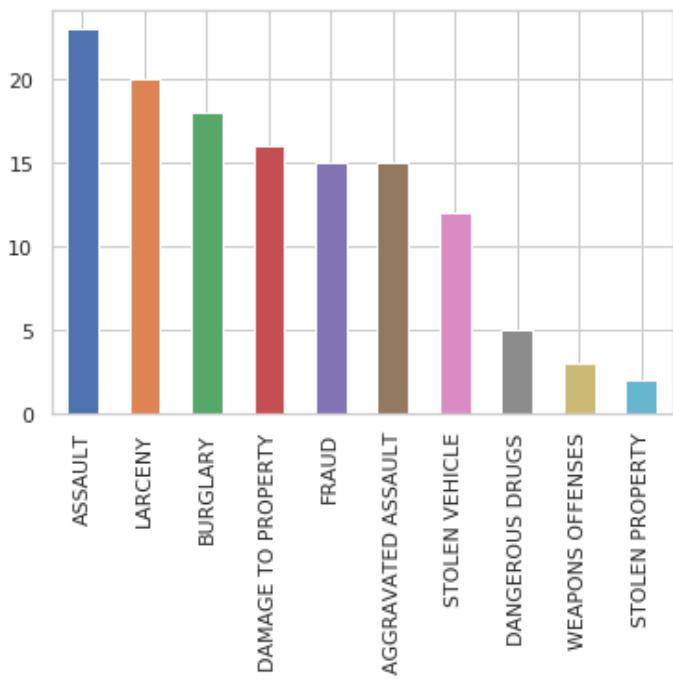
Crimes in Denby



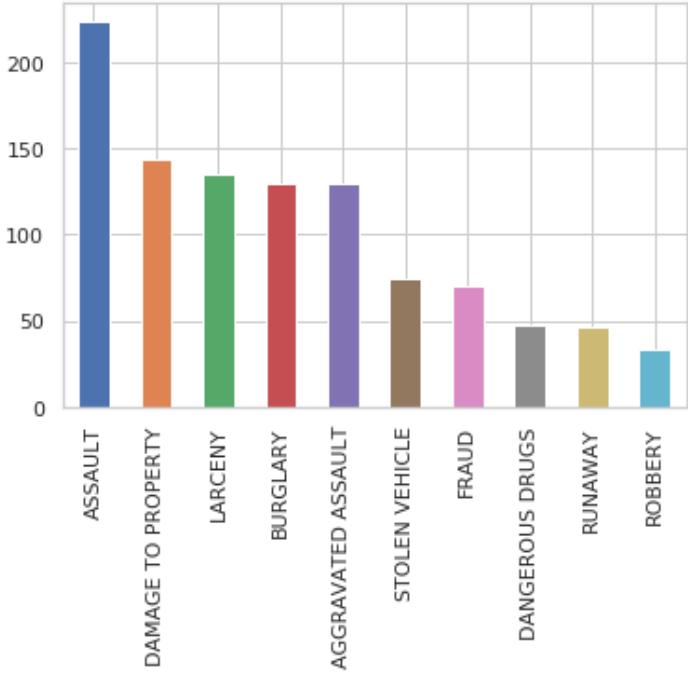
Crimes in Detroit Golf



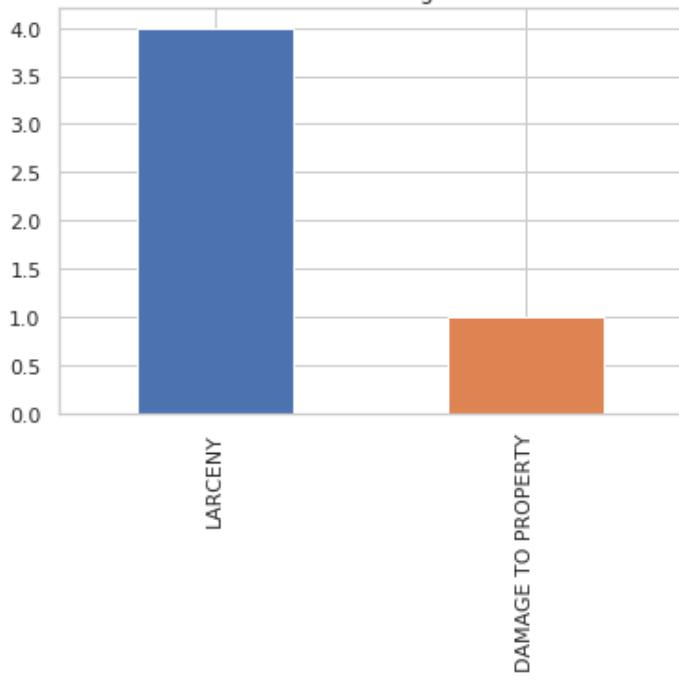
Crimes in Dexter-Fenkell



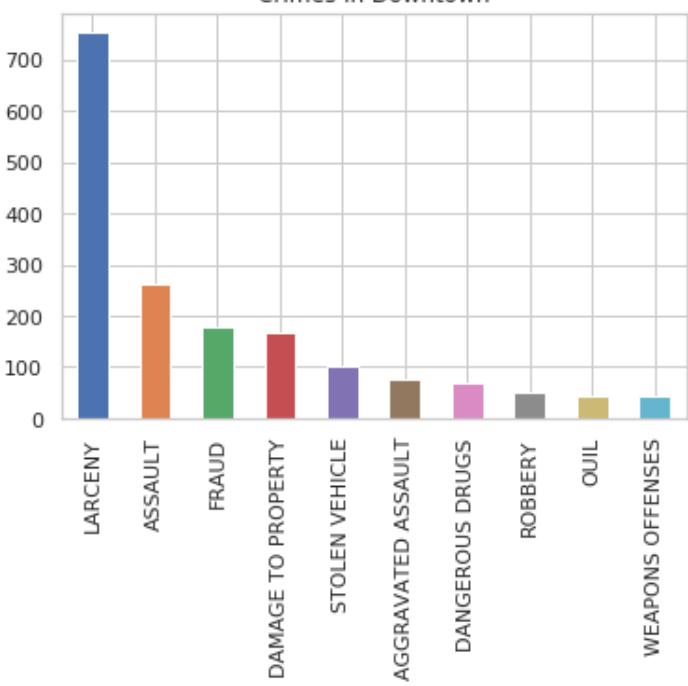
Crimes in Dexter-Linwood



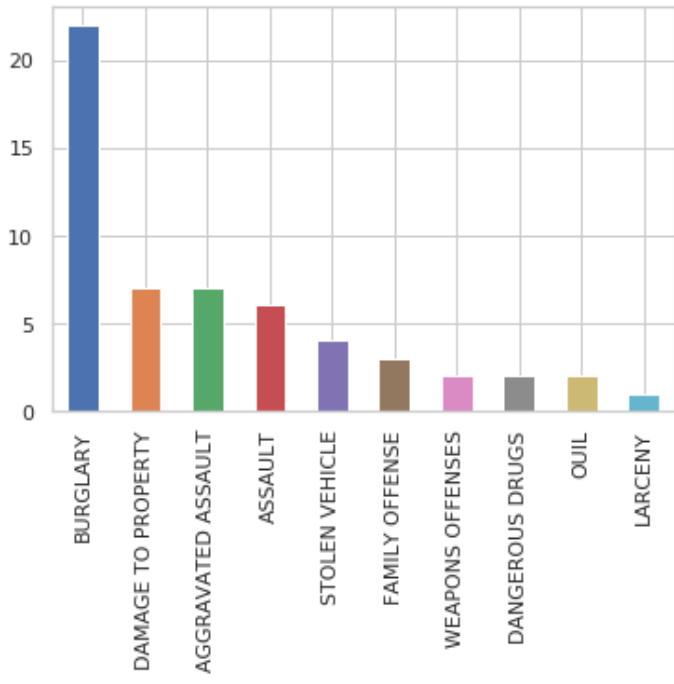
Crimes in Douglass



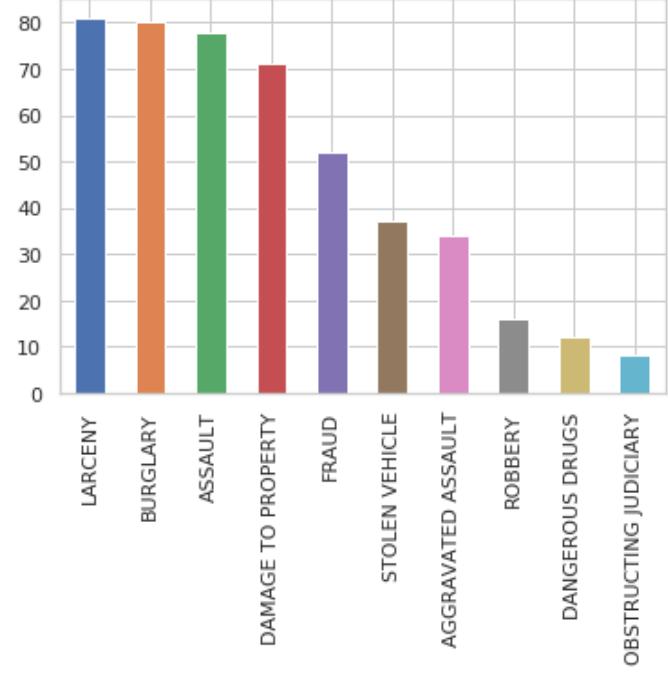
Crimes in Downtown



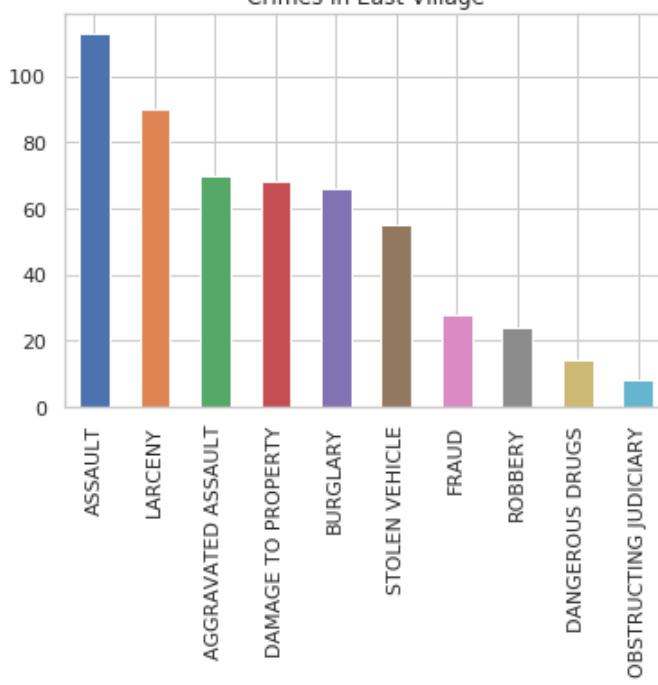
Crimes in East Canfield



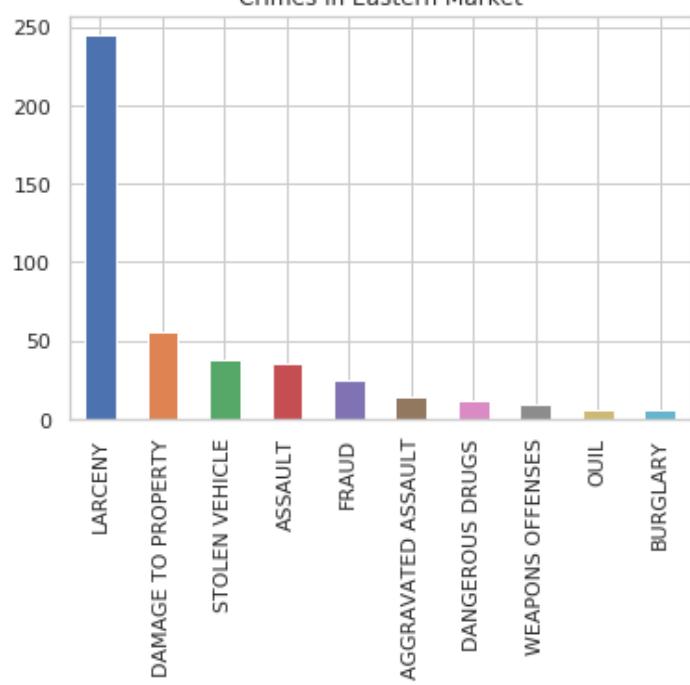
Crimes in East English Village



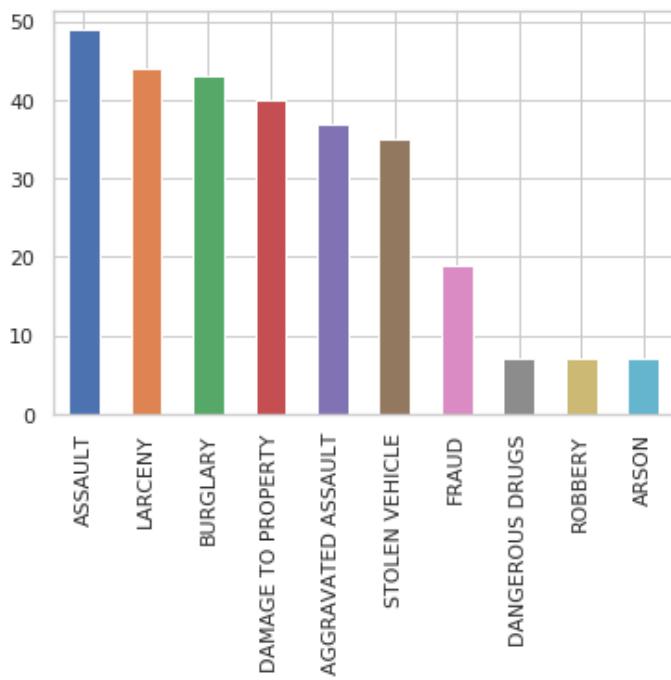
Crimes in East Village



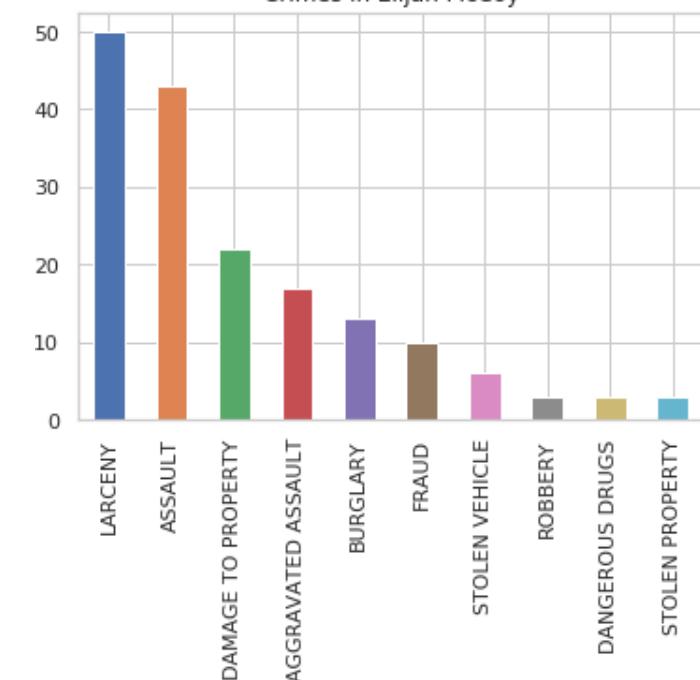
Crimes in Eastern Market



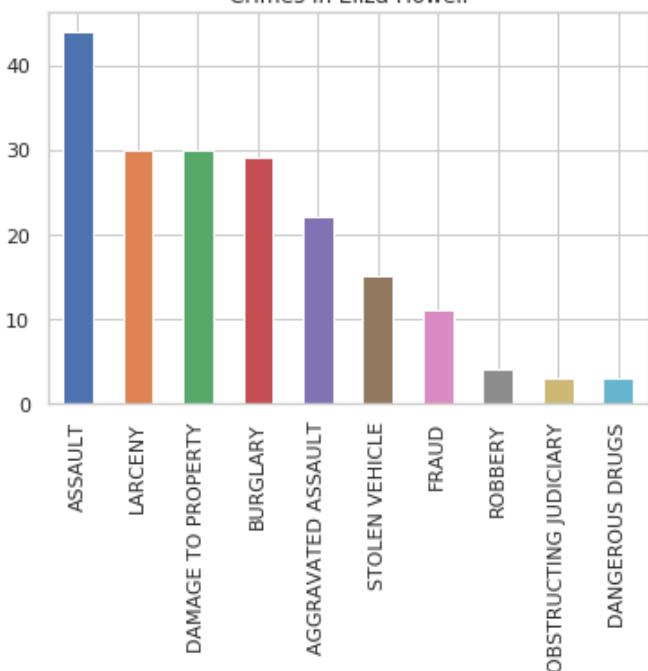
Crimes in Eden Gardens



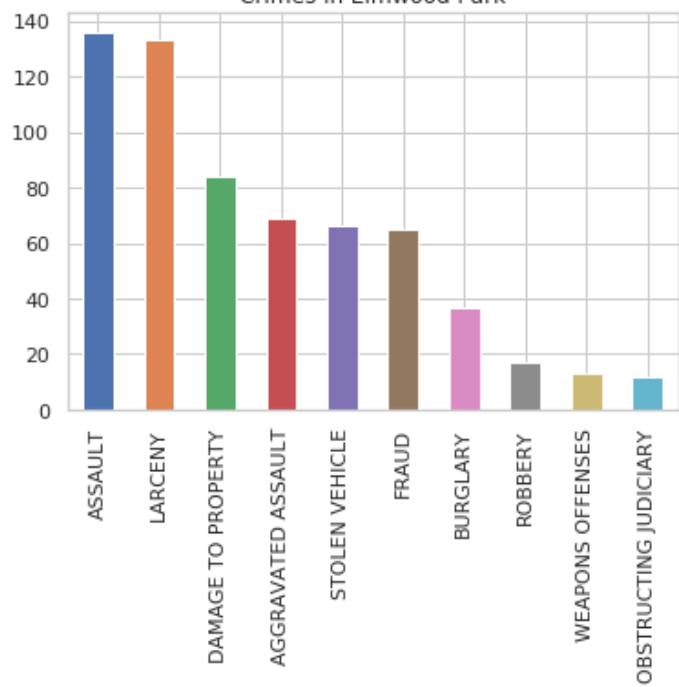
Crimes in Elijah McCoy



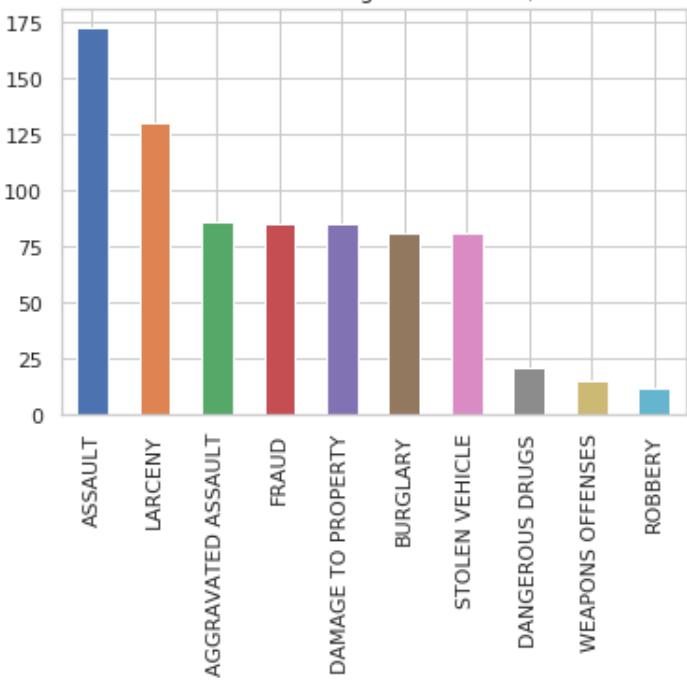
Crimes in Eliza Howell



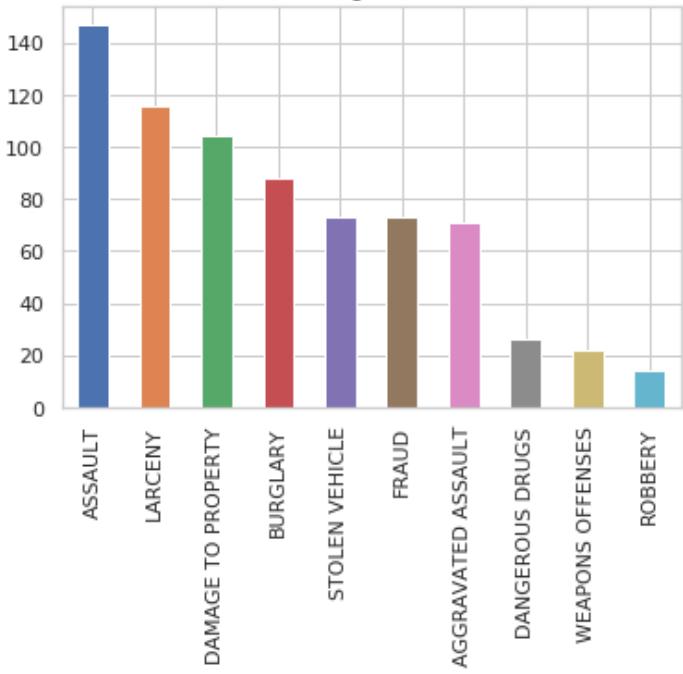
Crimes in Elmwood Park



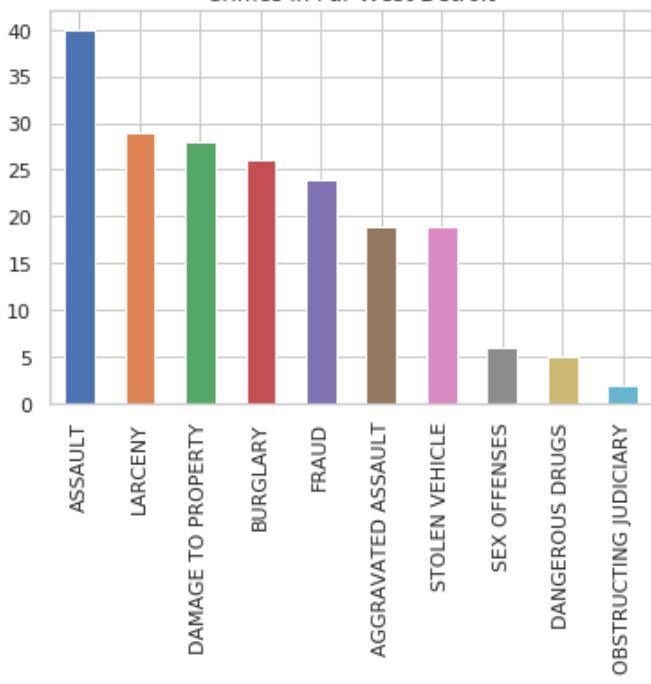
Crimes in Evergreen Lahser 7/8



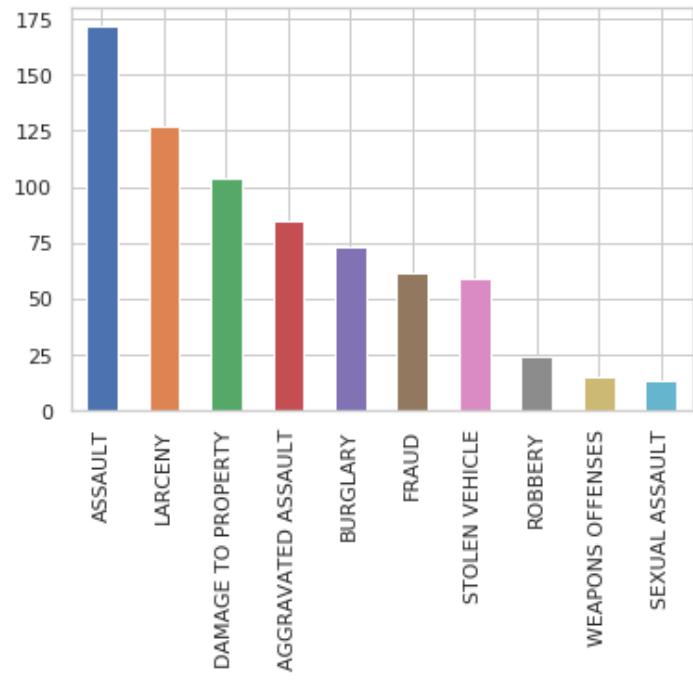
Crimes in Evergreen-Outer Drive



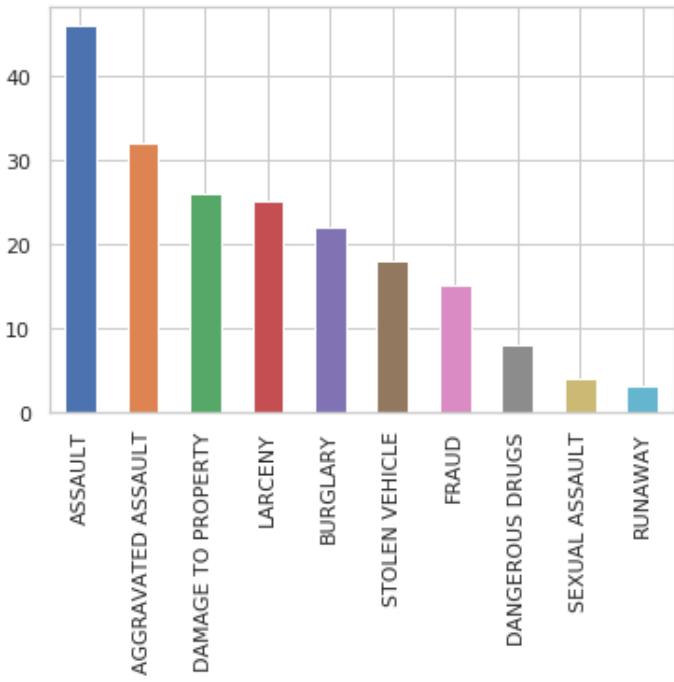
Crimes in Far West Detroit



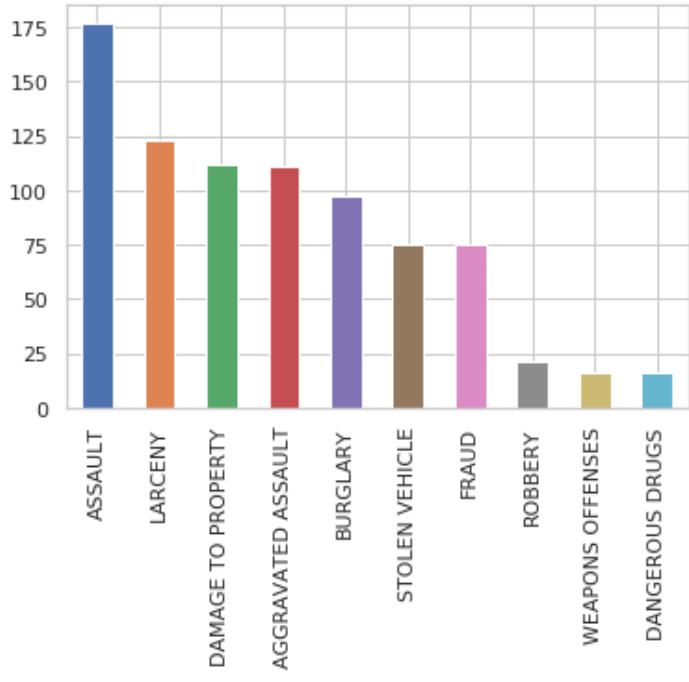
Crimes in Farwell



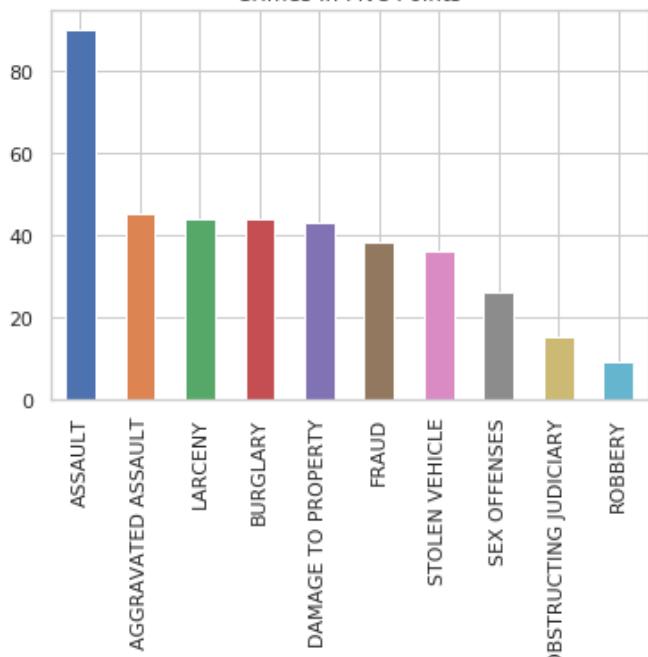
Crimes in Fiskhorn



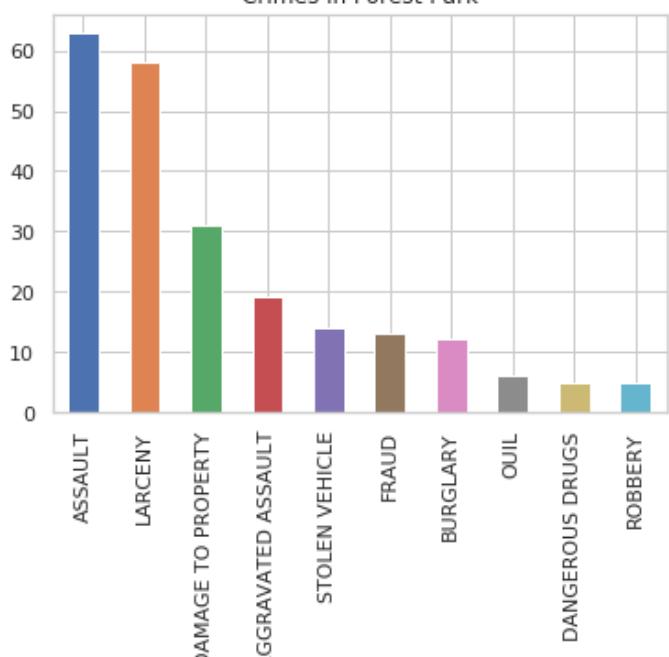
Crimes in Fitzgerald/Marygrove



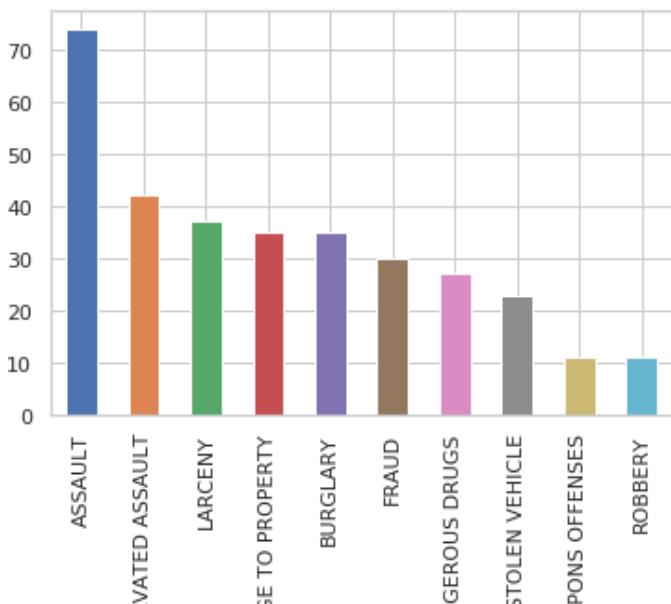
Crimes in Five Points



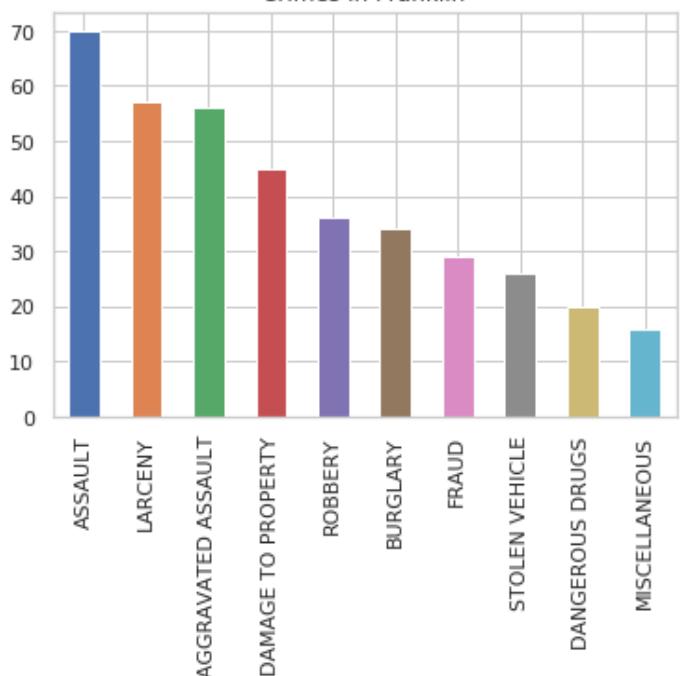
Crimes in Forest Park



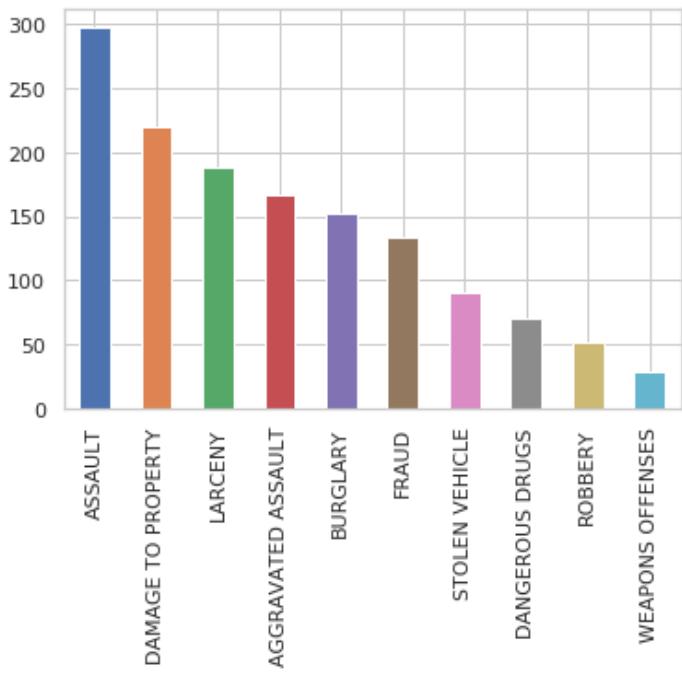
Crimes in Fox Creek



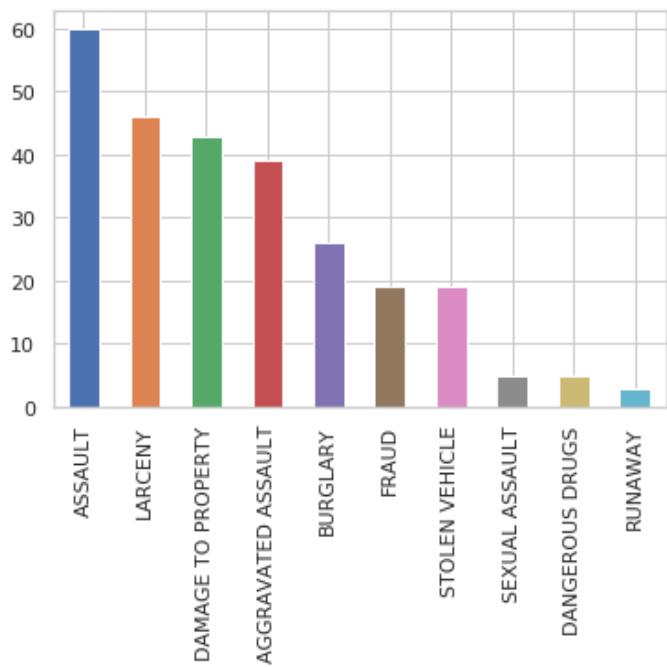
Crimes in Franklin



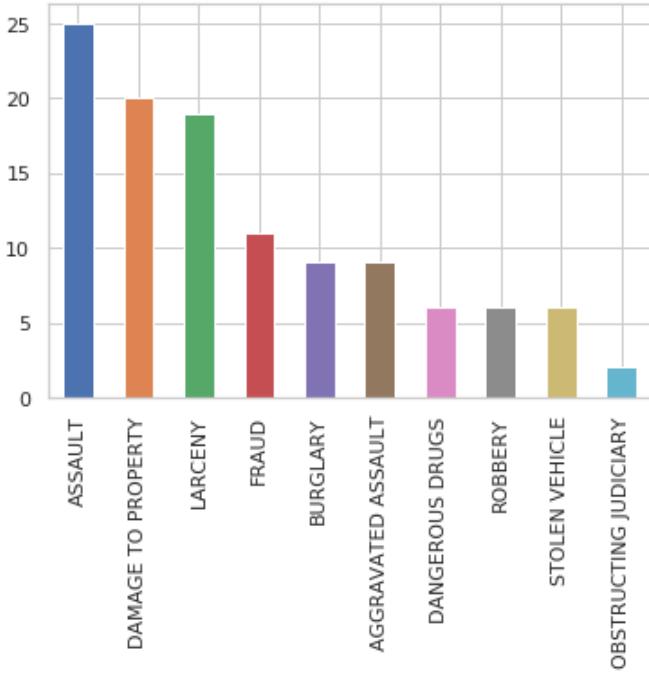
Crimes in Franklin Park



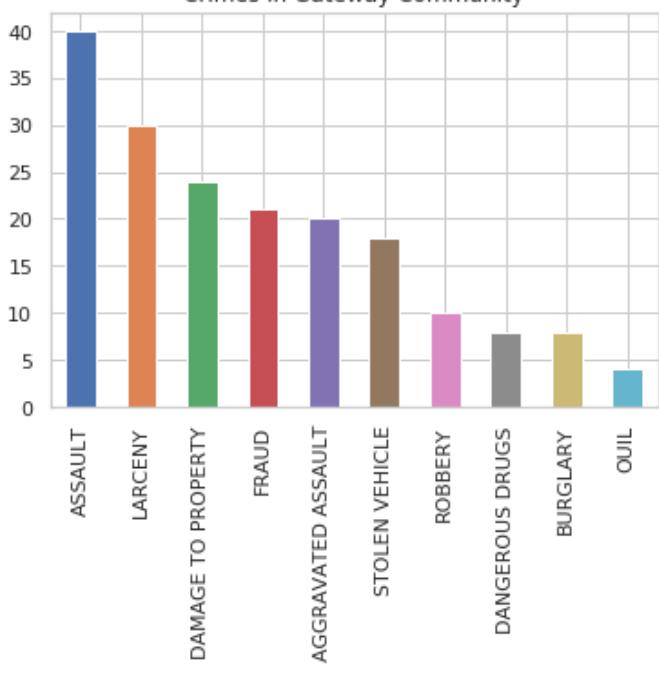
Crimes in Garden Homes



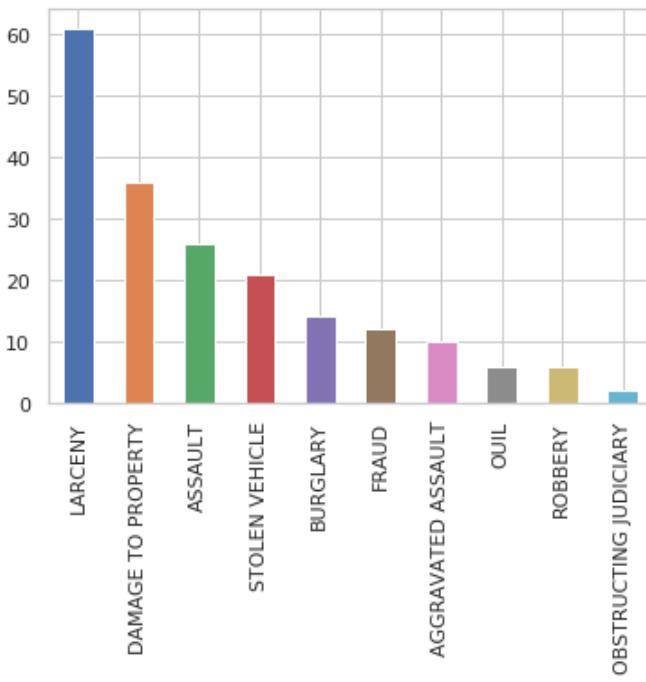
Crimes in Garden View



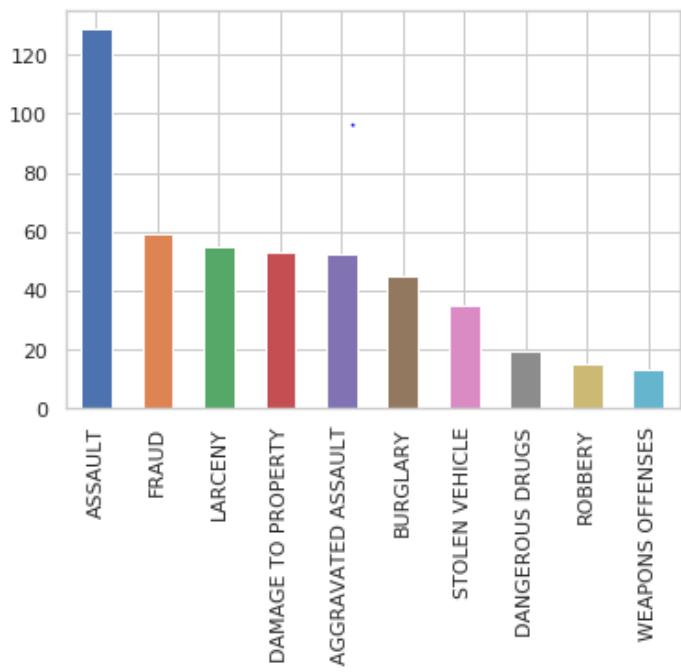
Crimes in Gateway Community



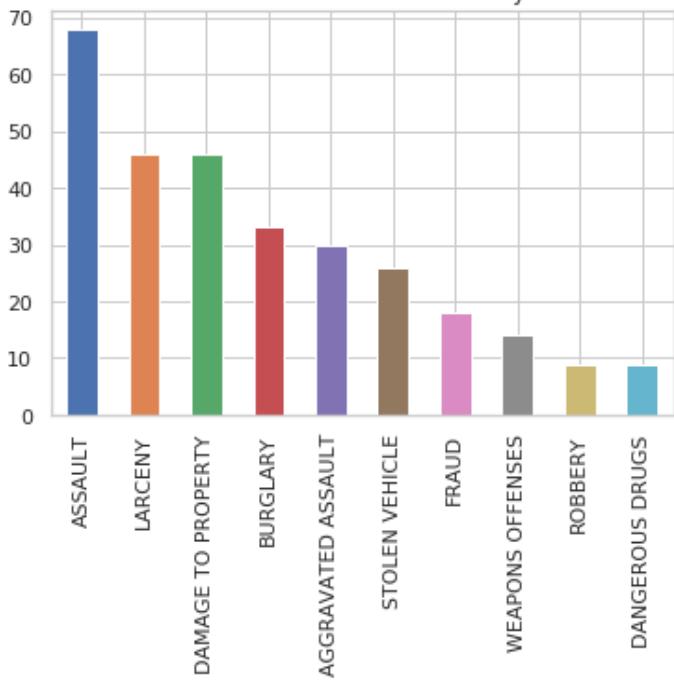
Crimes in Gold Coast



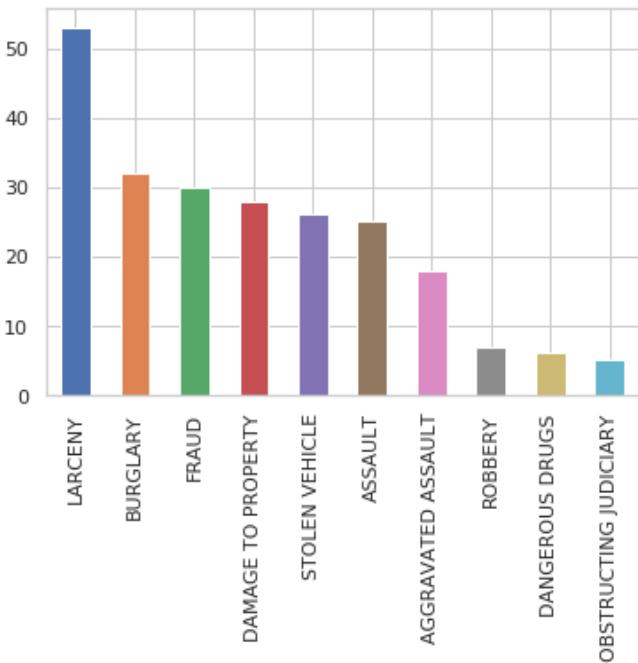
Crimes in Grand River-I96



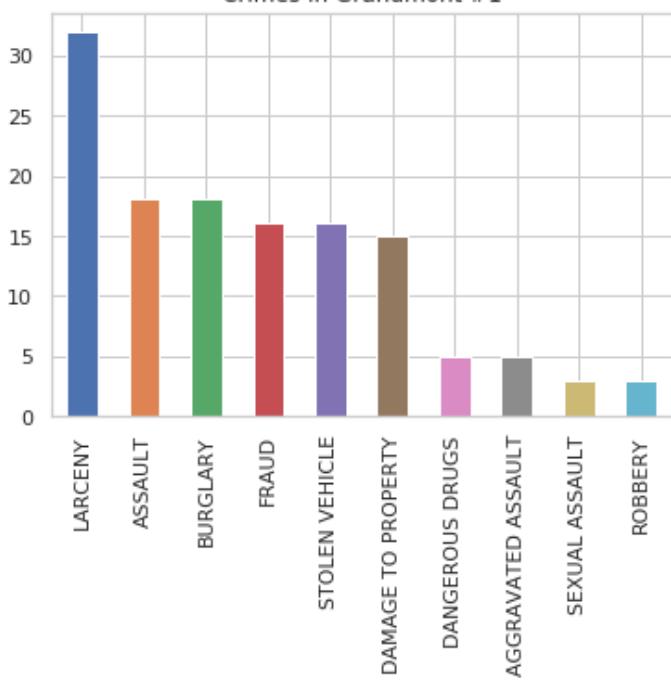
Crimes in Grand River-St Marys



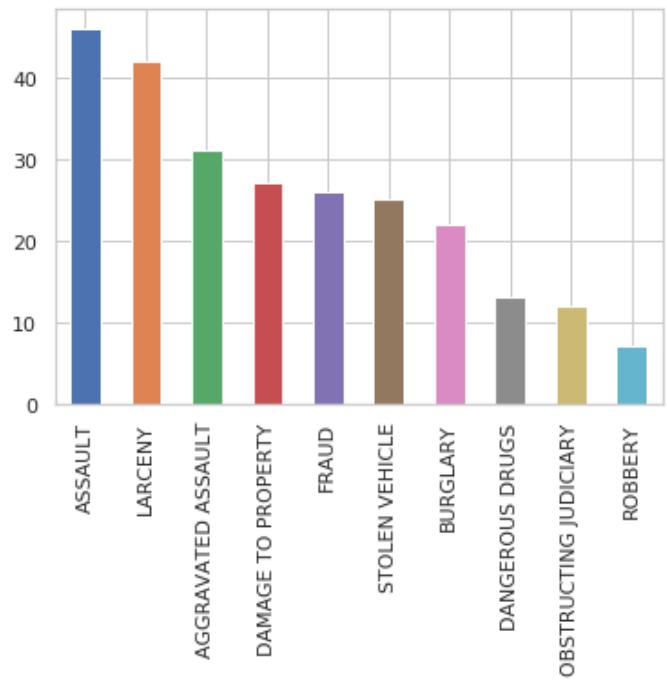
Crimes in Grandmont



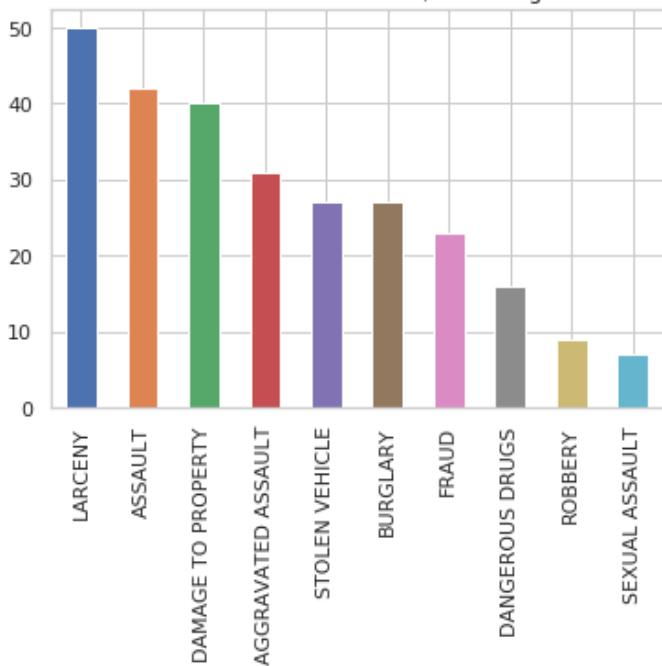
Crimes in Grandmont #1



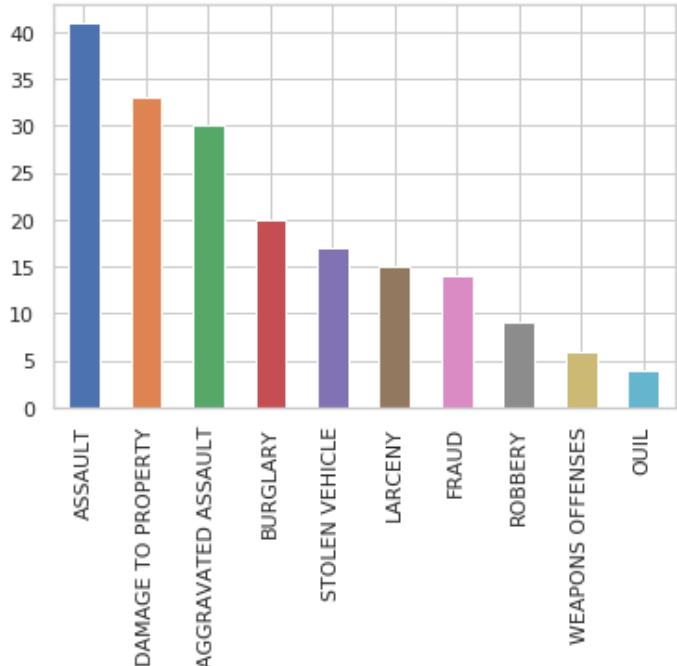
Crimes in Grant



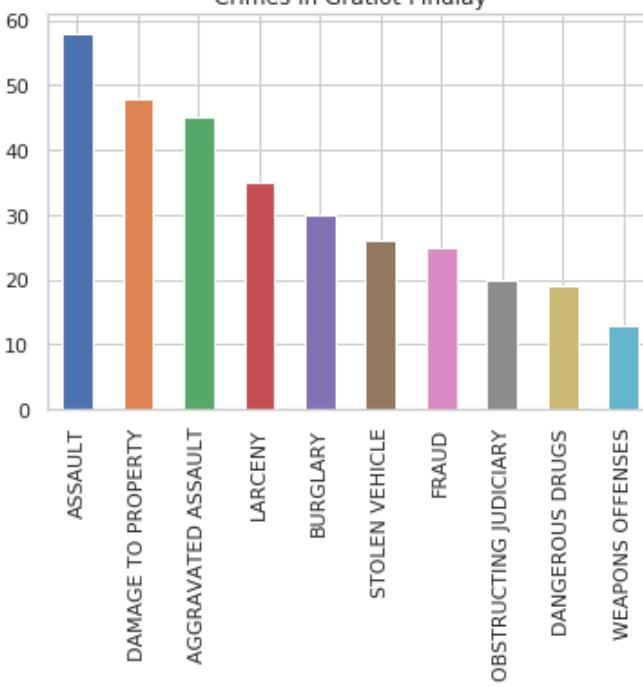
Crimes in Gratiot Town/Ketterring



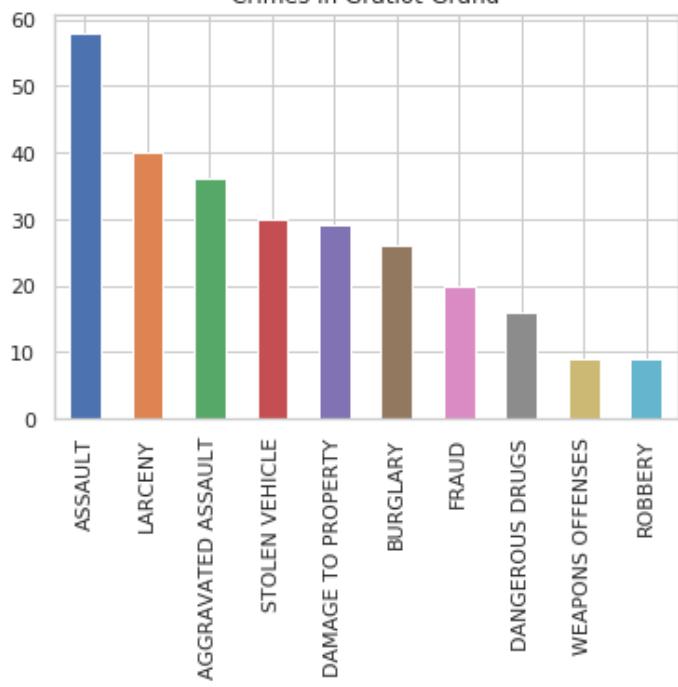
Crimes in Gratiot Woods



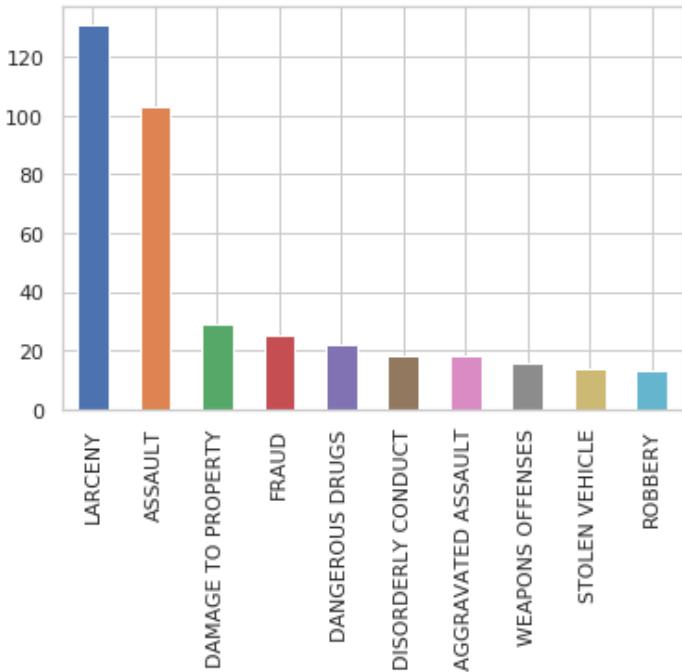
Crimes in Gratiot-Findlay



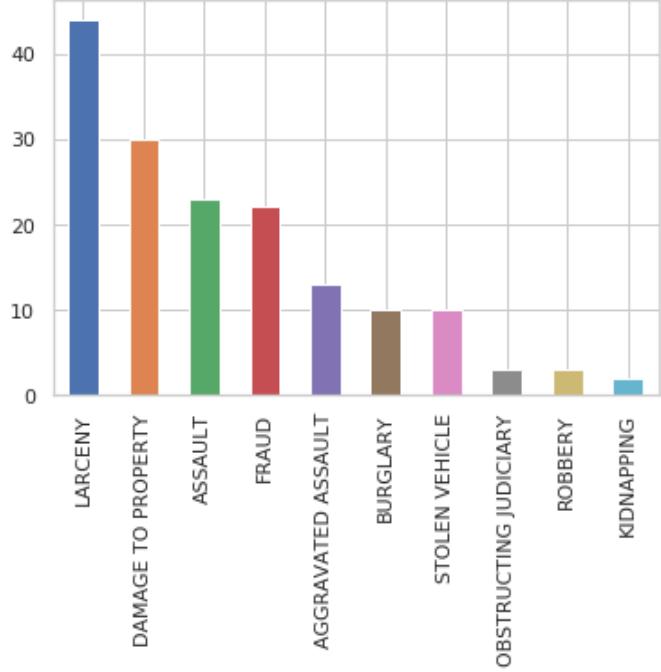
Crimes in Gratiot-Grand



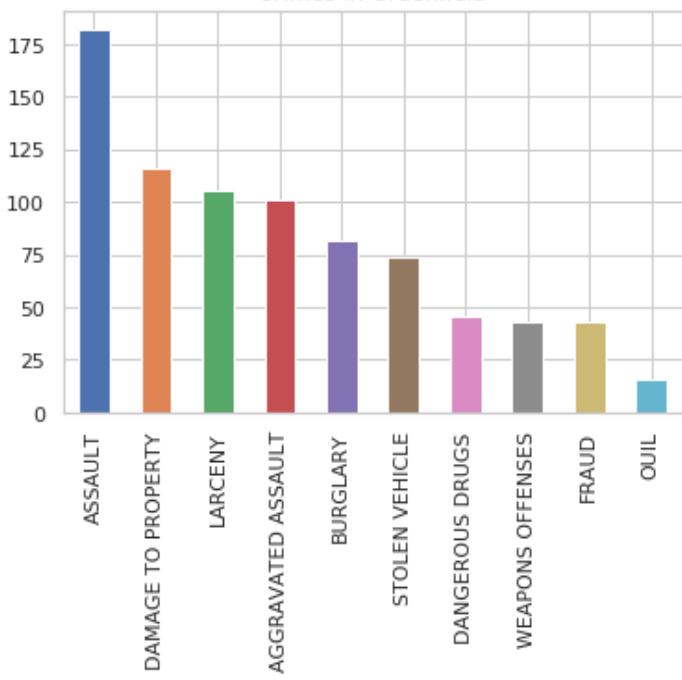
Crimes in Greektown



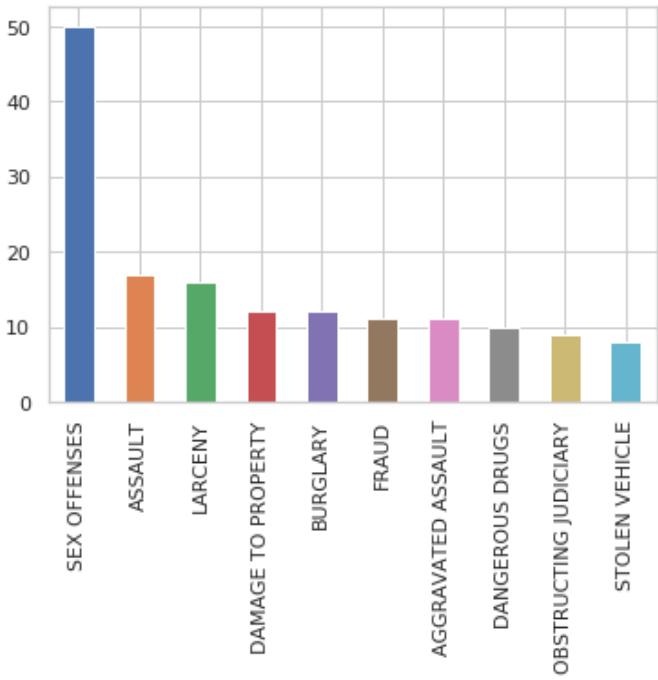
Crimes in Green Acres



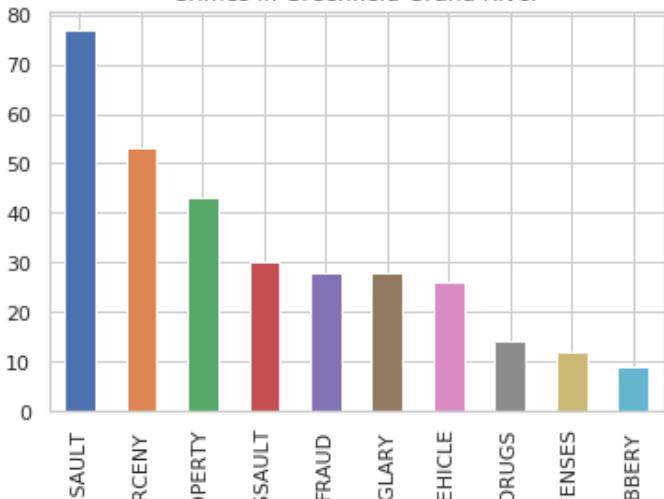
Crimes in Greenfield



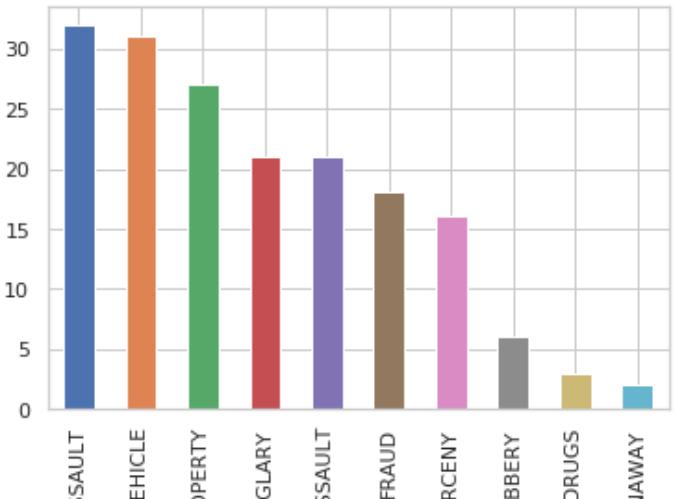
Crimes in Greenfield Park



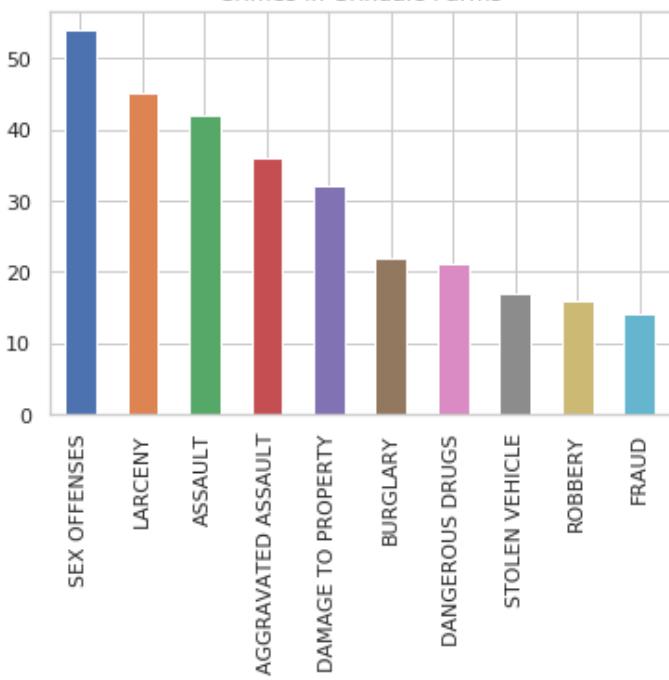
Crimes in Greenfield-Grand River



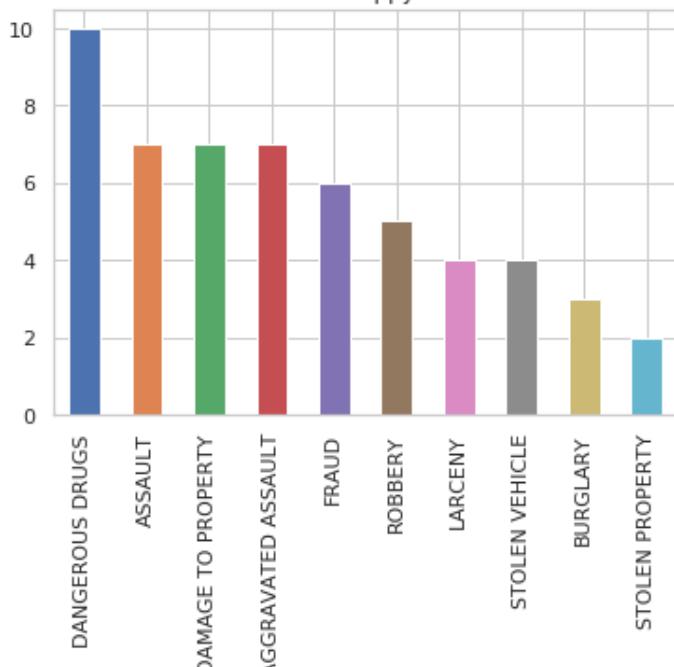
Crimes in Greenwich



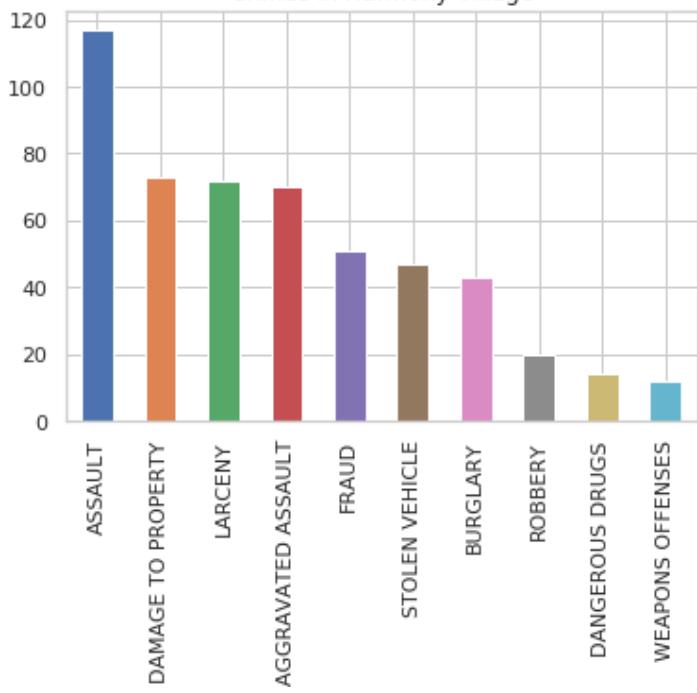
Crimes in Grixdale Farms



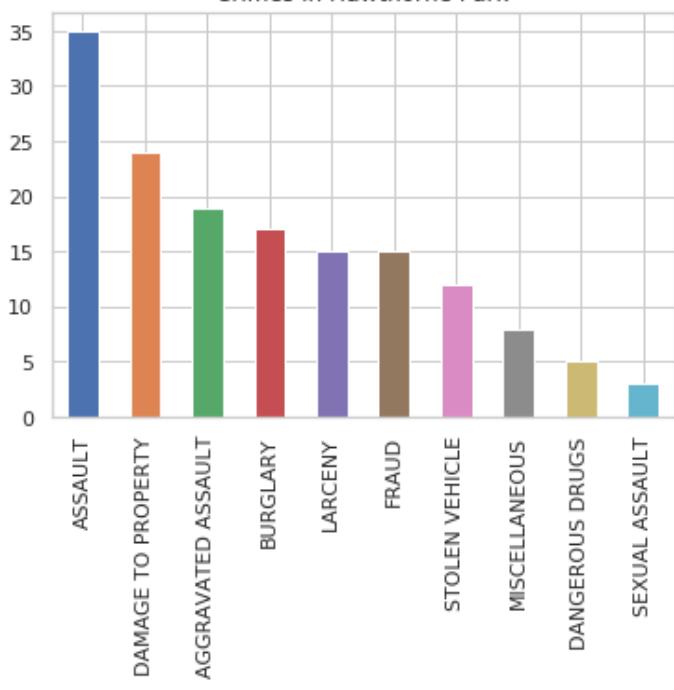
Crimes in Happy Homes



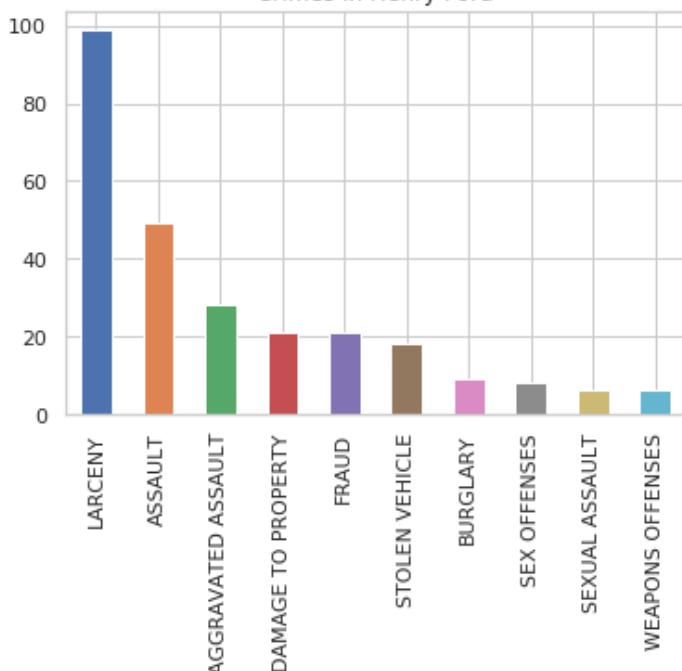
Crimes in Harmony Village



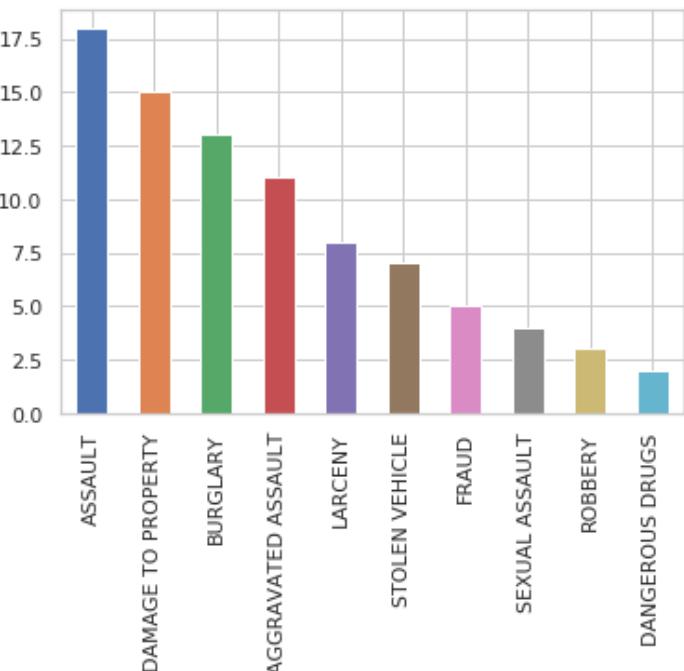
Crimes in Hawthorne Park



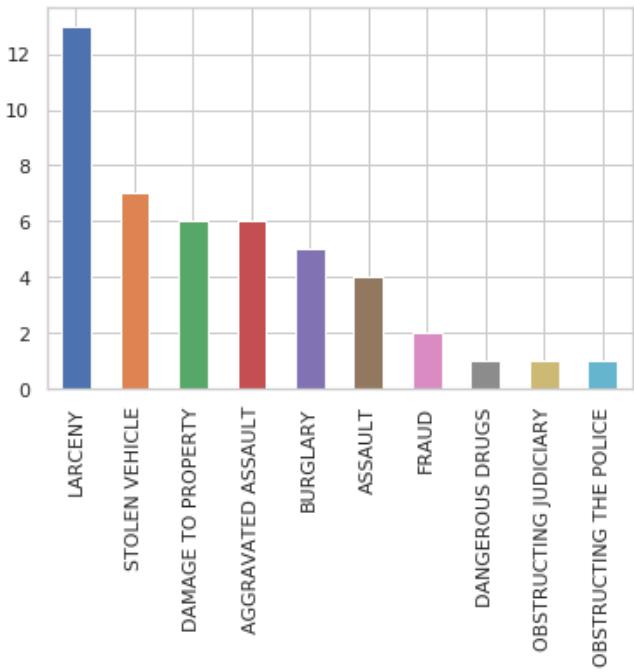
Crimes in Henry Ford



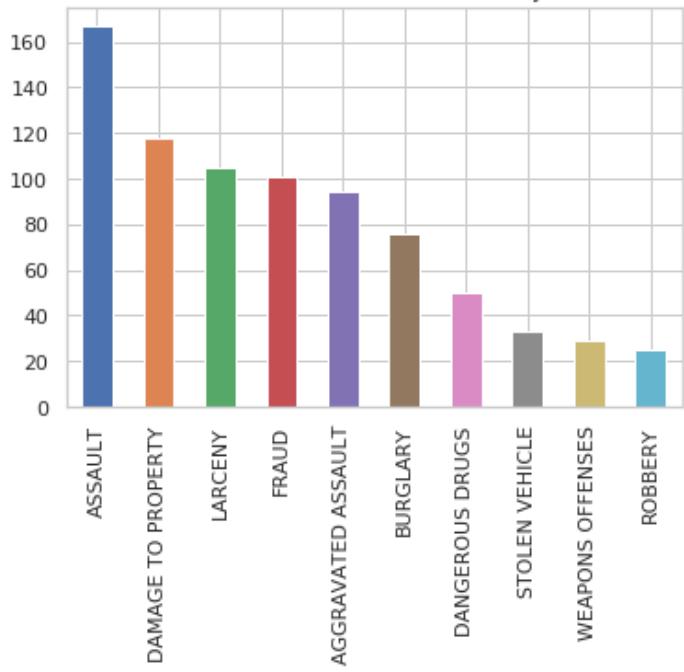
Crimes in Herman Kiefer

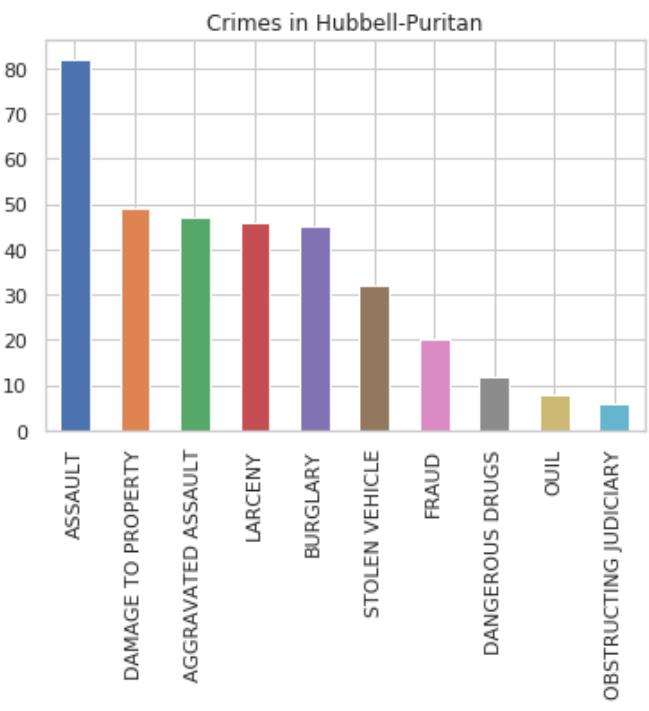
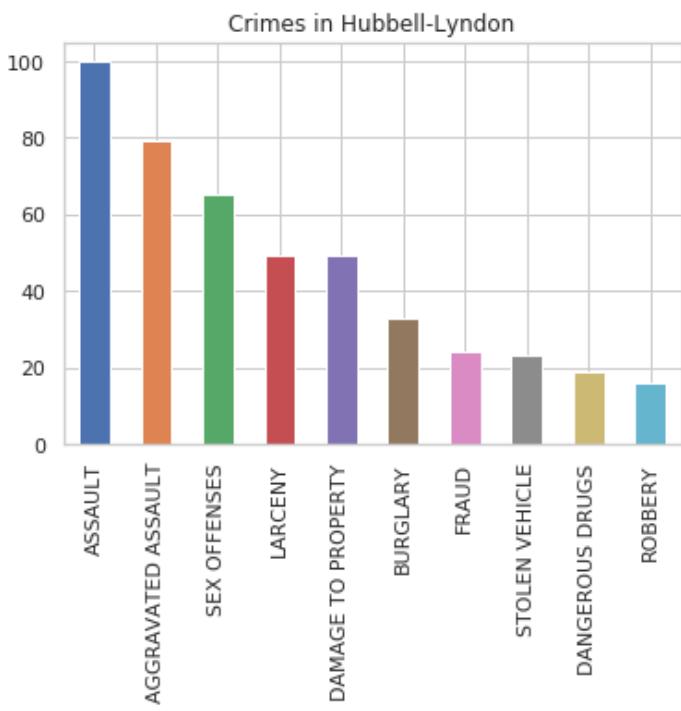
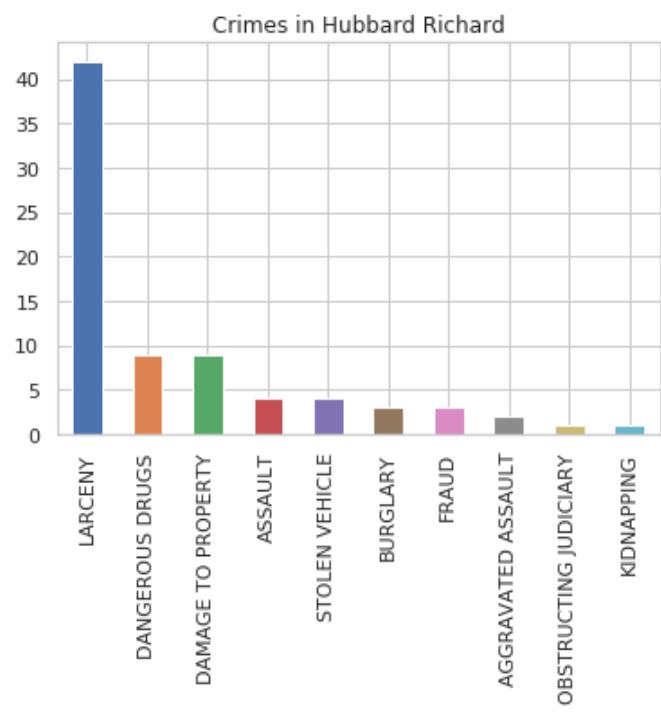
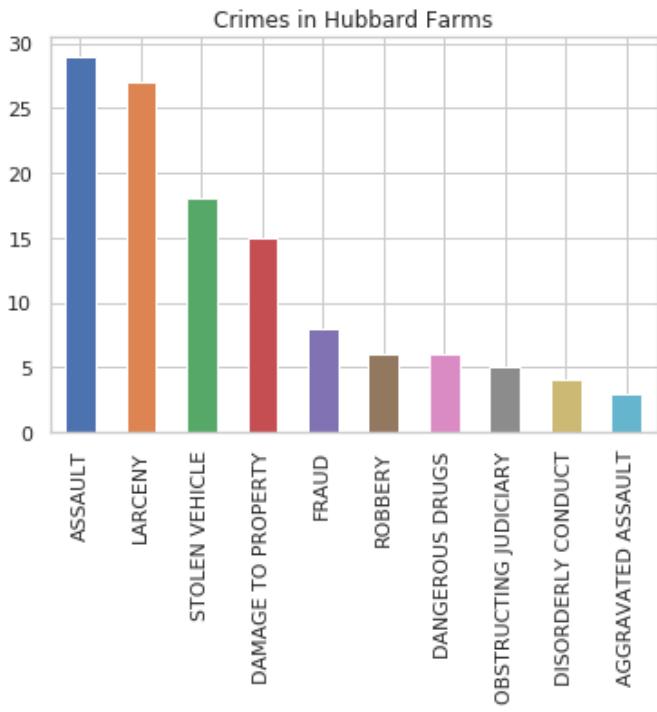


Crimes in Historic Atkinson

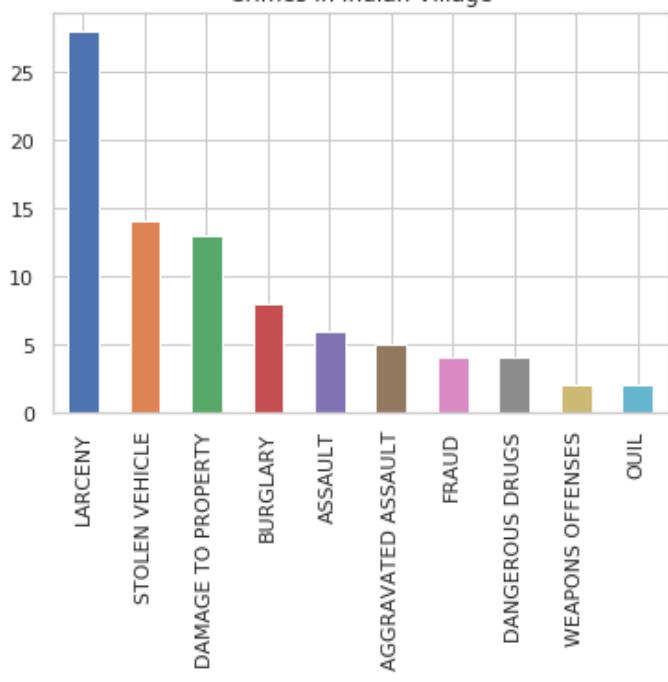


Crimes in Holcomb Community

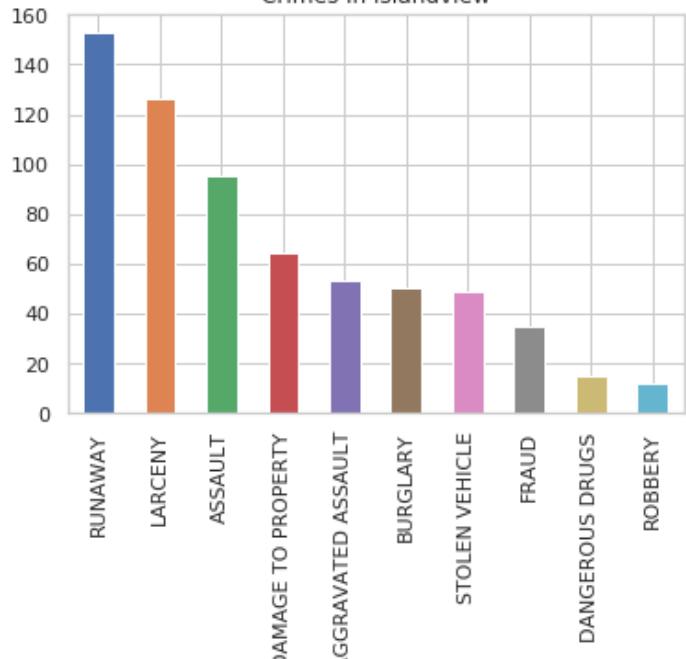




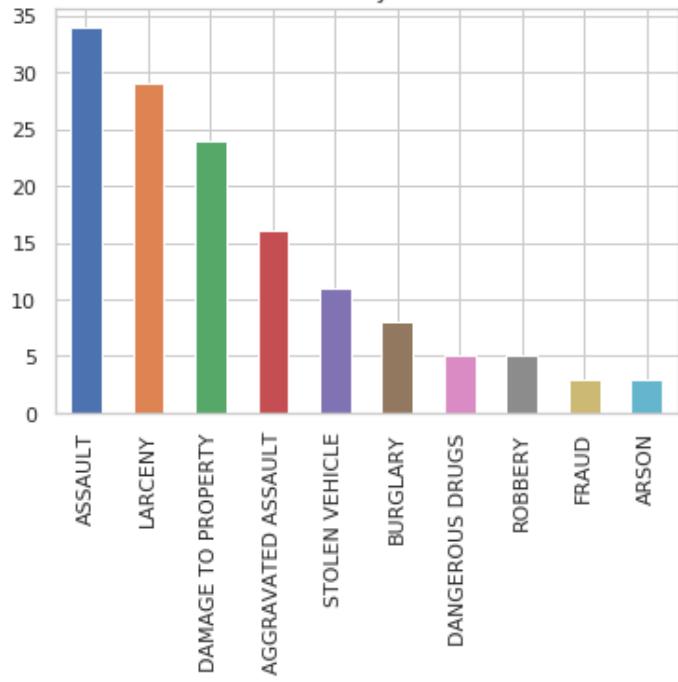
Crimes in Indian Village



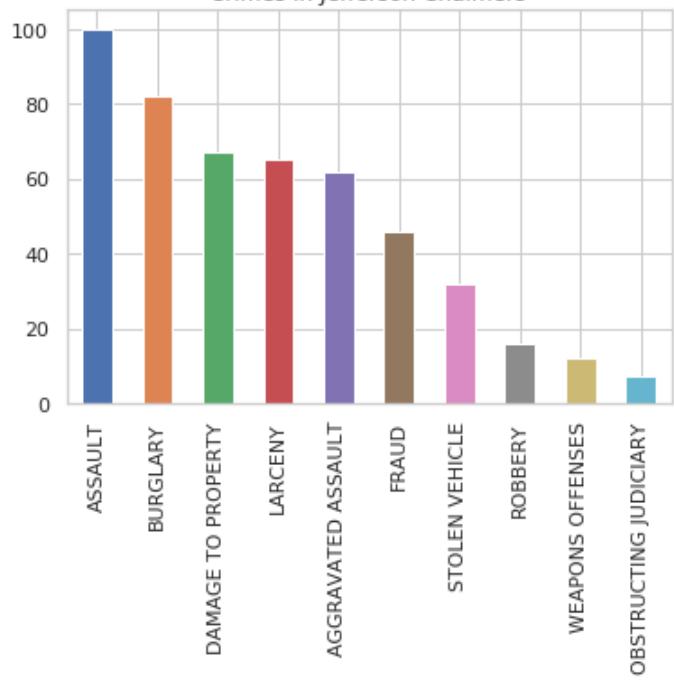
Crimes in Islandview



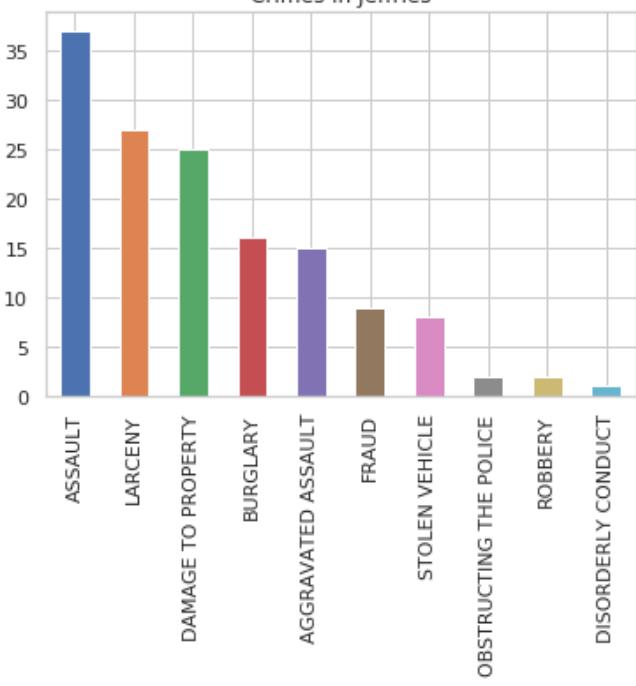
Crimes in Jamison



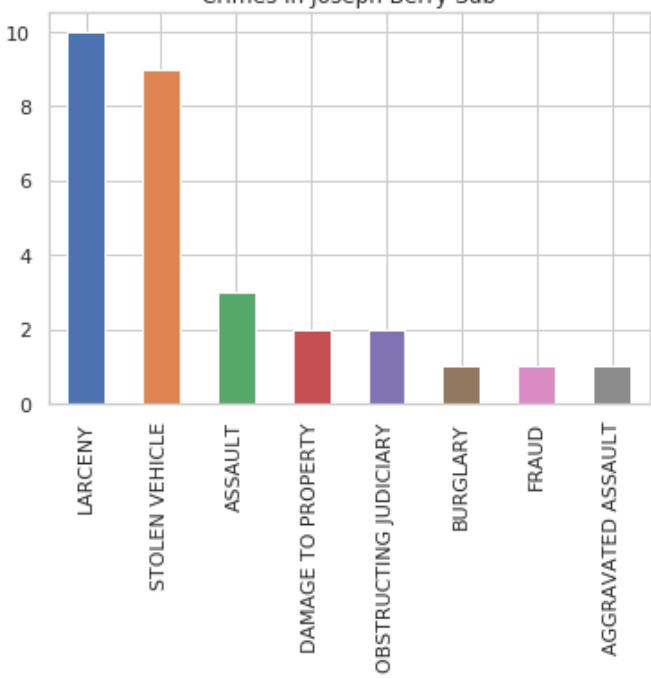
Crimes in Jefferson Chalmers



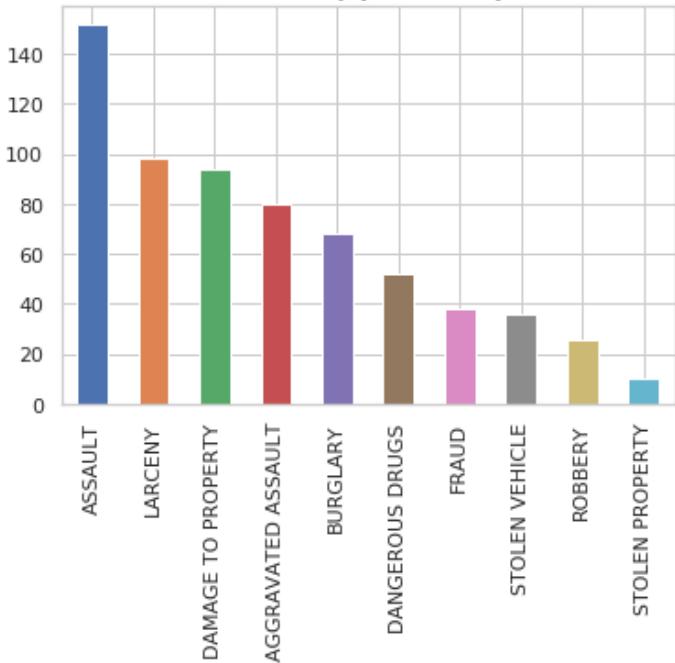
Crimes in Jeffries



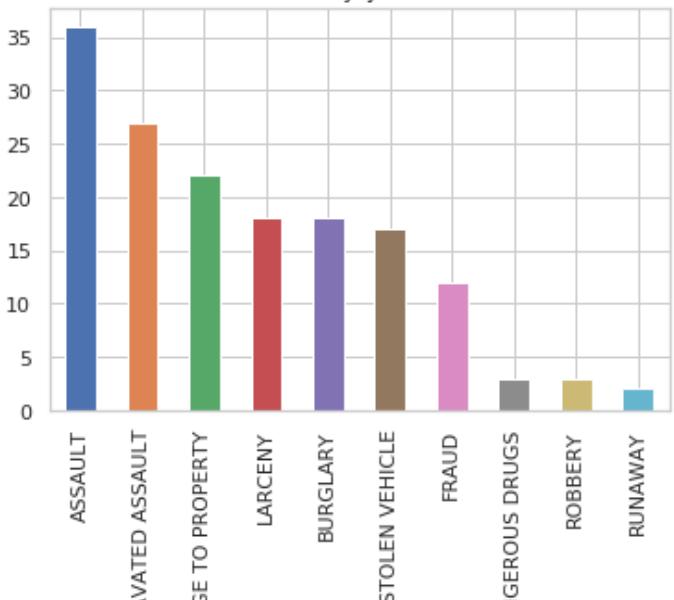
Crimes in Joseph Berry Sub



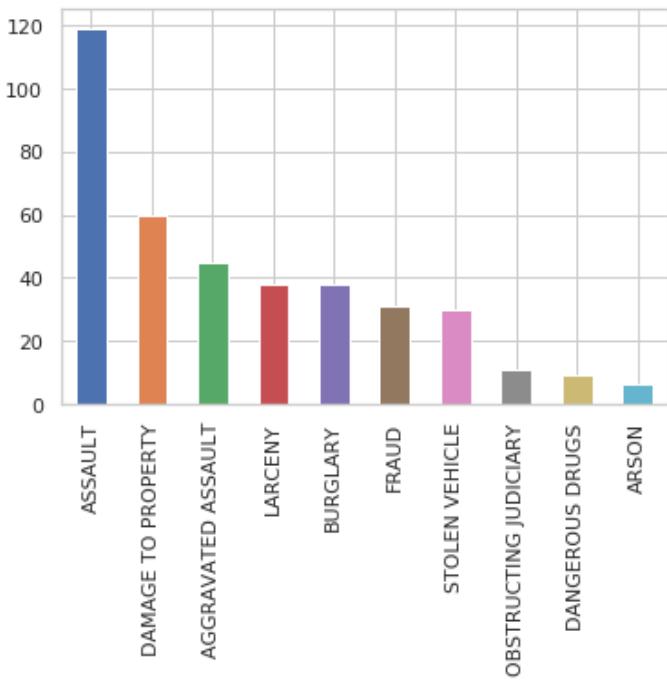
Crimes in Joy Community



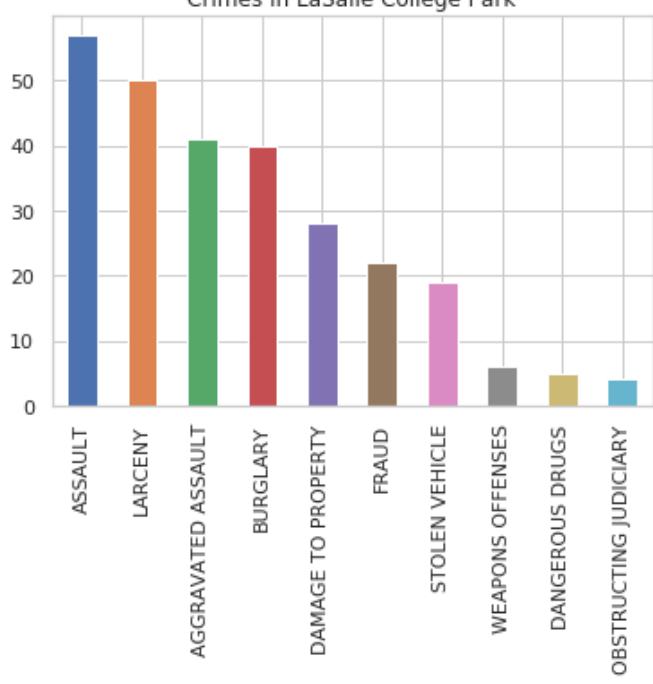
Crimes in Joy-Schaefer



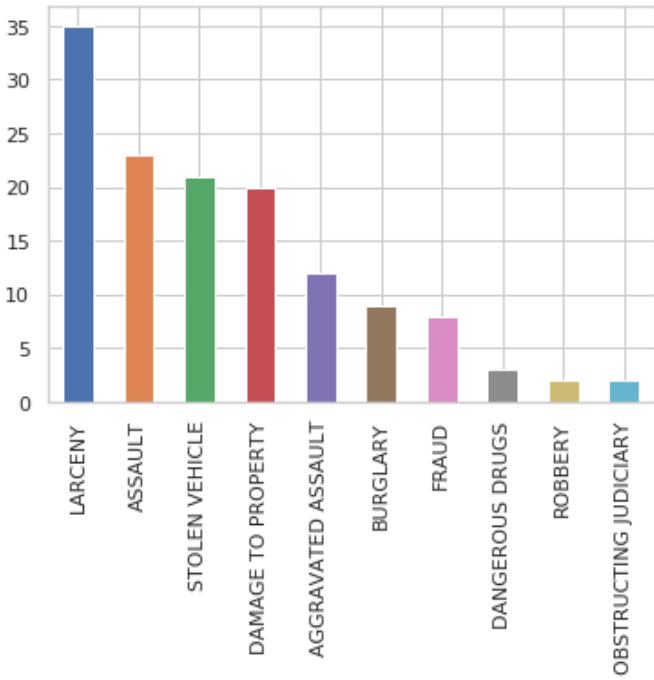
Crimes in Krainz Woods



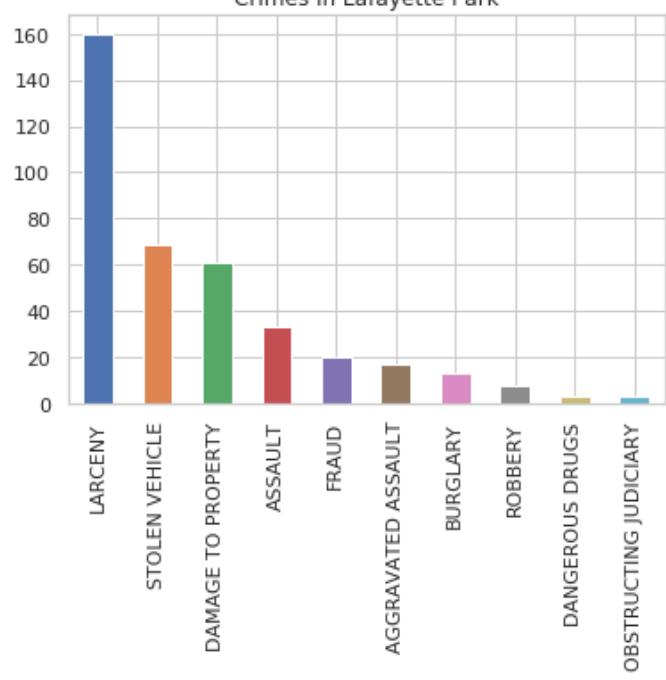
Crimes in LaSalle College Park



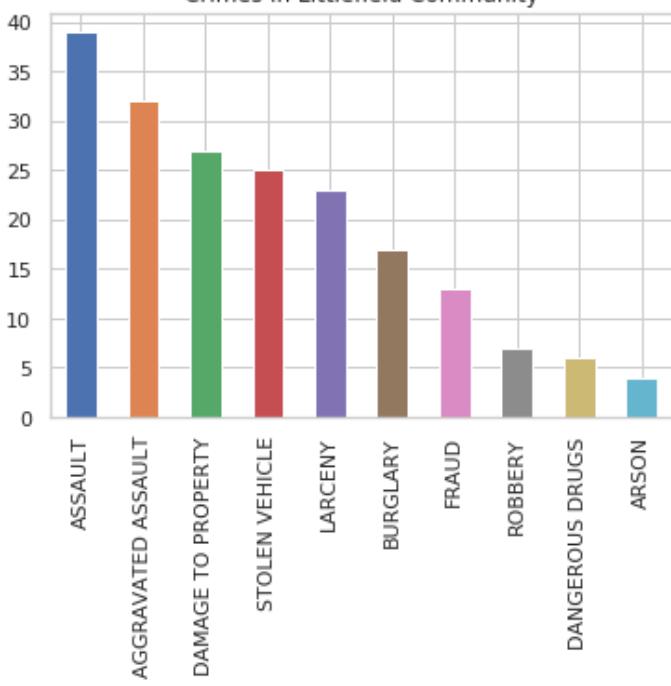
Crimes in LaSalle Gardens



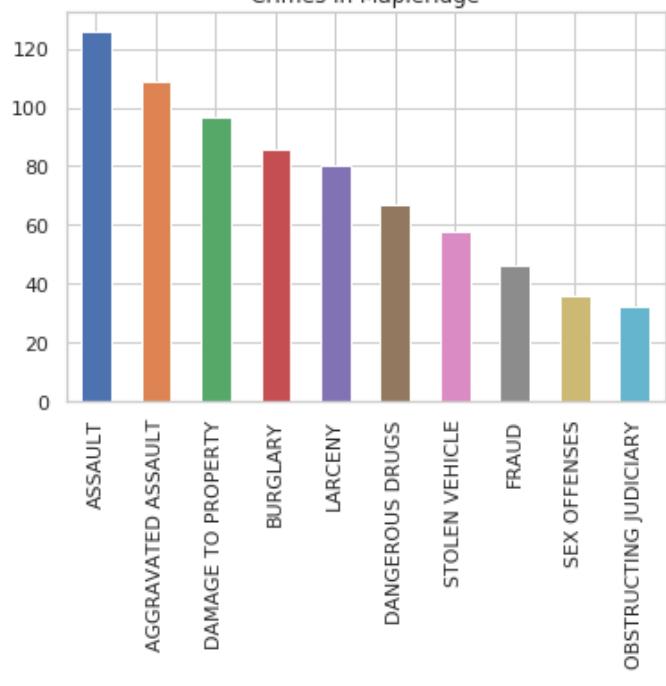
Crimes in Lafayette Park



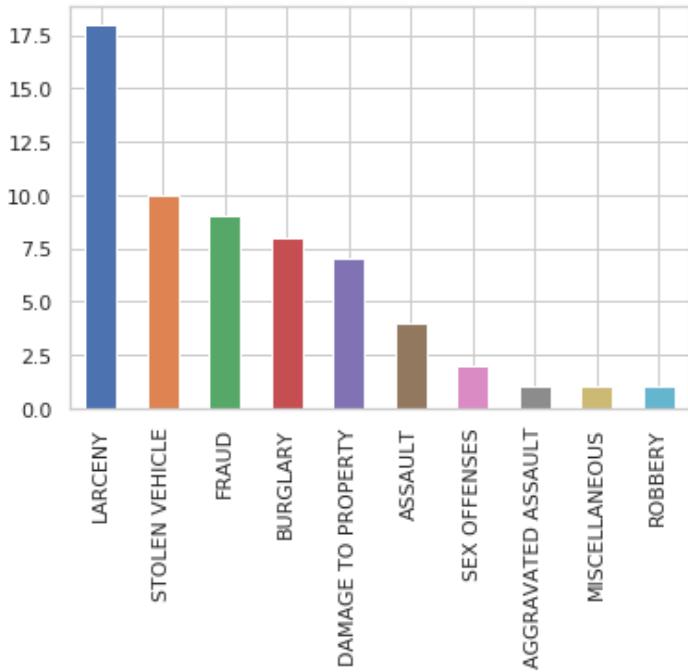
Crimes in Littlefield Community



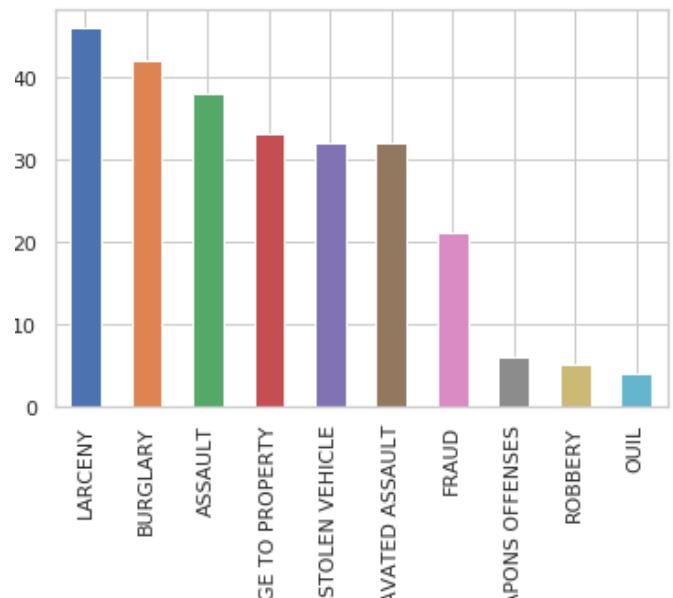
Crimes in Mapleridge



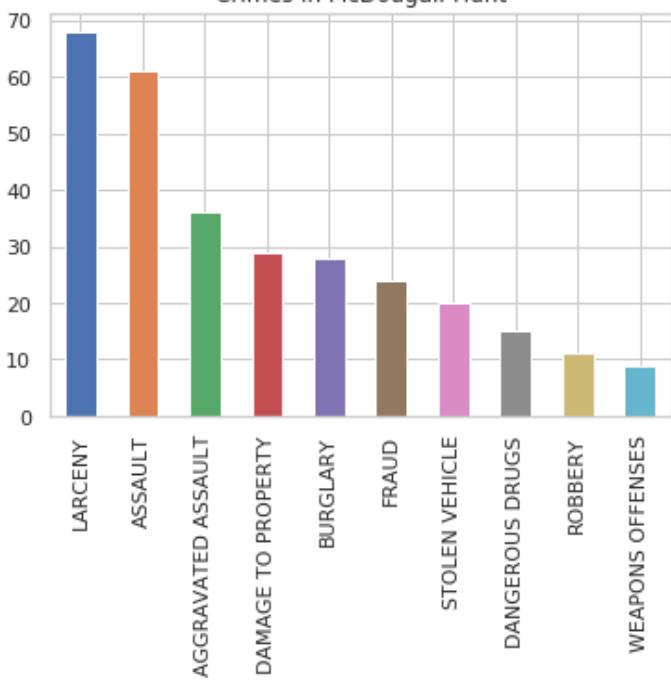
Crimes in Marina District



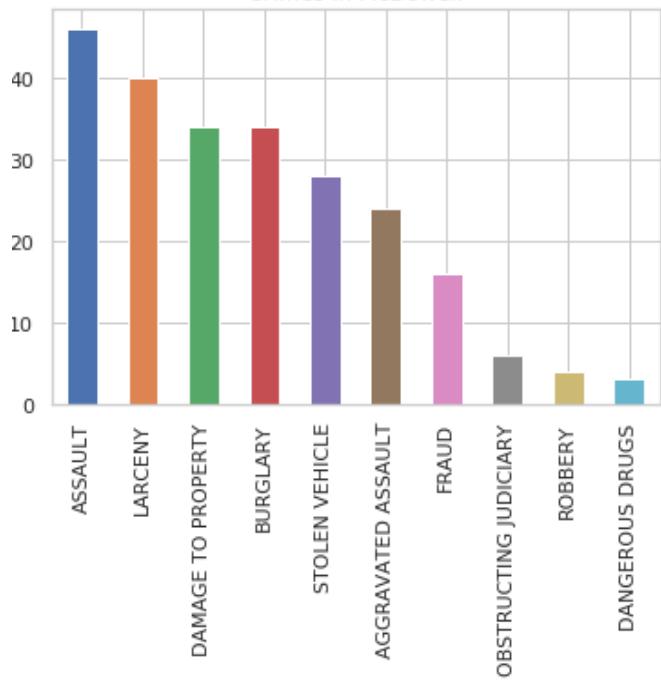
Crimes in Martin Park



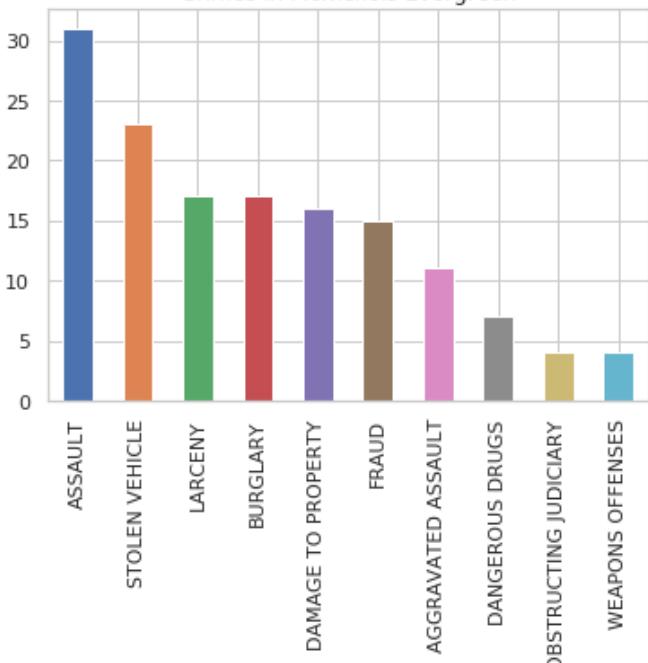
Crimes in McDougall-Hunt



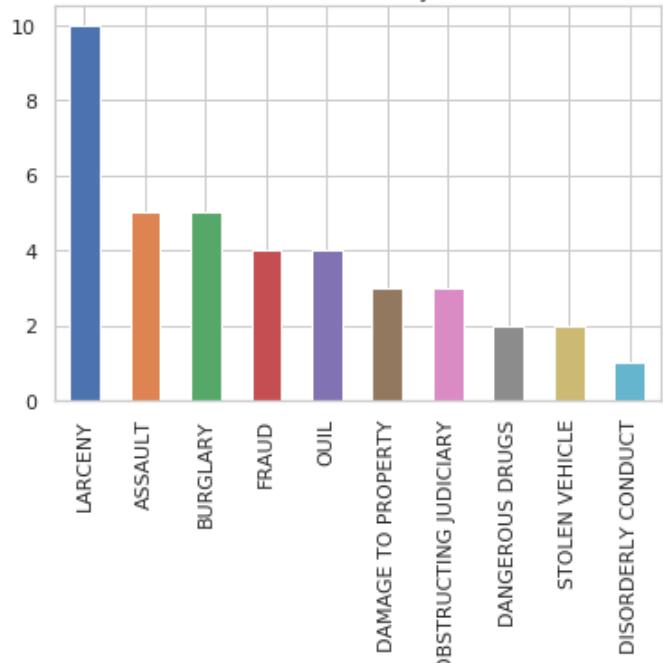
Crimes in McDowell



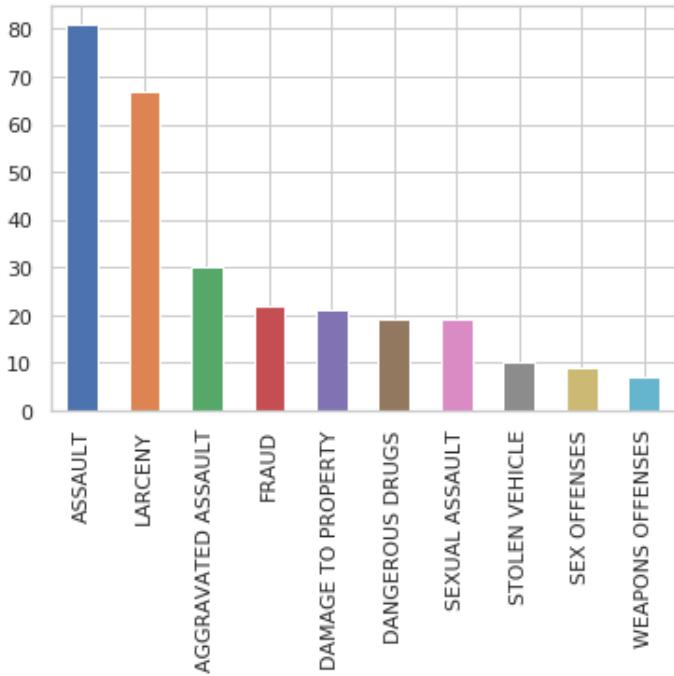
Crimes in McNichols Evergreen



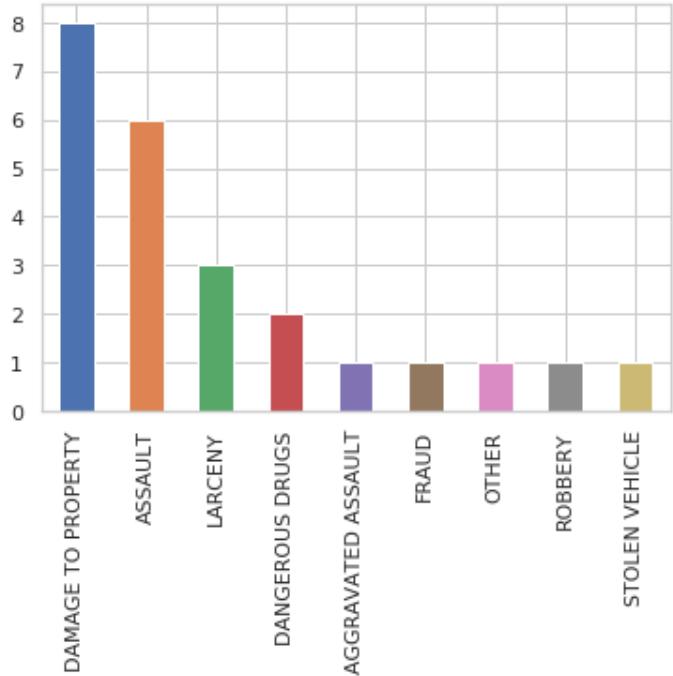
Crimes in Medbury Park



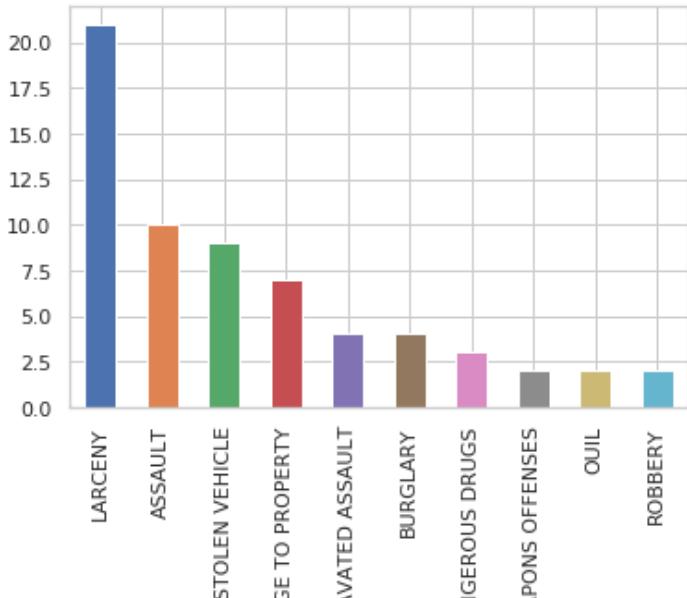
Crimes in Medical Center



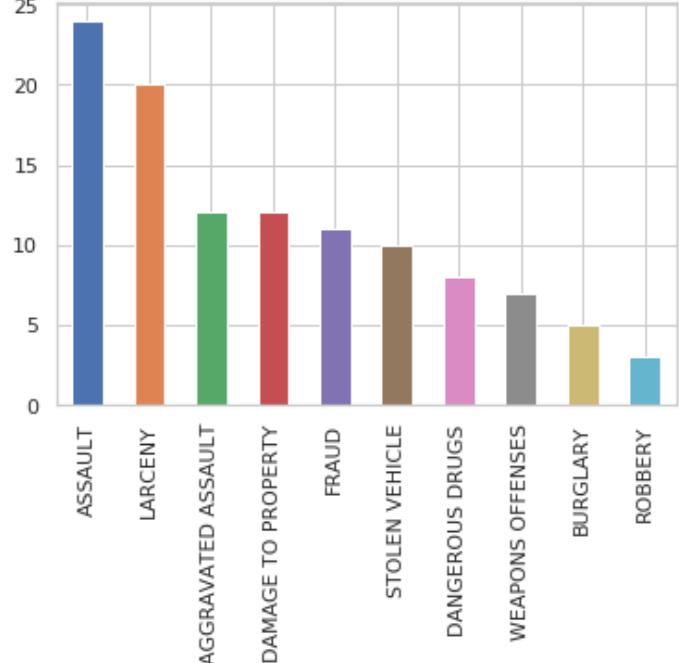
Crimes in Melvern Hill



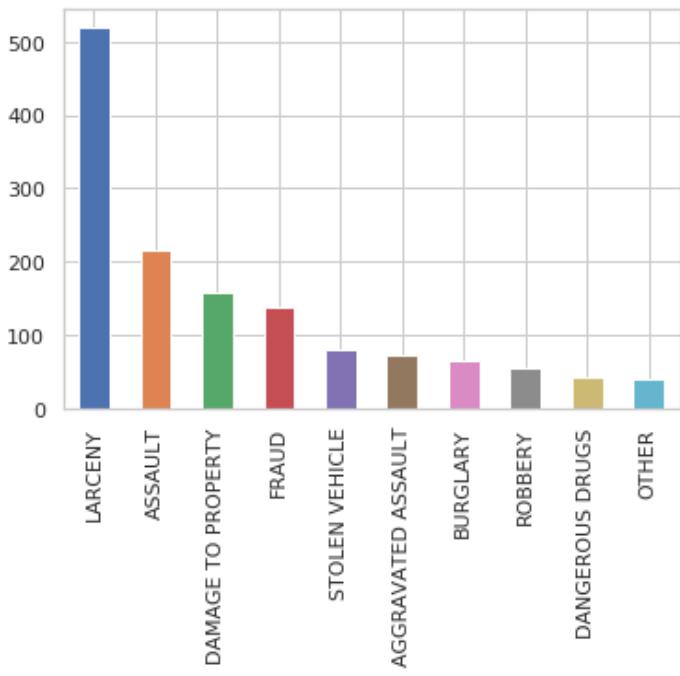
Crimes in Mexicantown



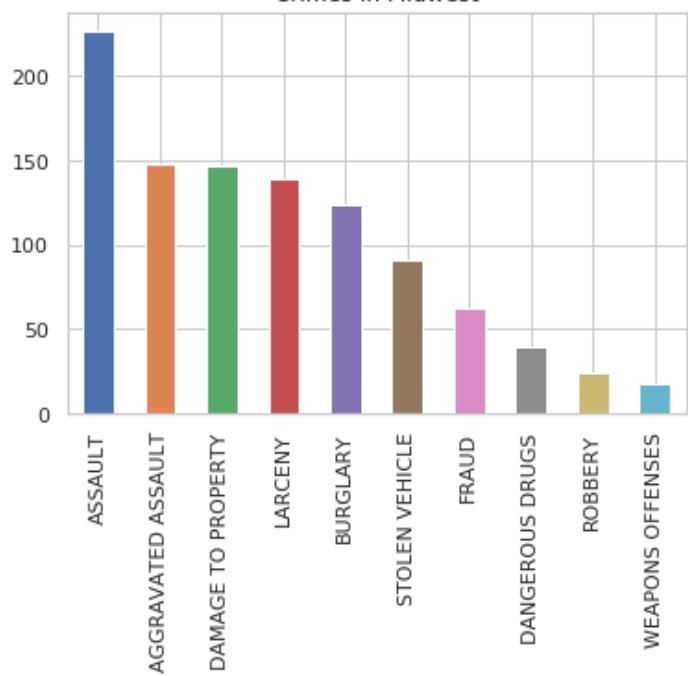
Crimes in Michigan-Martin



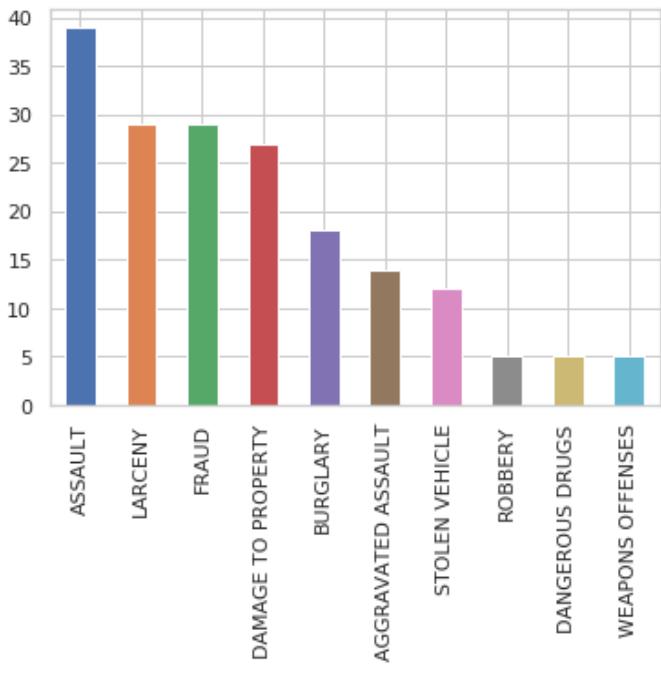
Crimes in Midtown



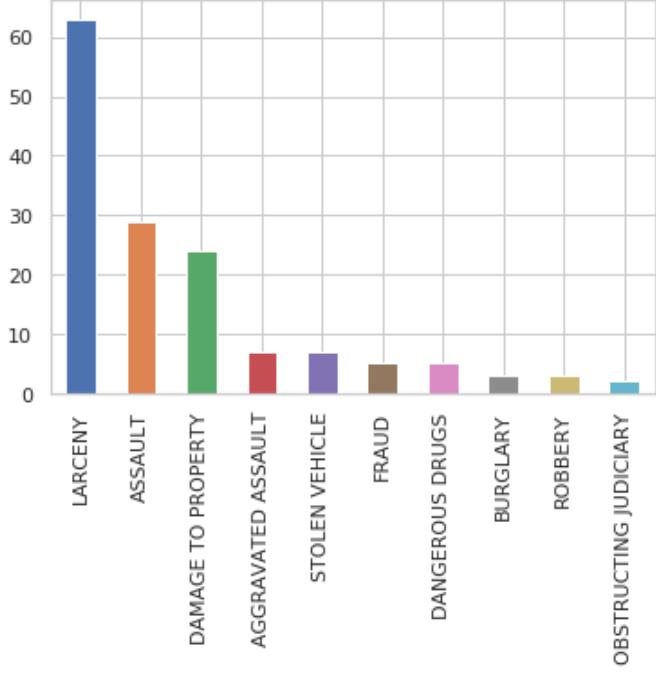
Crimes in Midwest



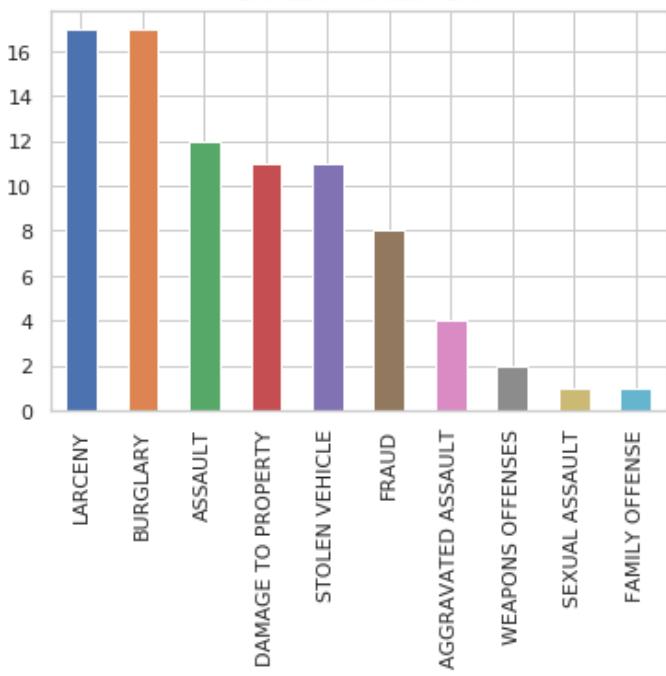
Crimes in Miller Grove



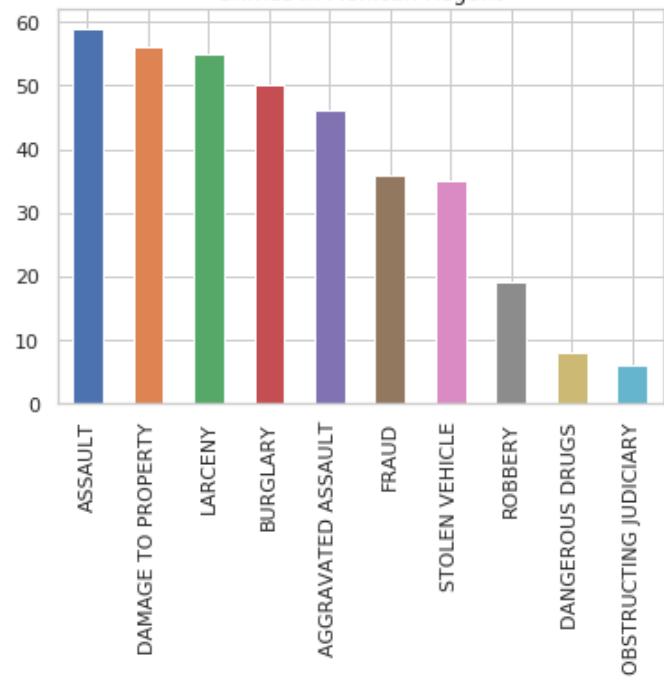
Crimes in Milwaukee Junction



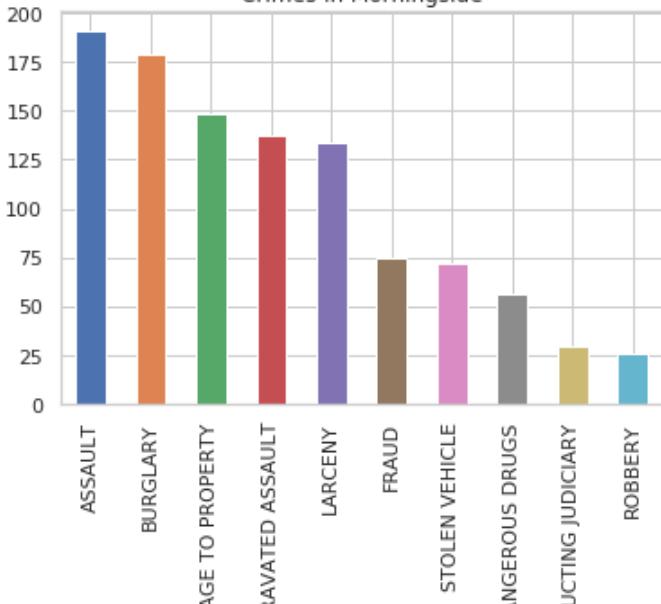
Crimes in Minock Park



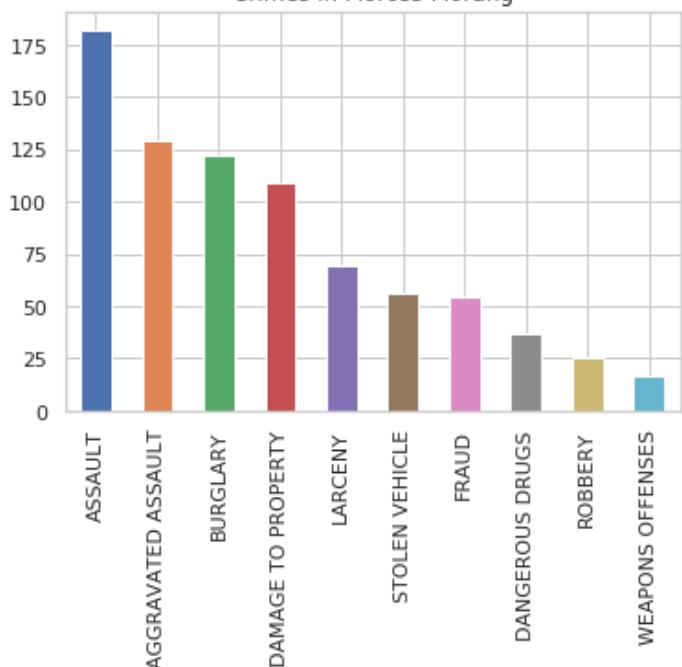
Crimes in Mohican Regent



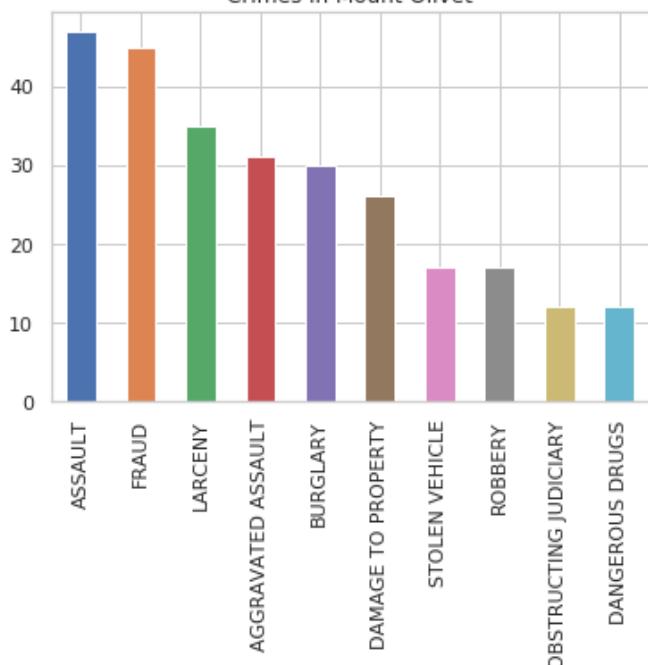
Crimes in Morningside



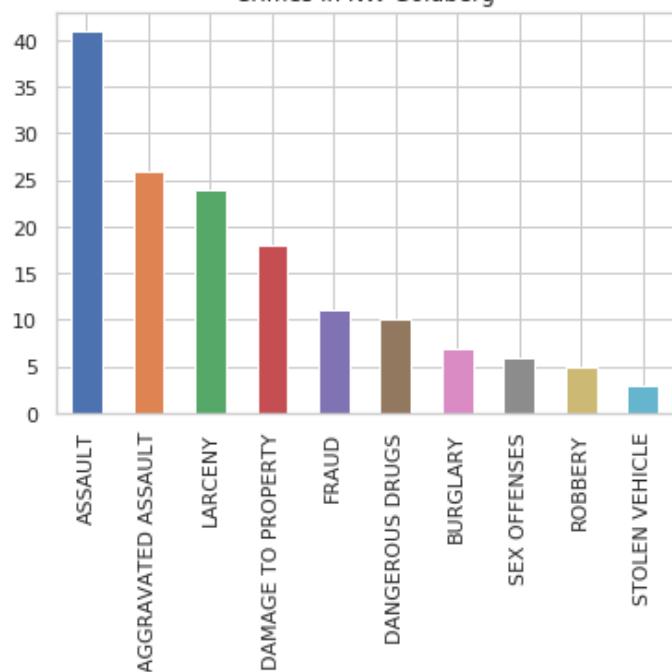
Crimes in Moross-Morang



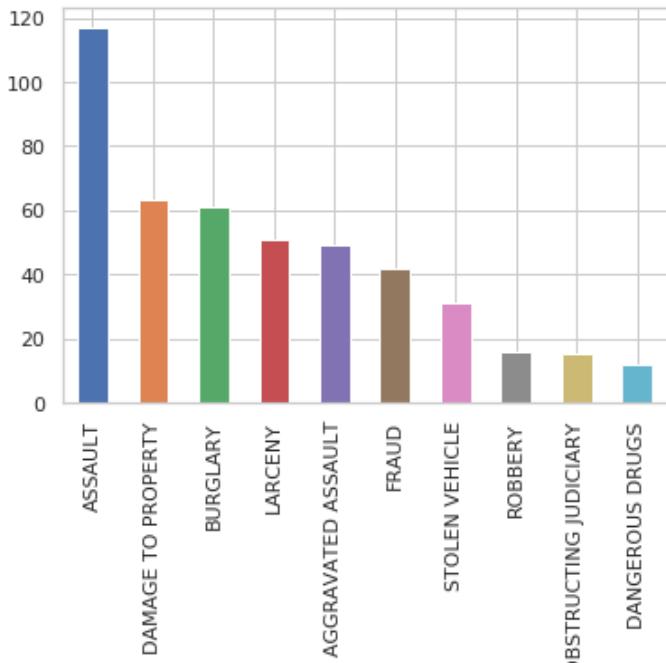
Crimes in Mount Olivet



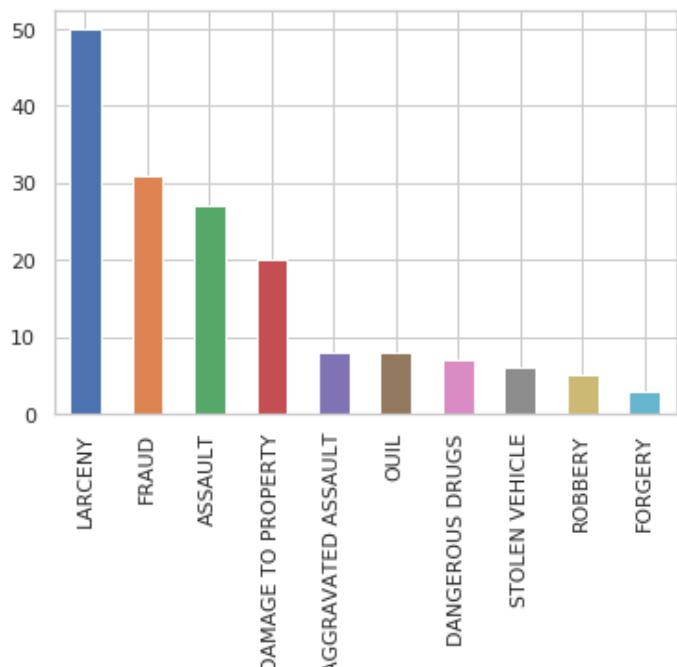
Crimes in NW Goldberg



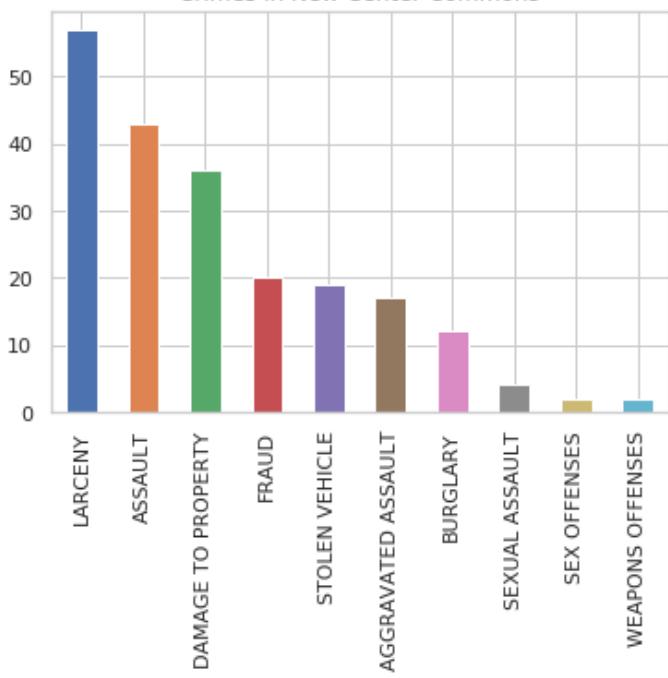
Crimes in Nardin Park



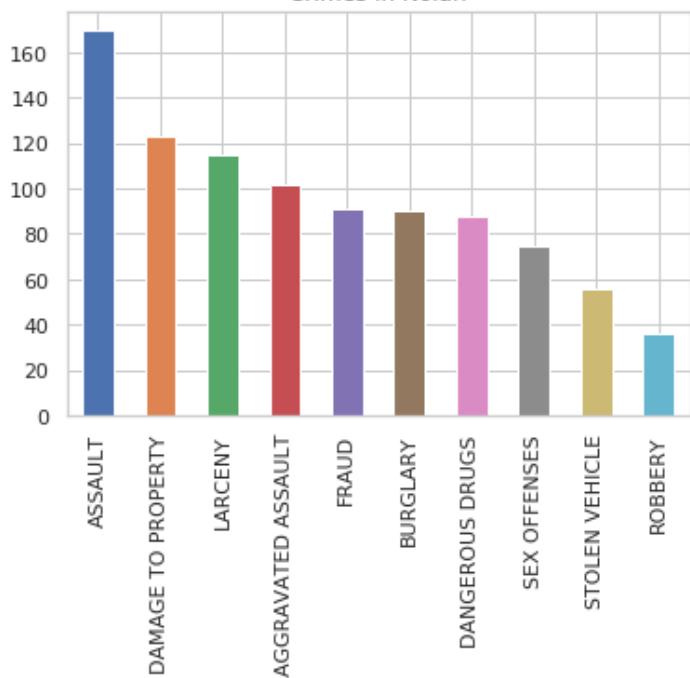
Crimes in New Center



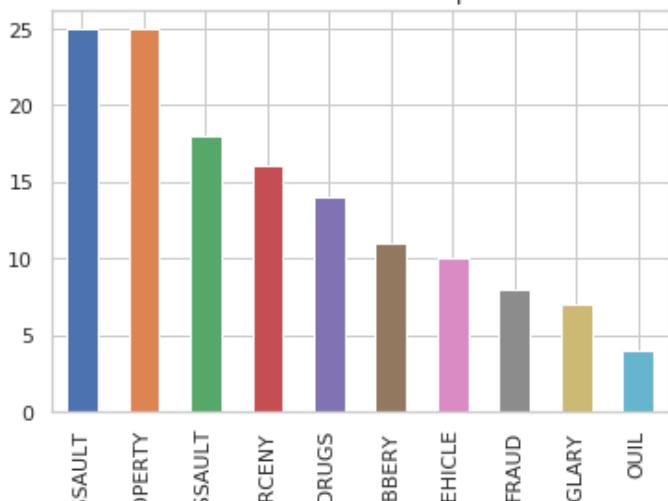
Crimes in New Center Commons



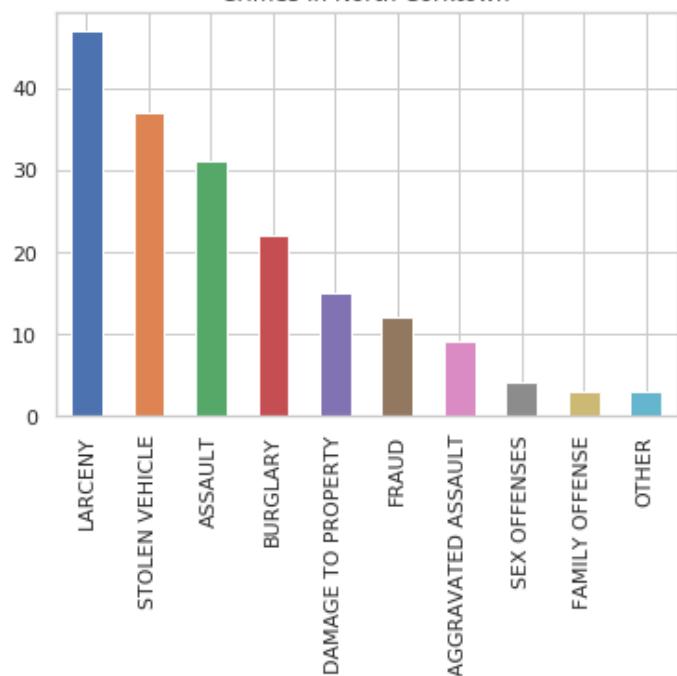
Crimes in Nolan



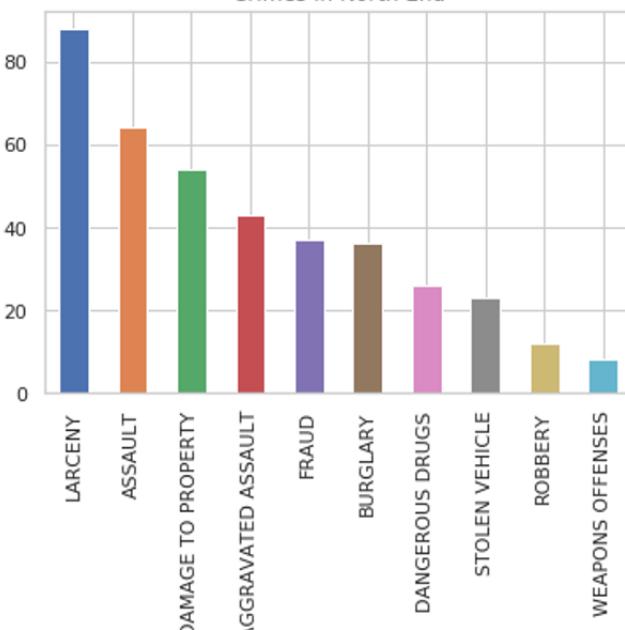
Crimes in North Campau



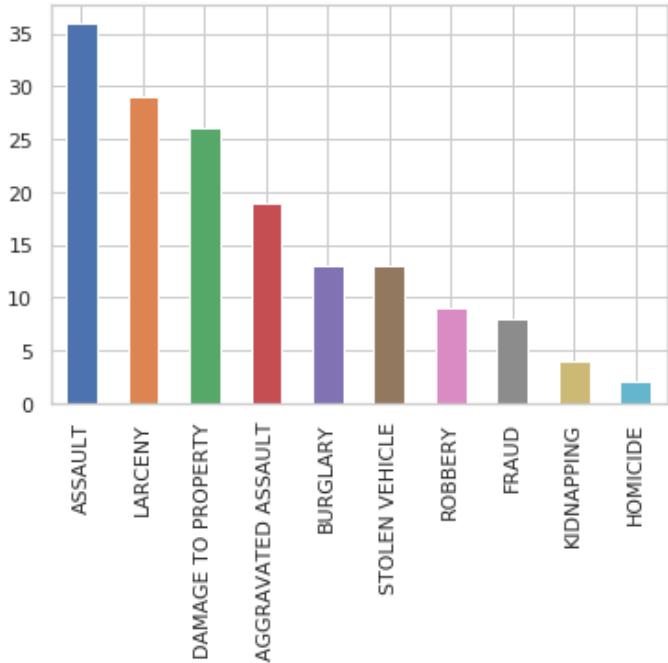
Crimes in North Corktown



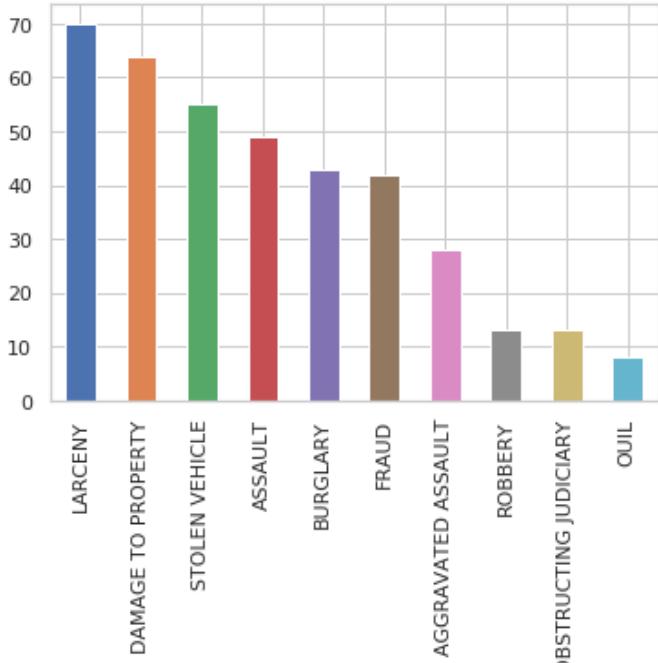
Crimes in North End



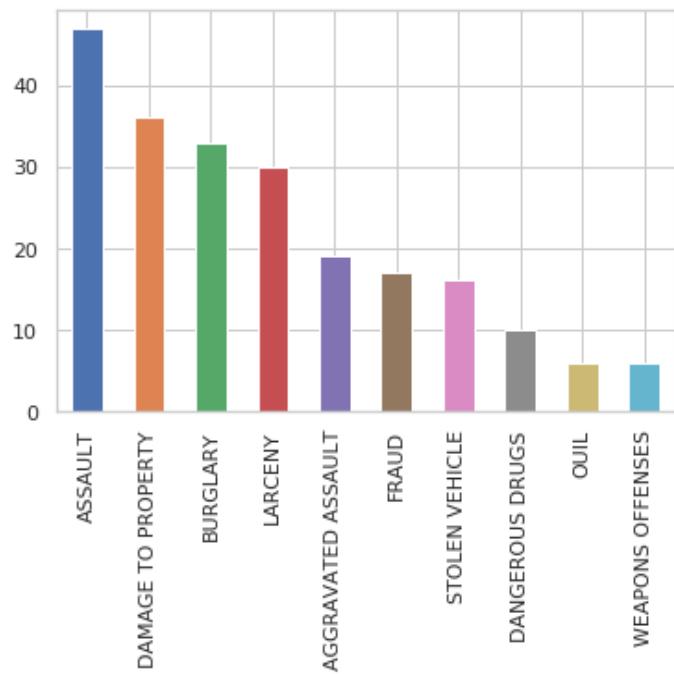
Crimes in North LaSalle



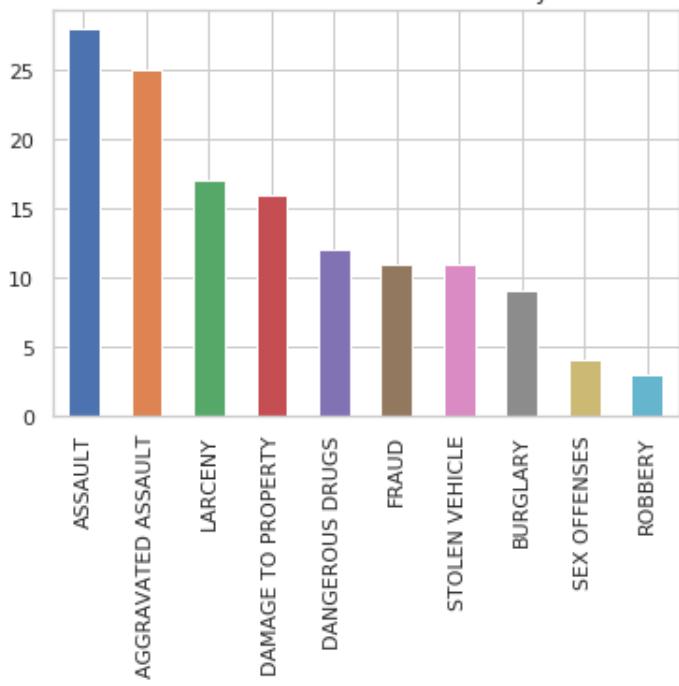
Crimes in North Rosedale Park



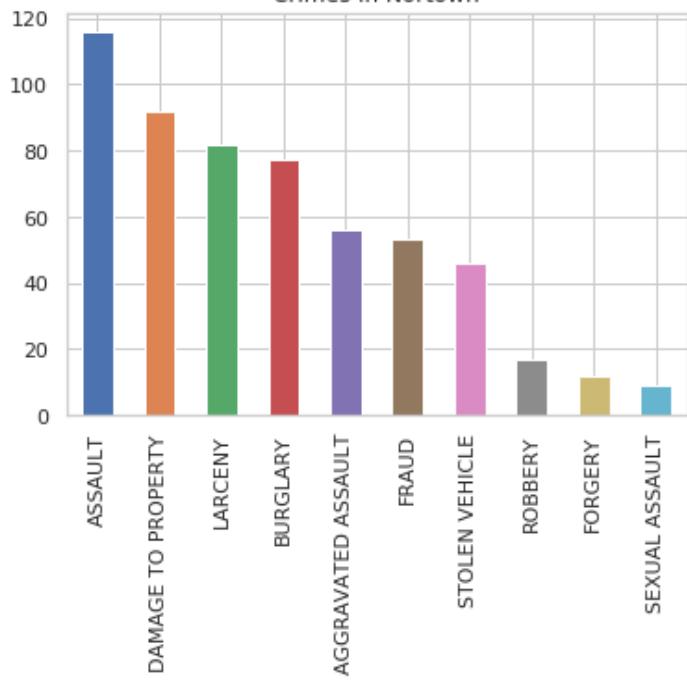
Crimes in Northeast Central District



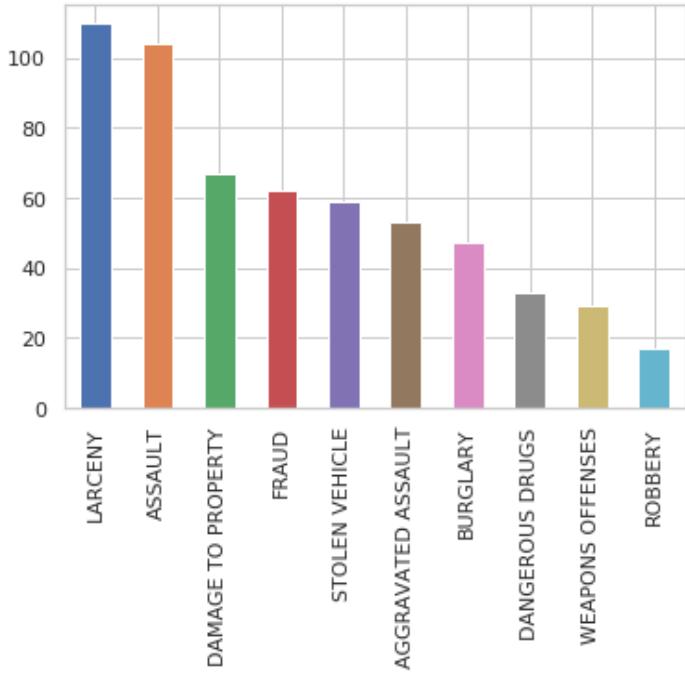
Crimes in Northwest Community



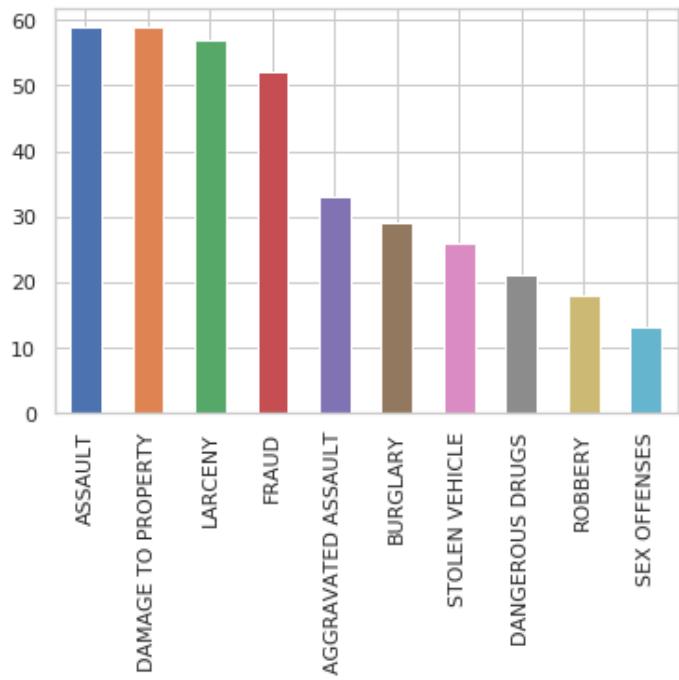
Crimes in Nortown



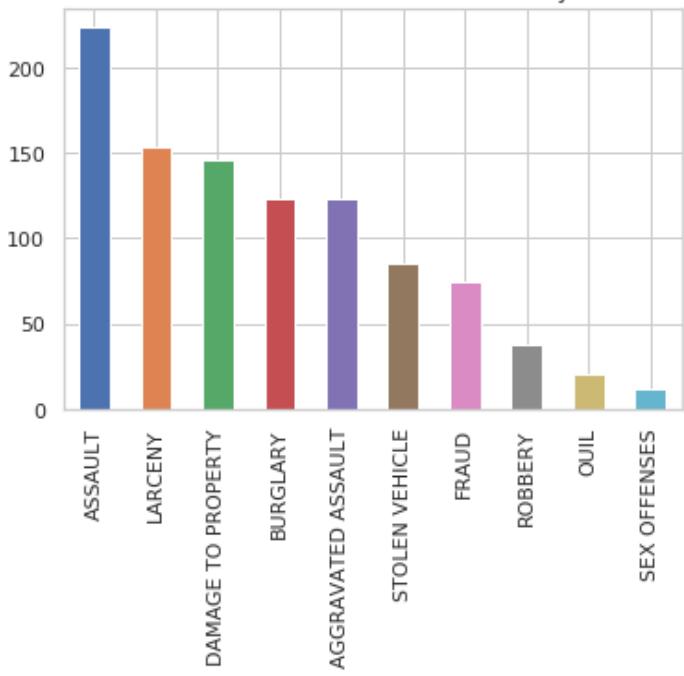
Crimes in O'Hair Park



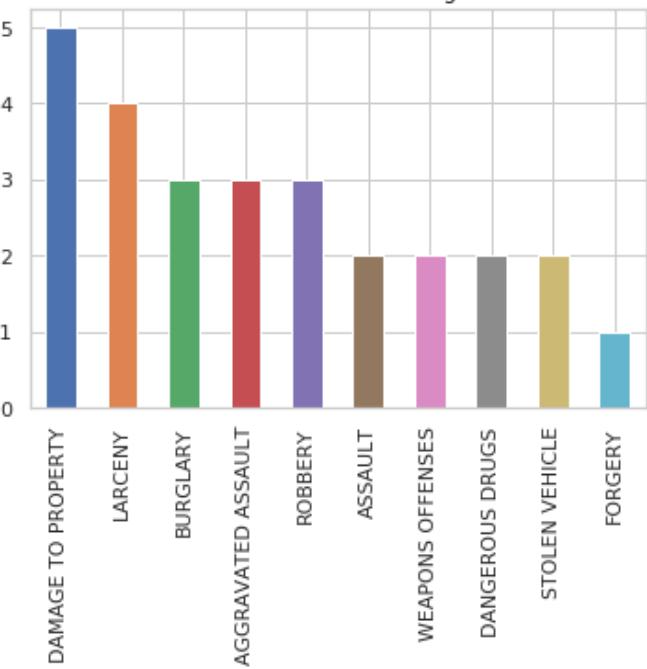
Crimes in Oak Grove



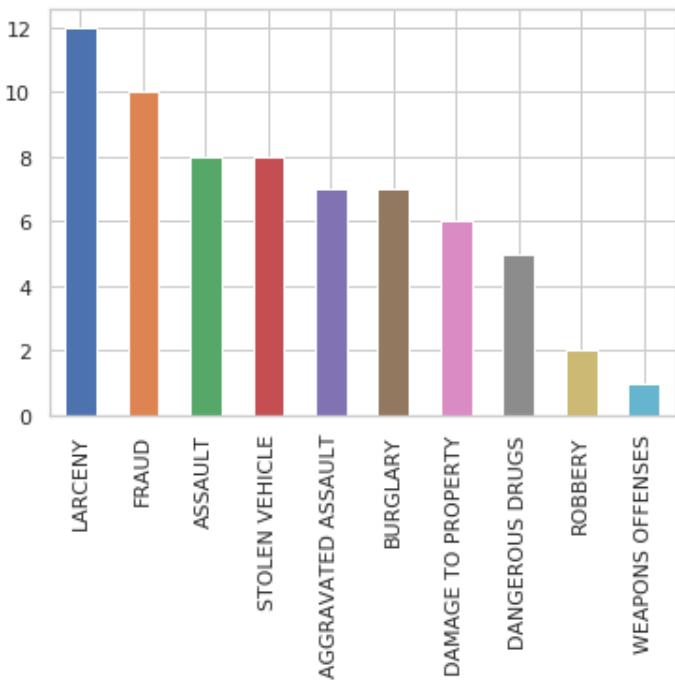
Crimes in Oakman Blvd Community



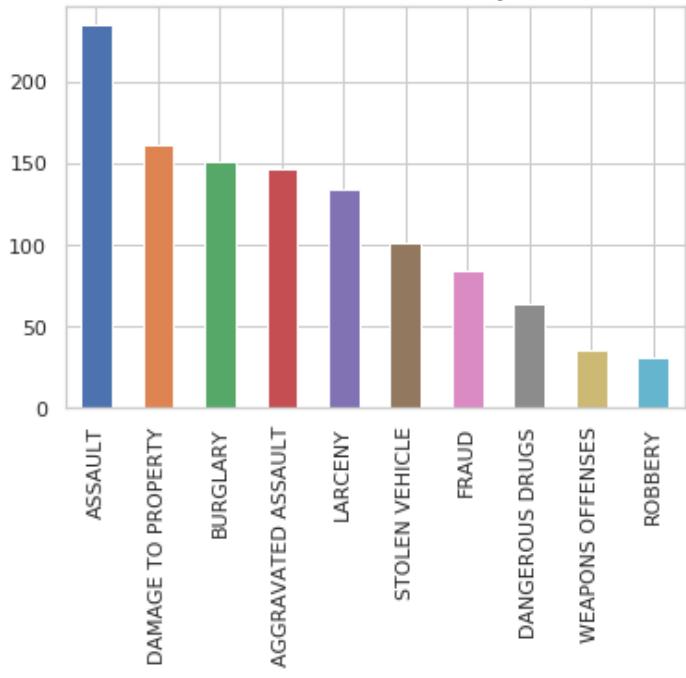
Crimes in Oakwood Heights



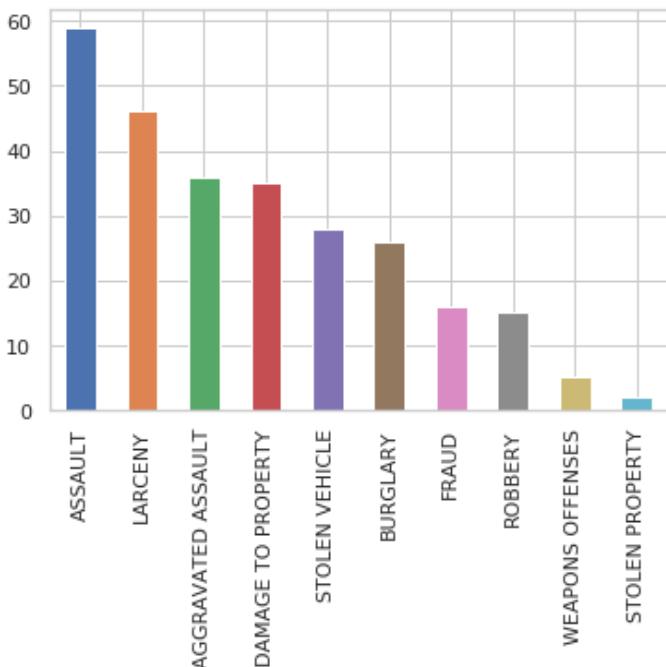
Crimes in Old Redford



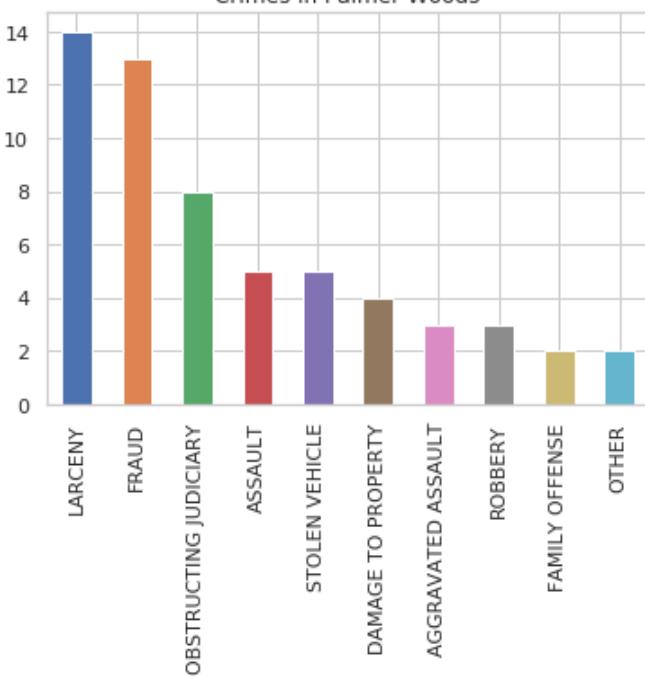
Crimes in Outer Drive-Hayes



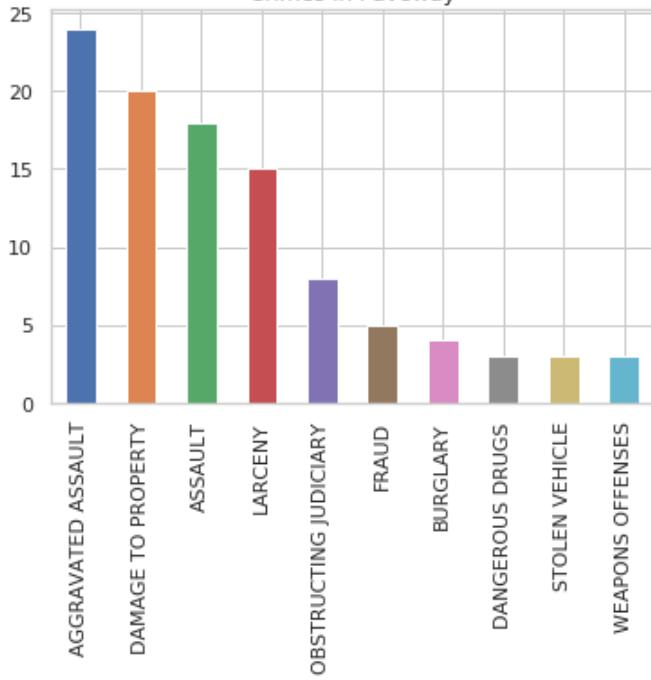
Crimes in Palmer Park



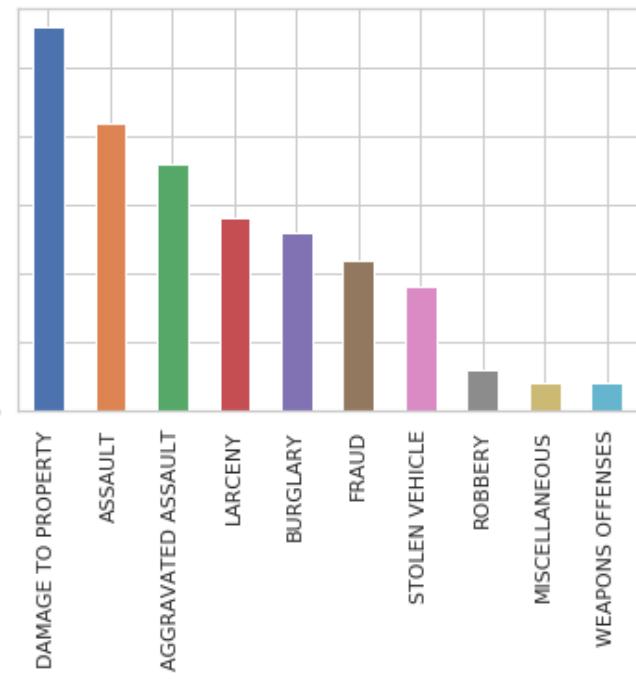
Crimes in Palmer Woods



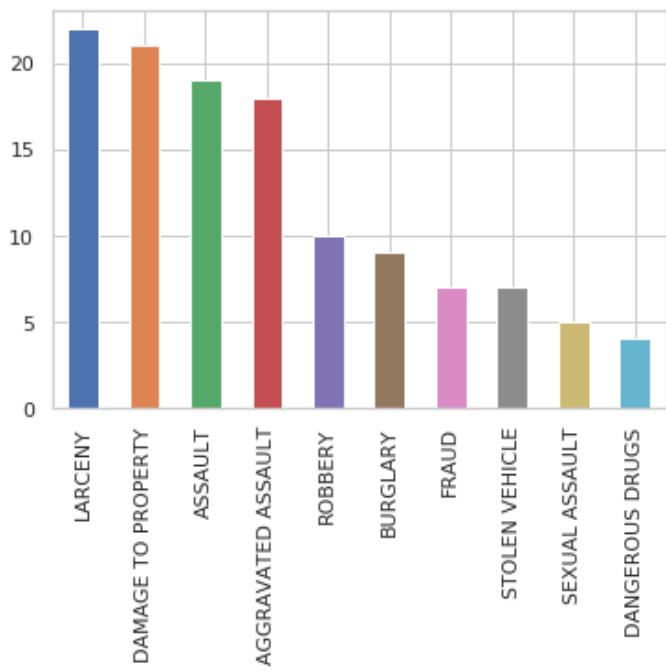
Crimes in Paveway



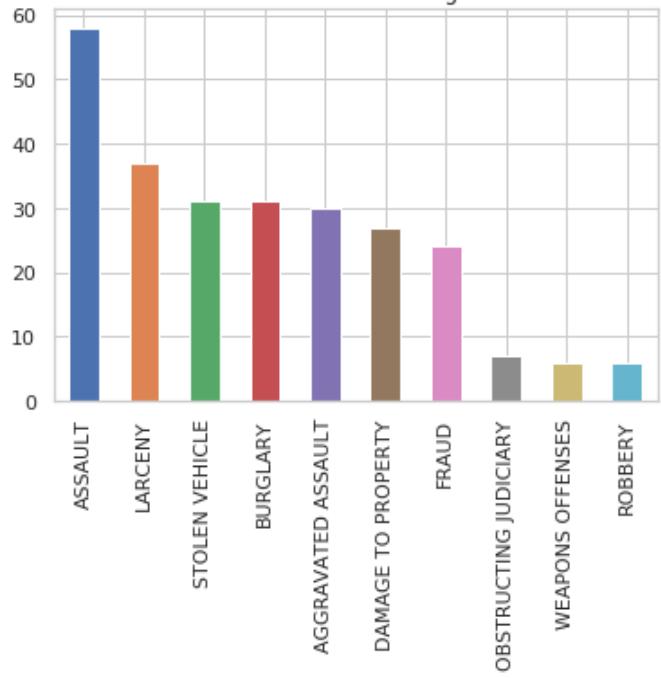
Crimes in Pembroke



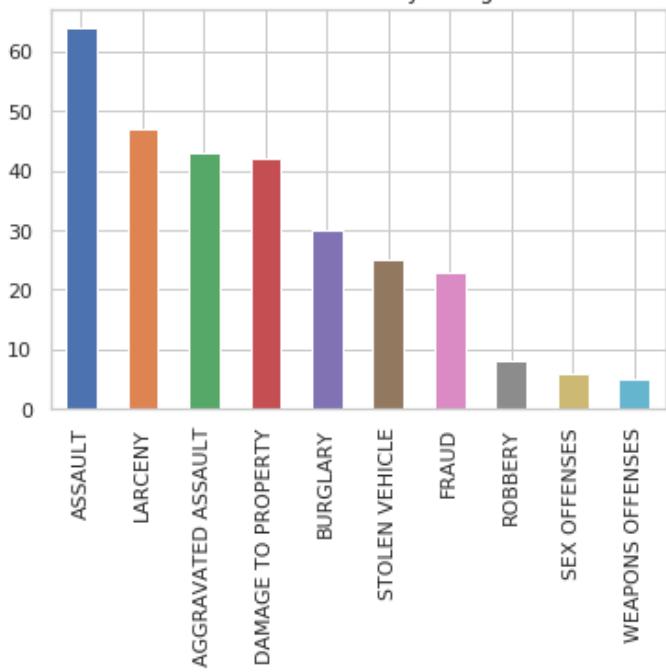
Crimes in Penrose



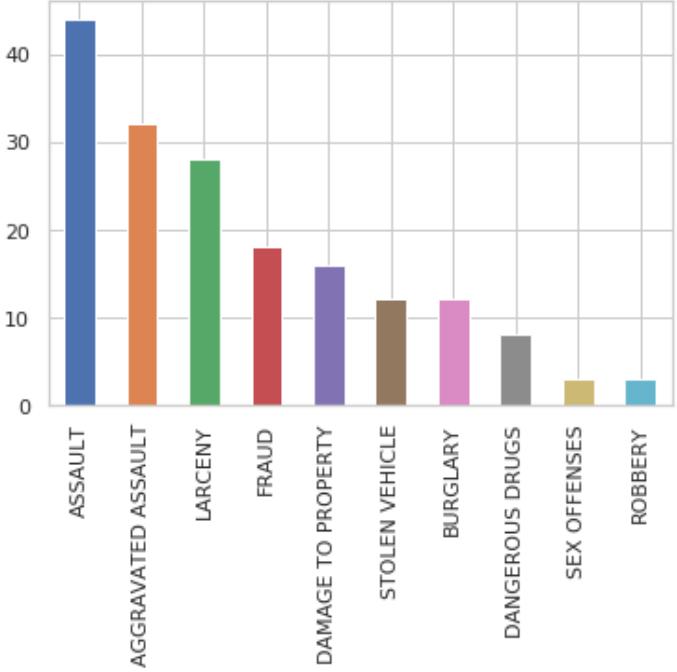
Crimes in Pershing



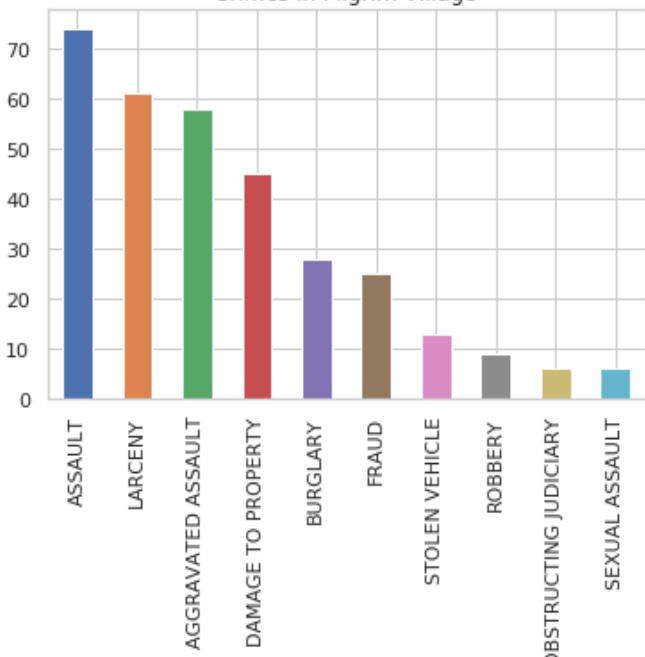
Crimes in Petoskey-Otsego



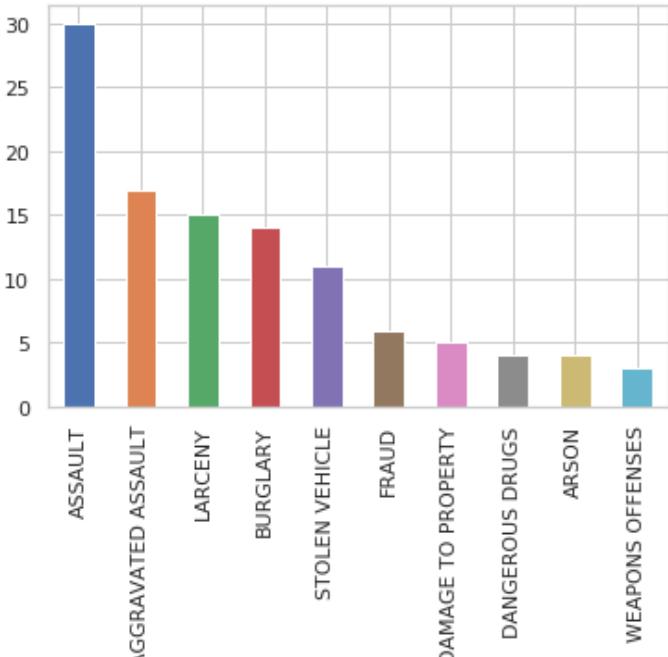
Crimes in Piety Hill



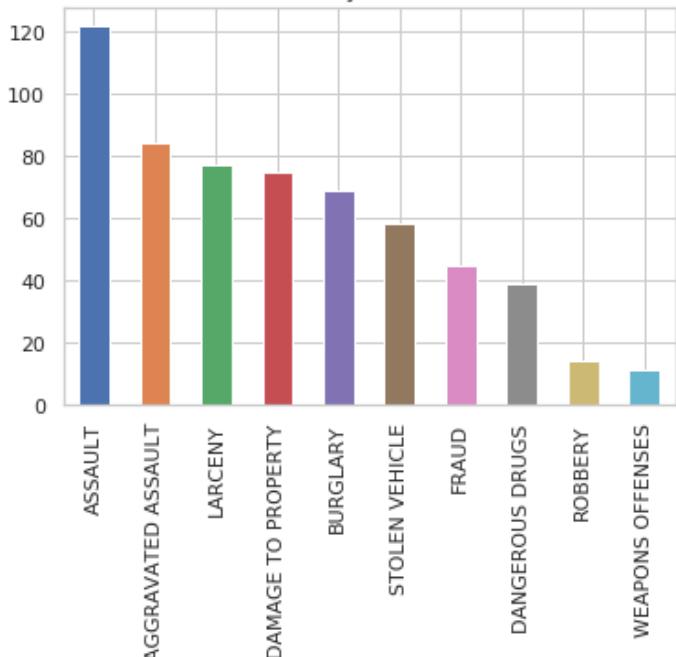
Crimes in Pilgrim Village



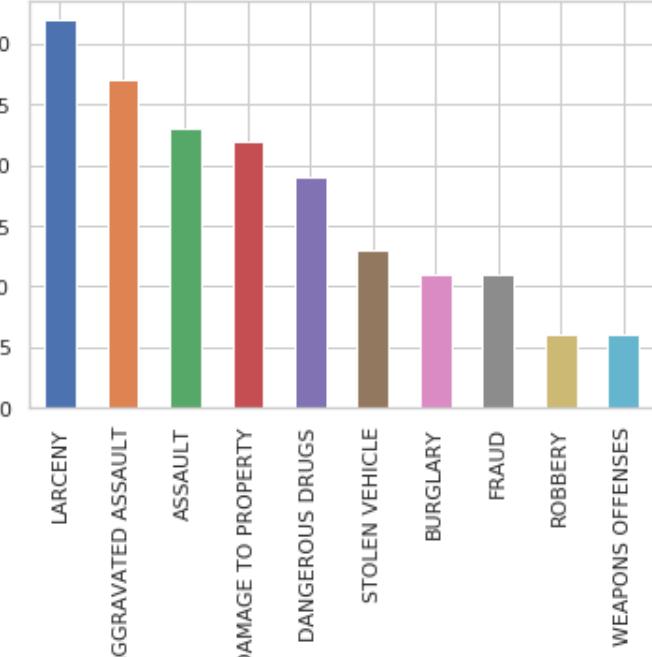
Crimes in Pingree Park



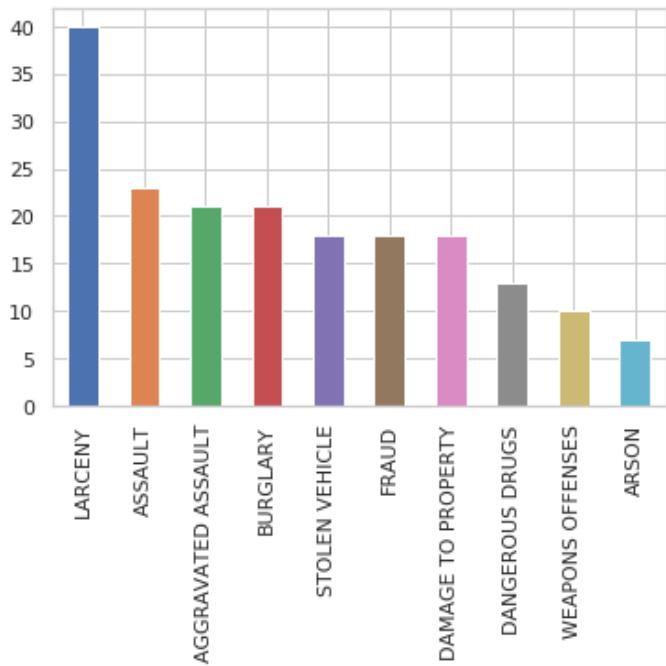
Crimes in Plymouth-Hubbell



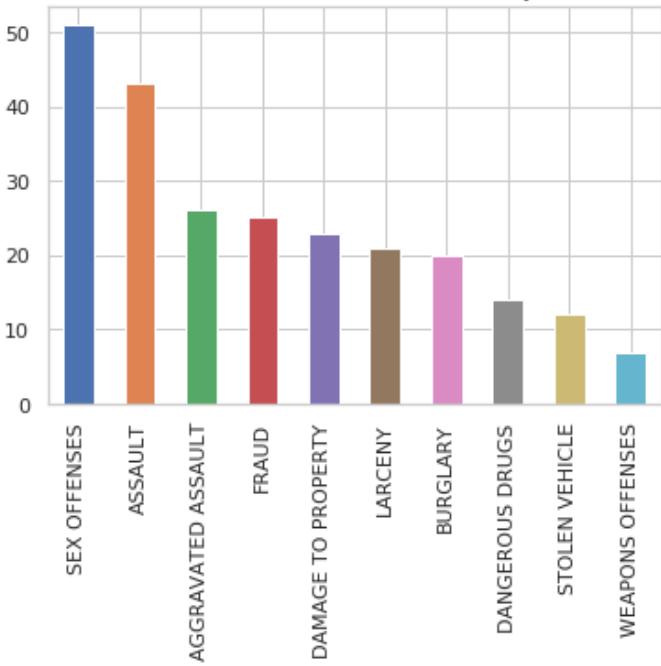
Crimes in Plymouth-I96



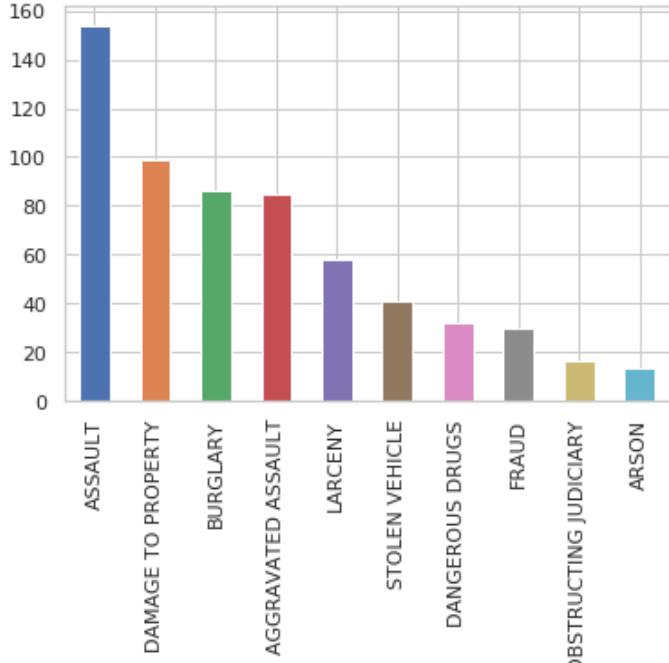
Crimes in Poletown East



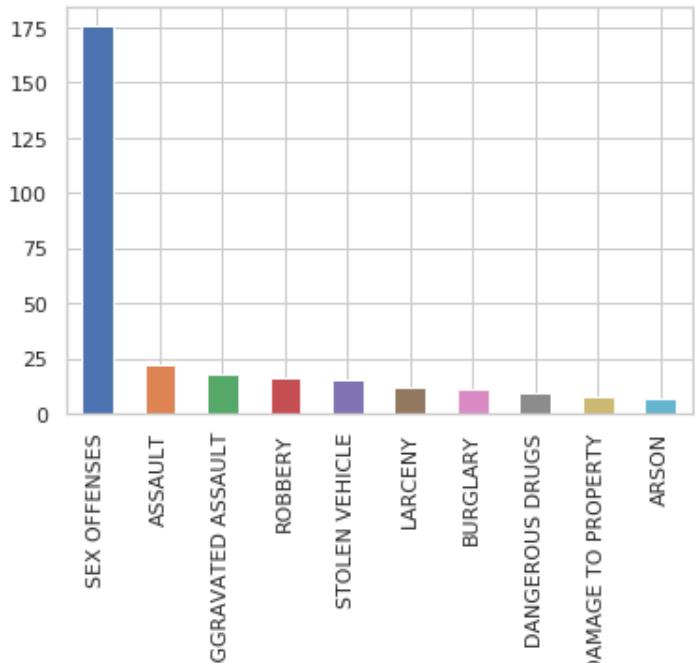
Crimes in Pride Area Community



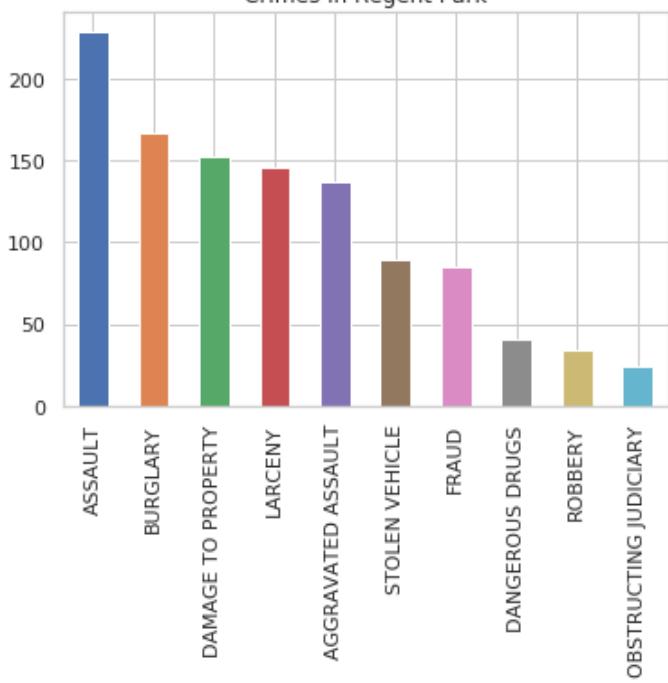
Crimes in Pulaski



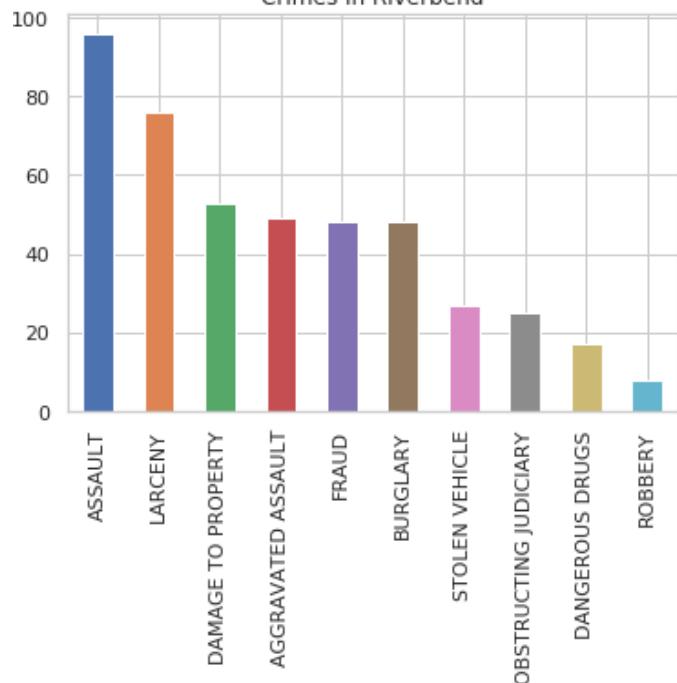
Crimes in Ravendale



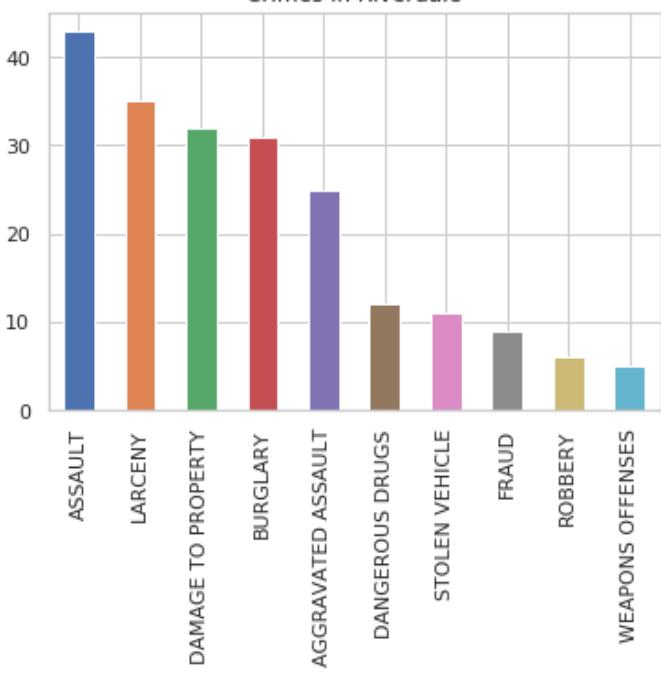
Crimes in Regent Park



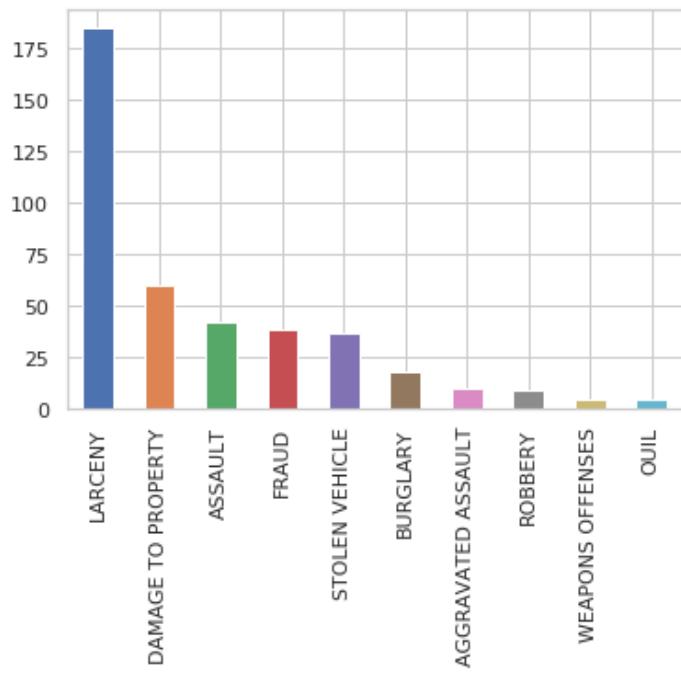
Crimes in Riverbend



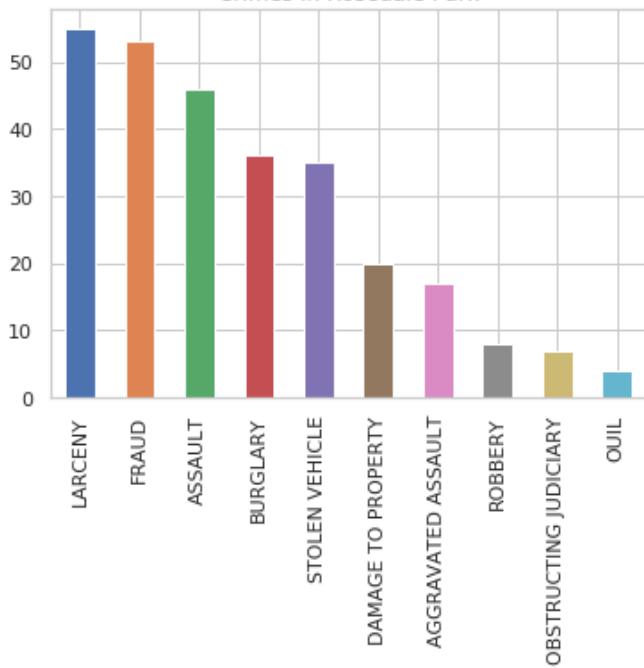
Crimes in Riverdale



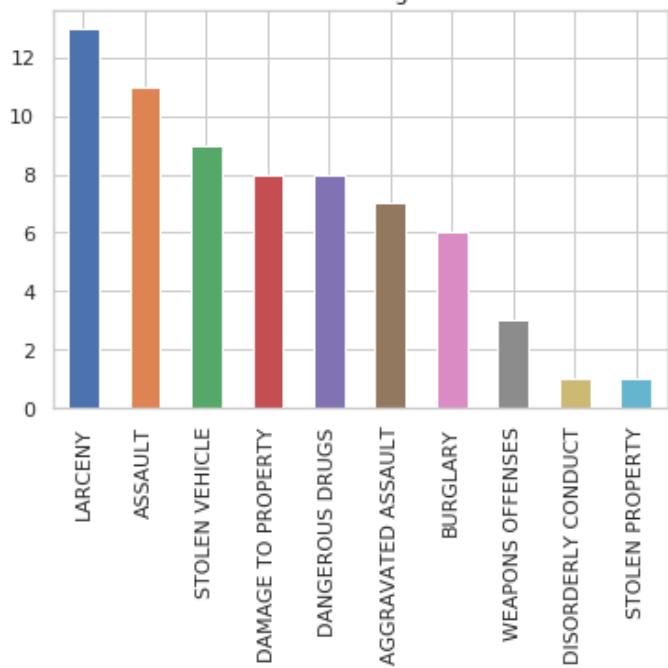
Crimes in Rivertown



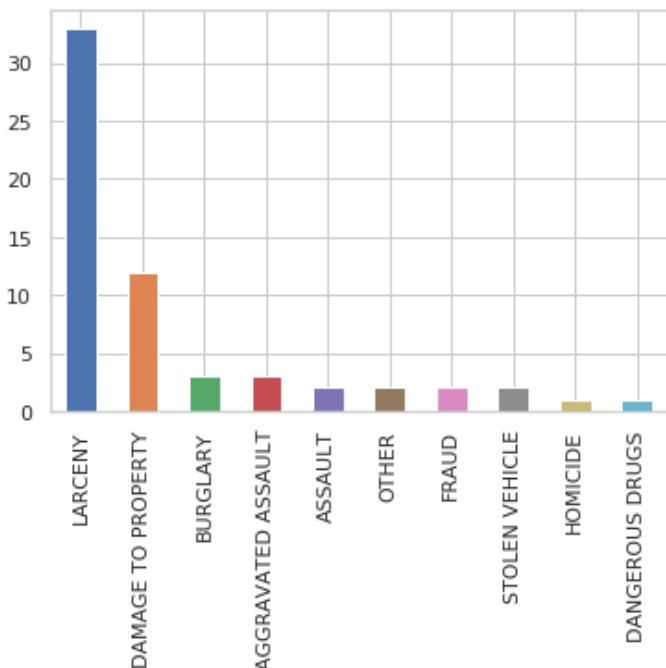
Crimes in Rosedale Park



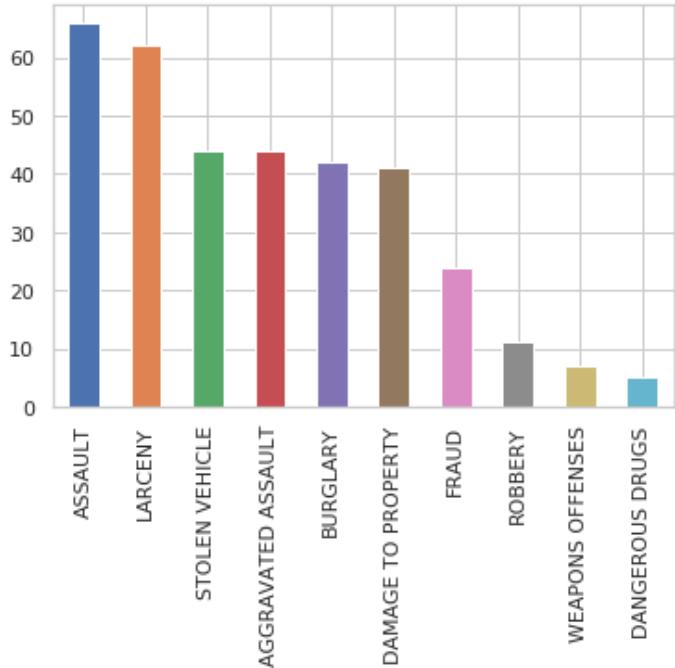
Crimes in Rouge Park



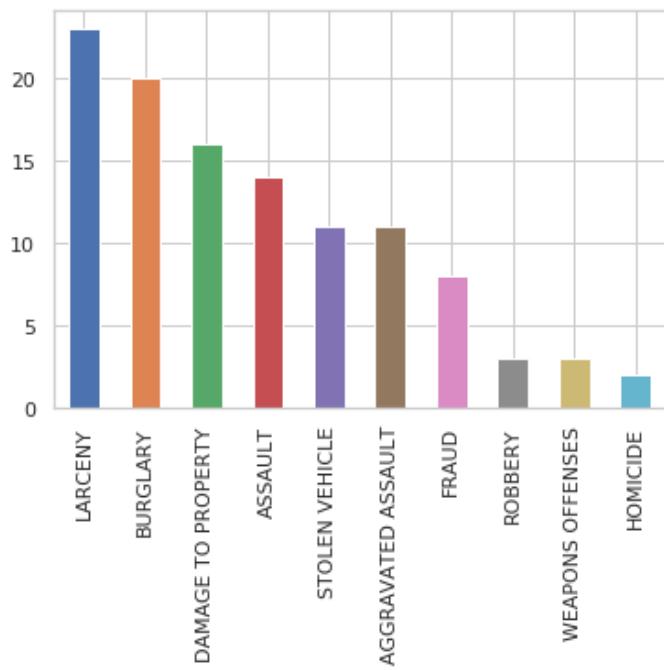
Crimes in Russell Industrial



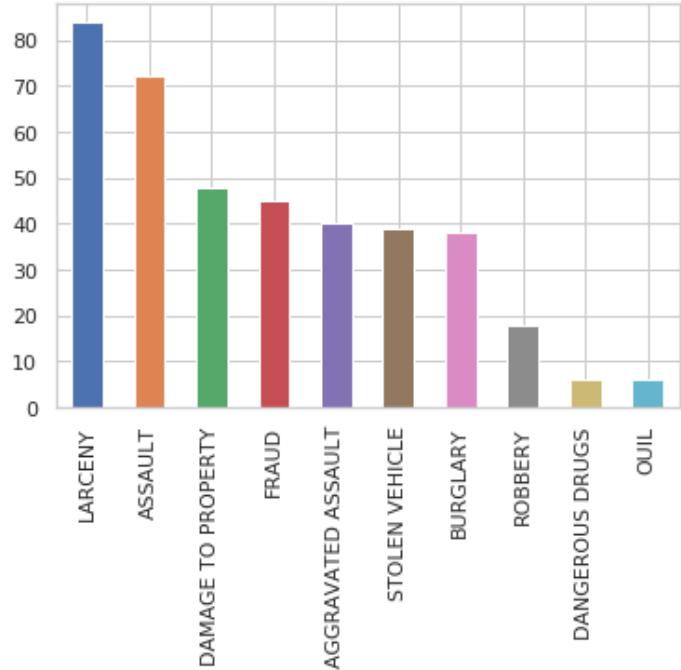
Crimes in Russell Woods



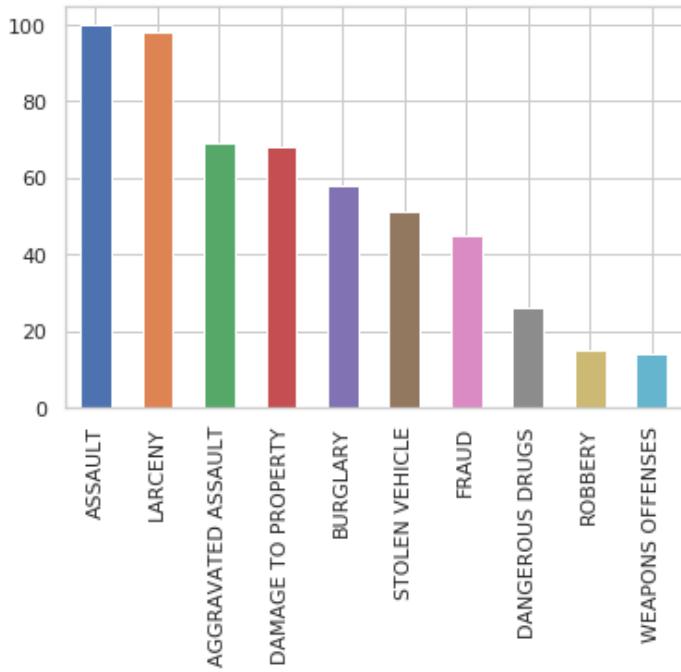
Crimes in San Bernardo



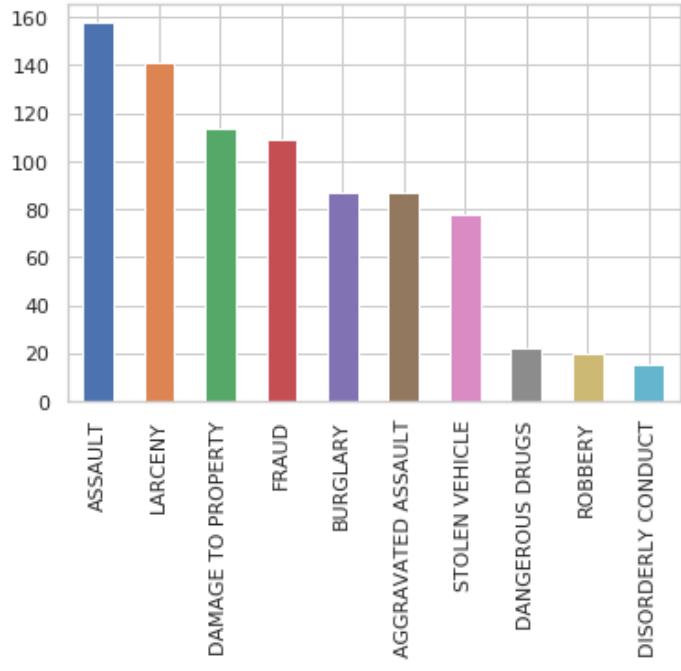
Crimes in Schaefer 7/8 Lodge



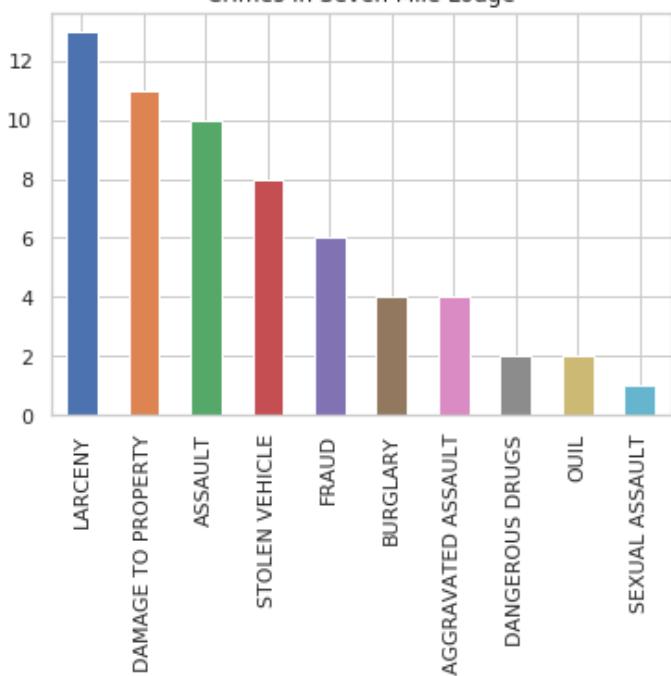
Crimes in Schoolcraft Southfield



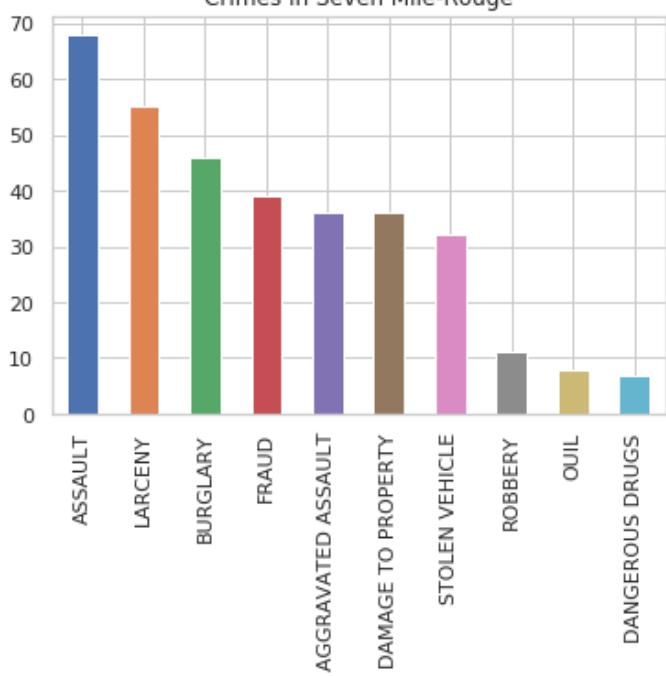
Crimes in Schulze



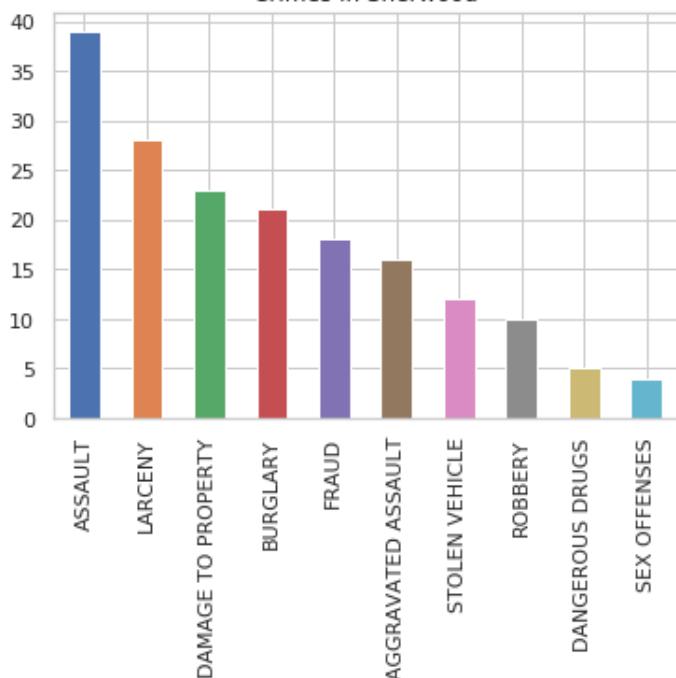
Crimes in Seven Mile Lodge



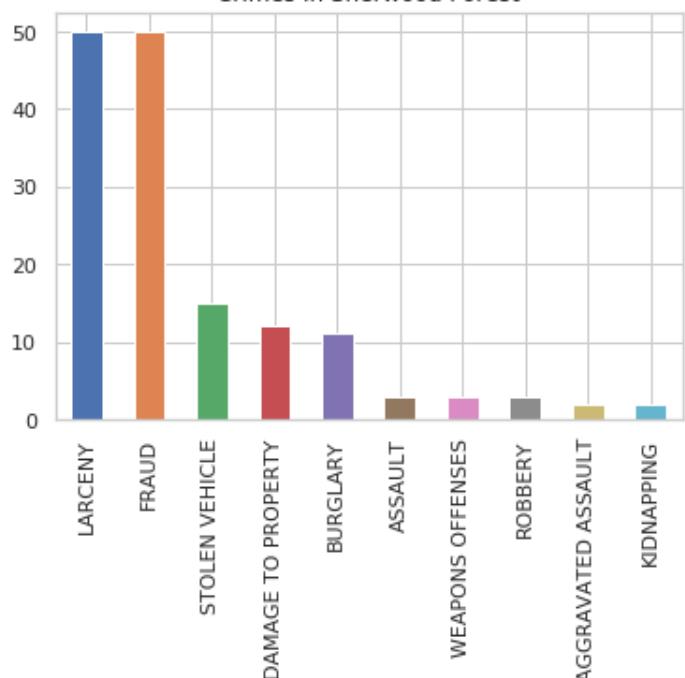
Crimes in Seven Mile-Rouge



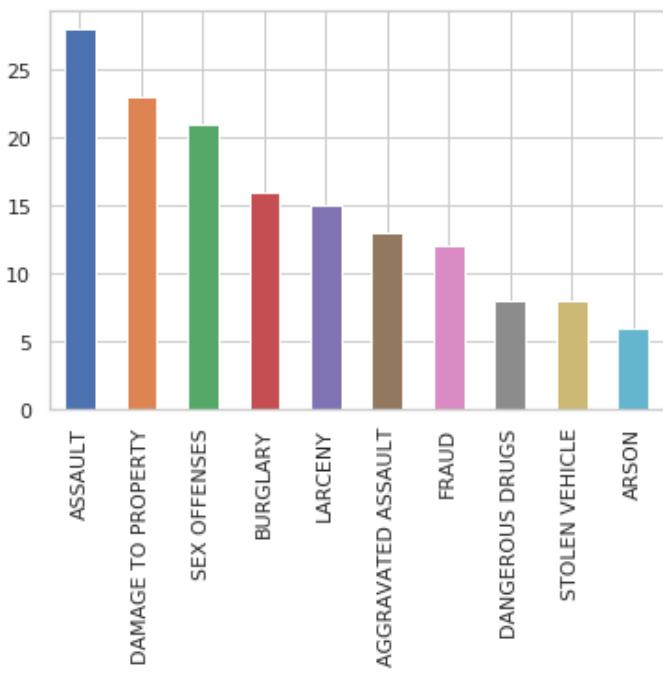
Crimes in Sherwood



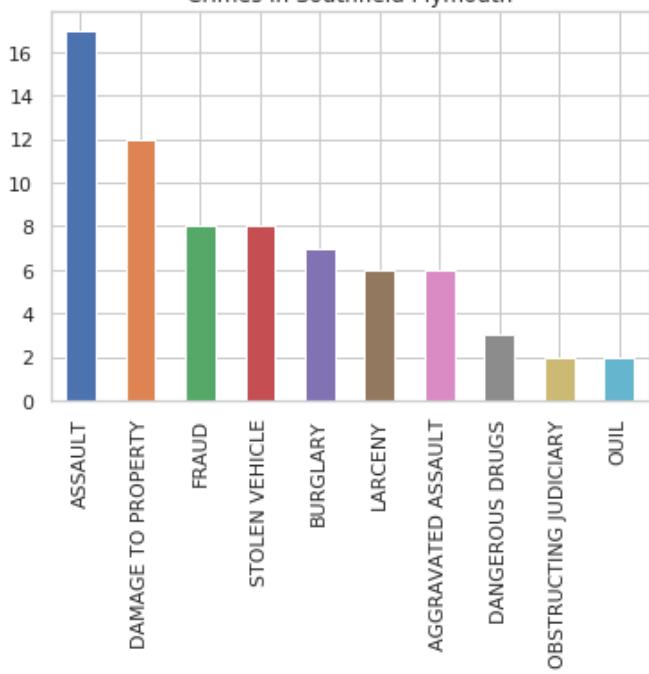
Crimes in Sherwood Forest



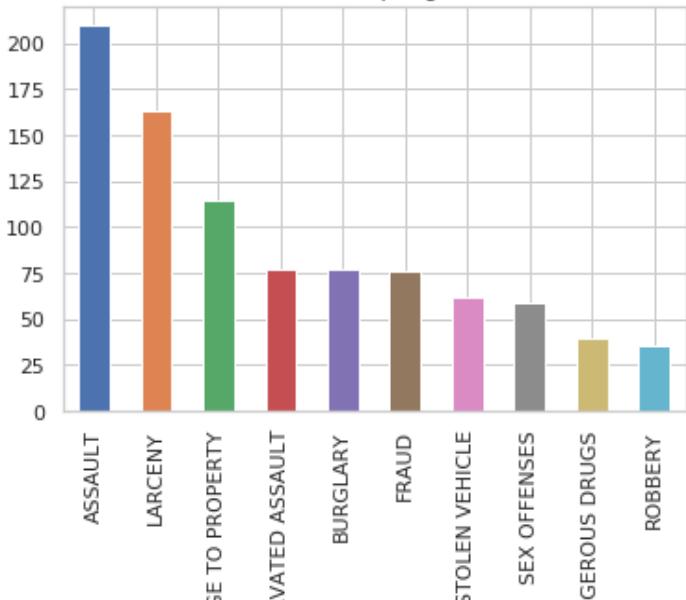
Crimes in South of Six



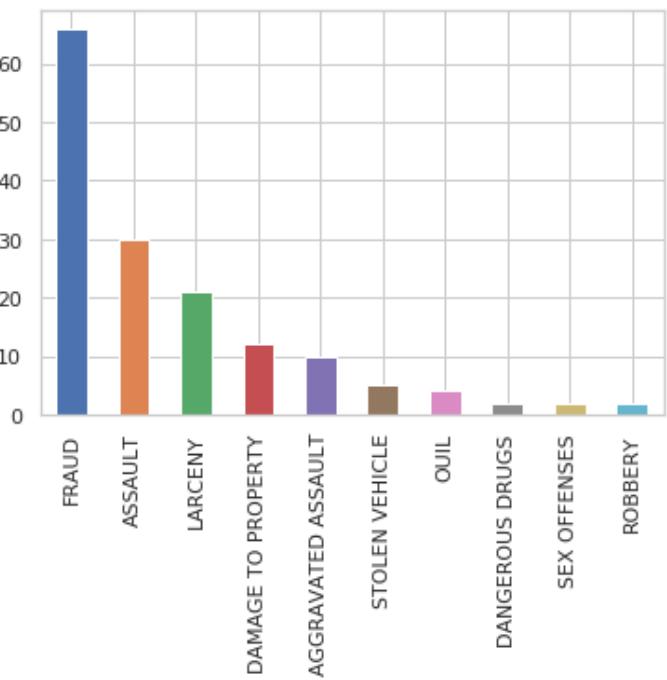
Crimes in Southfield Plymouth



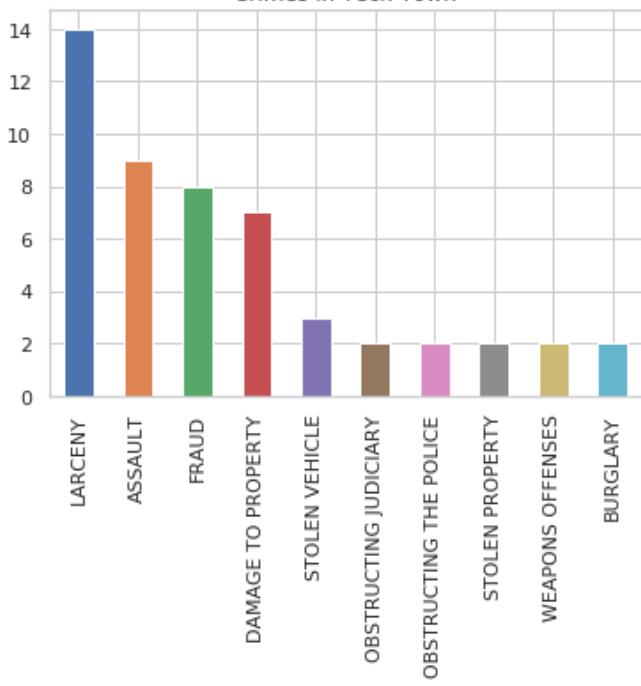
Crimes in Springwells



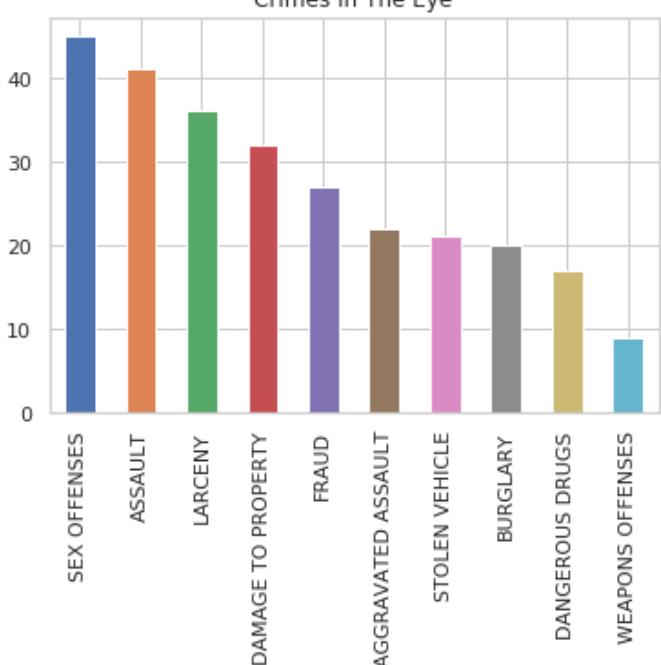
Crimes in State Fair



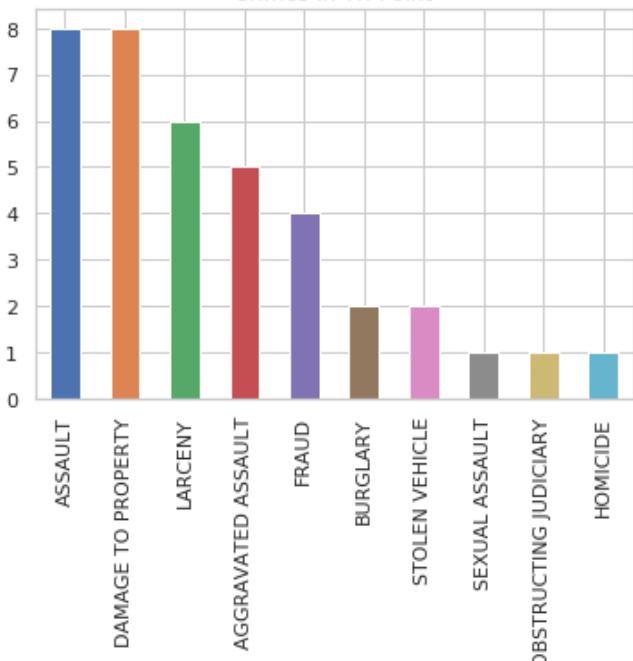
Crimes in Tech Town



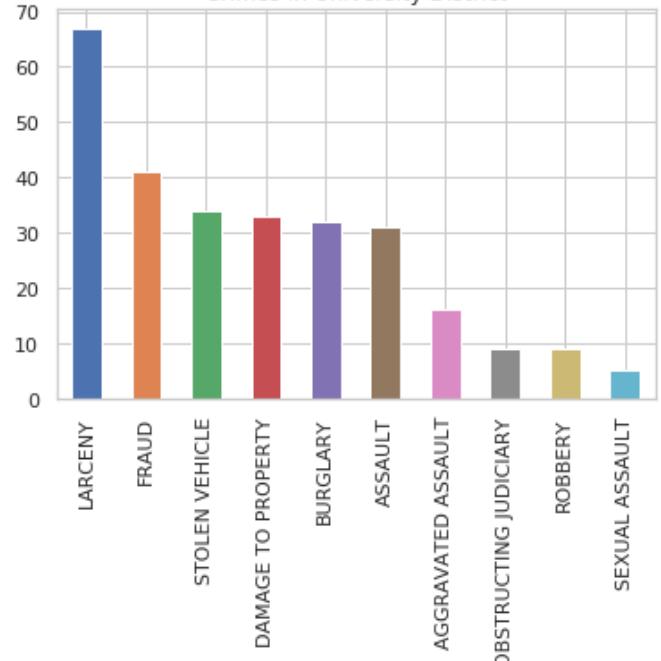
Crimes in The Eye



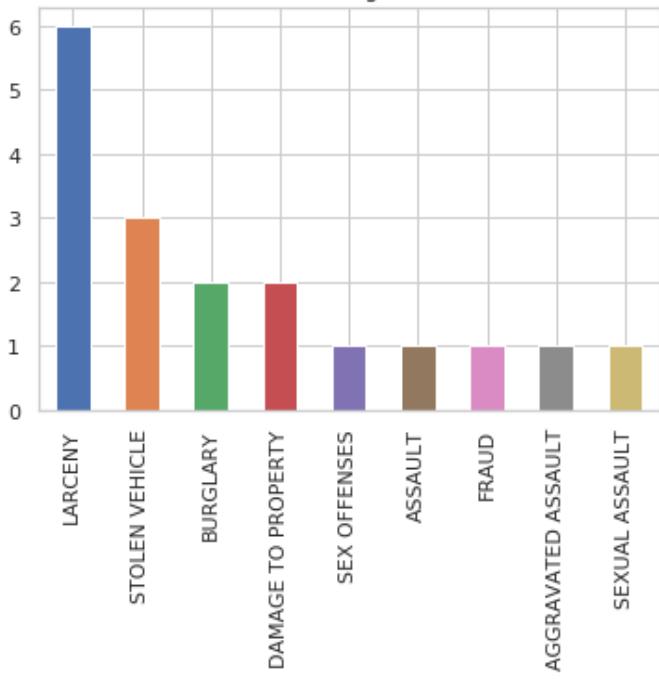
Crimes in Tri-Point



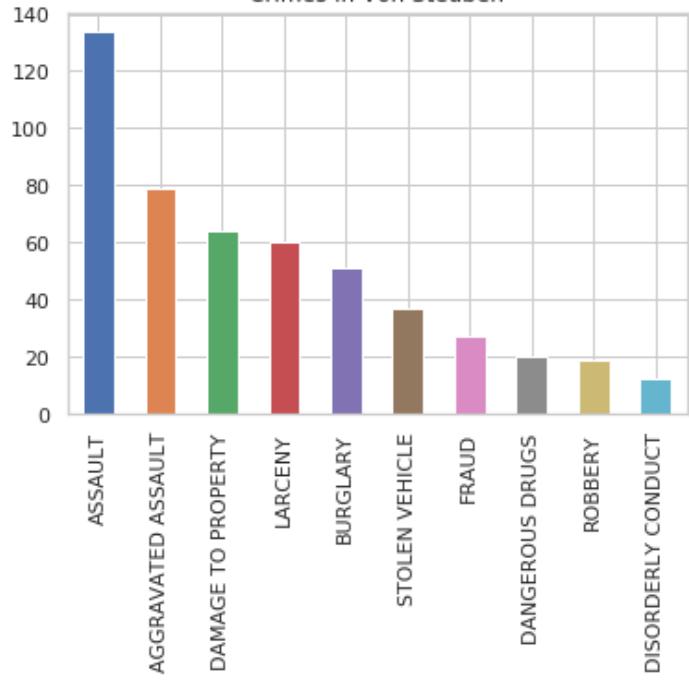
Crimes in University District



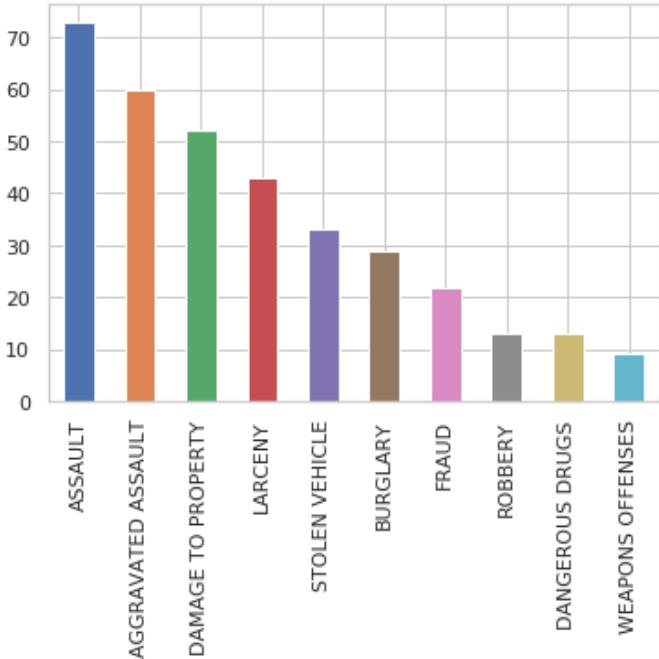
Crimes in Virginia Park



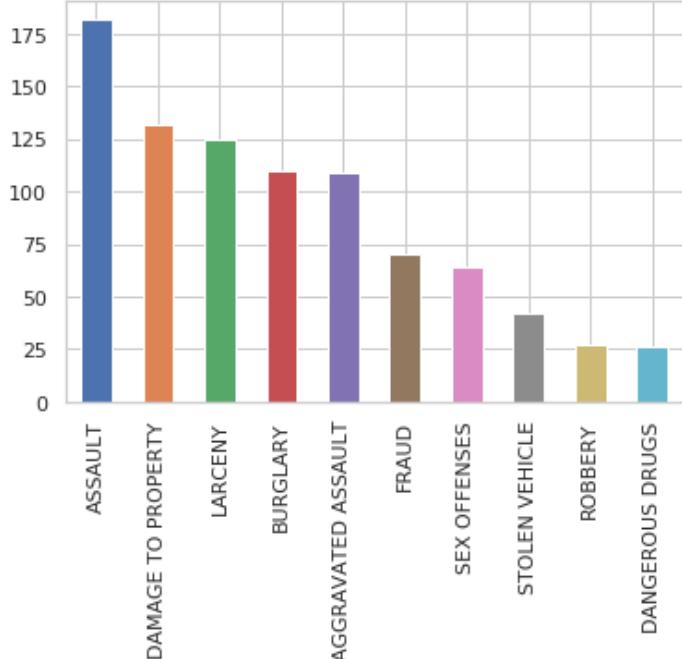
Crimes in Von Steuben



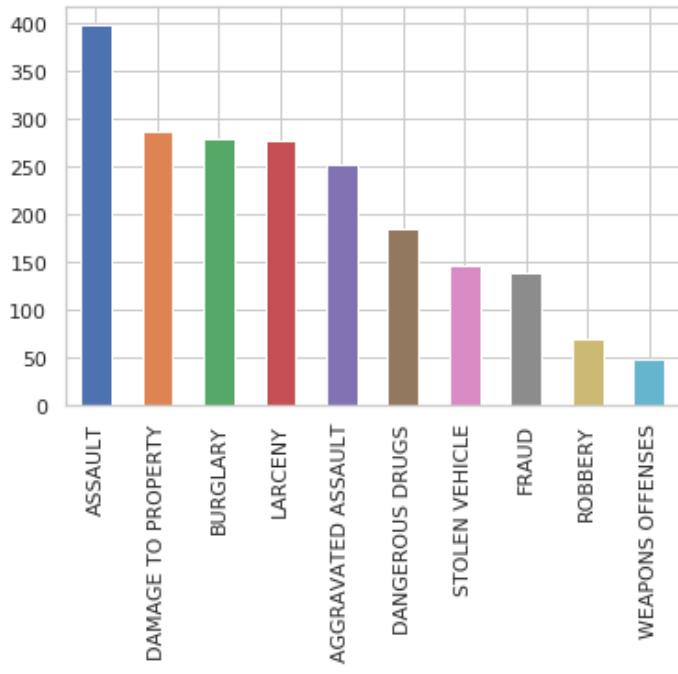
Crimes in Wade



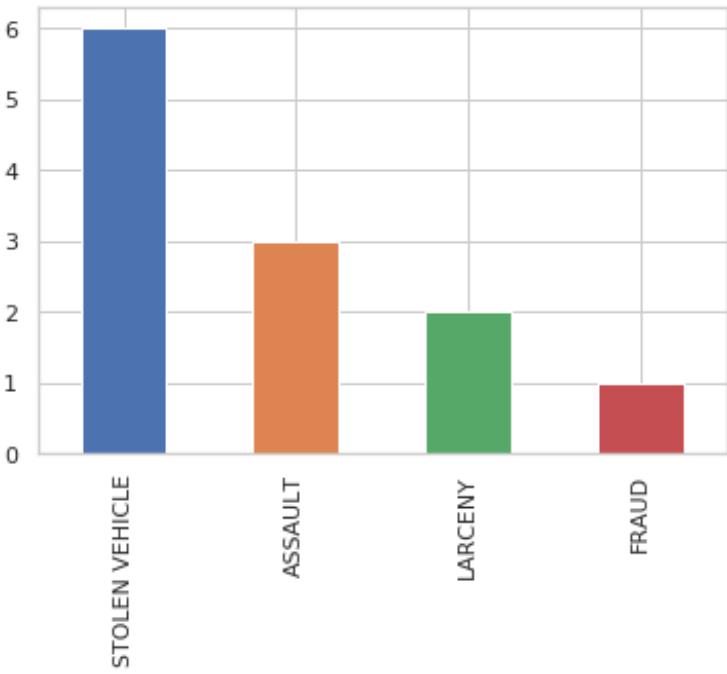
Crimes in Warren Ave Community



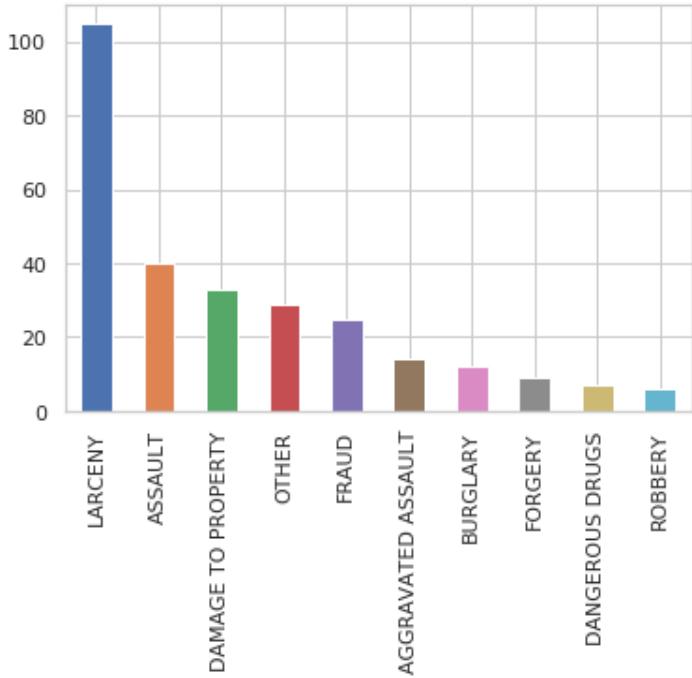
Crimes in Warrendale



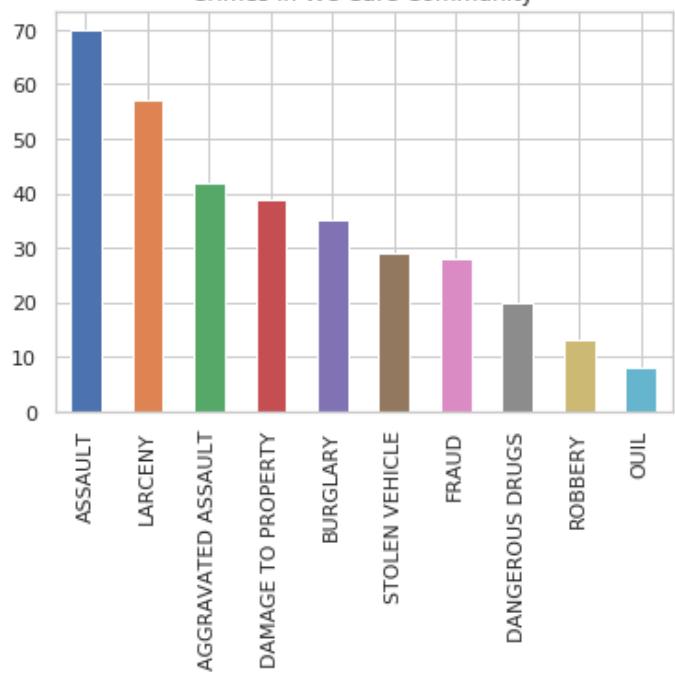
Crimes in Waterworks Park



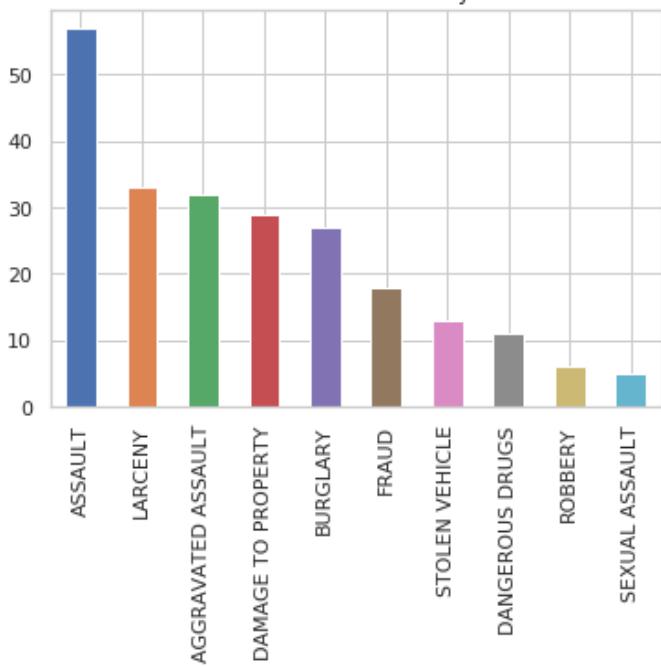
Crimes in Wayne State



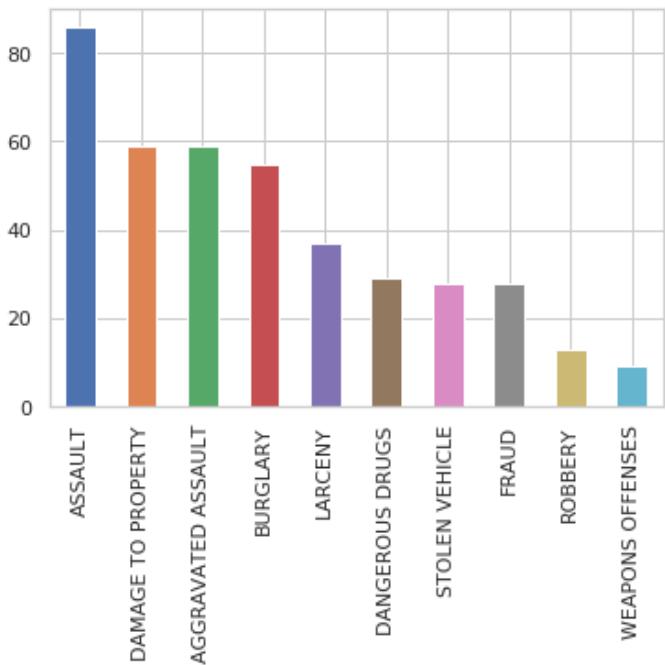
Crimes in We Care Community



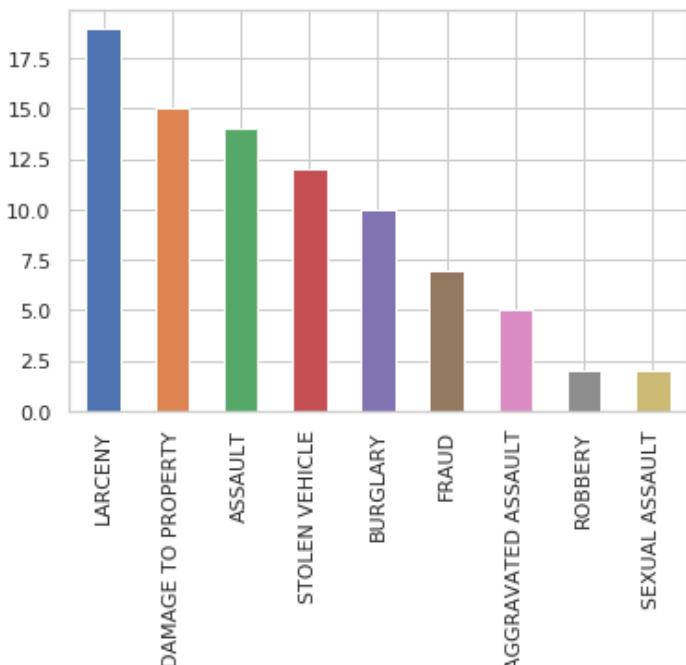
Crimes in Weatherby



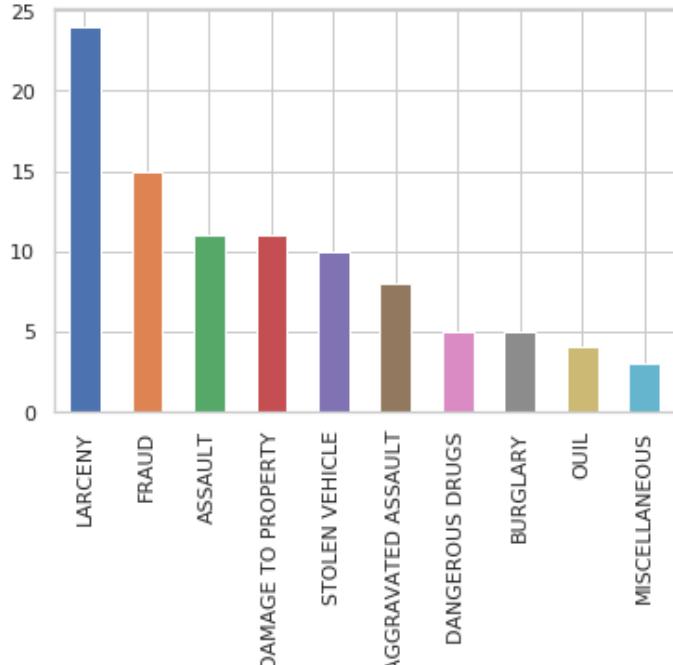
Crimes in West End



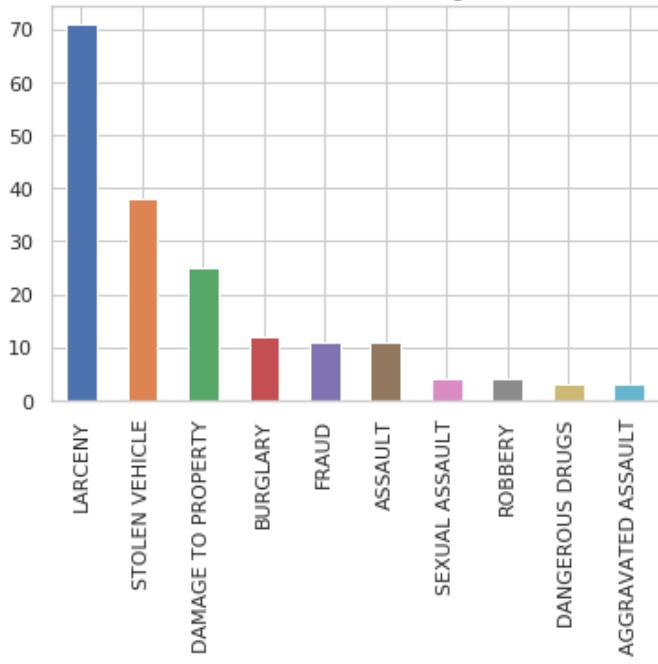
Crimes in West Outer Drive



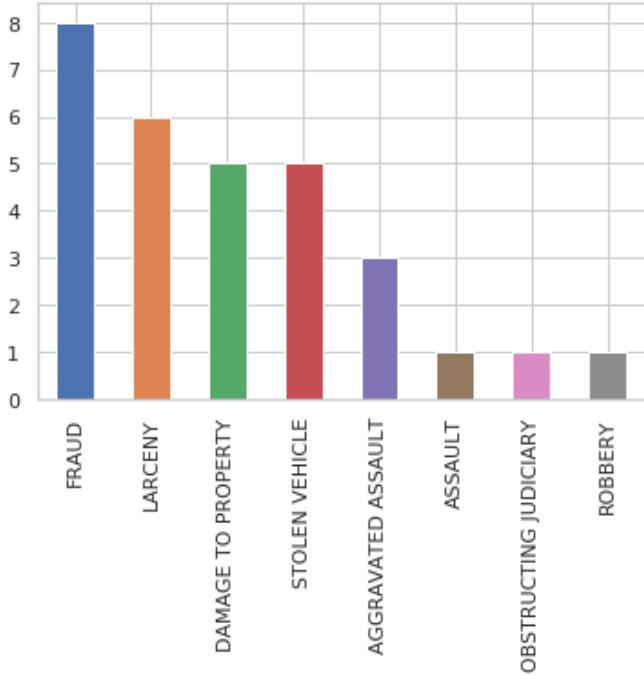
Crimes in West Side Industrial



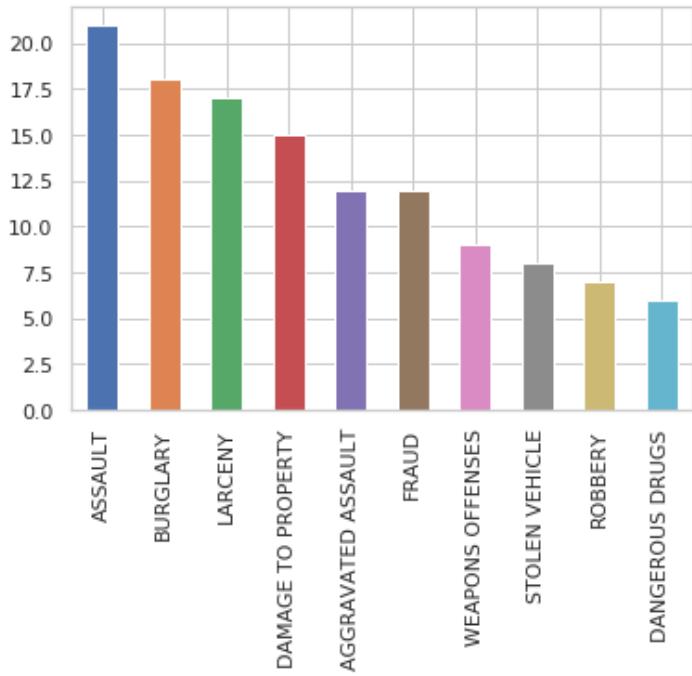
Crimes in West Village



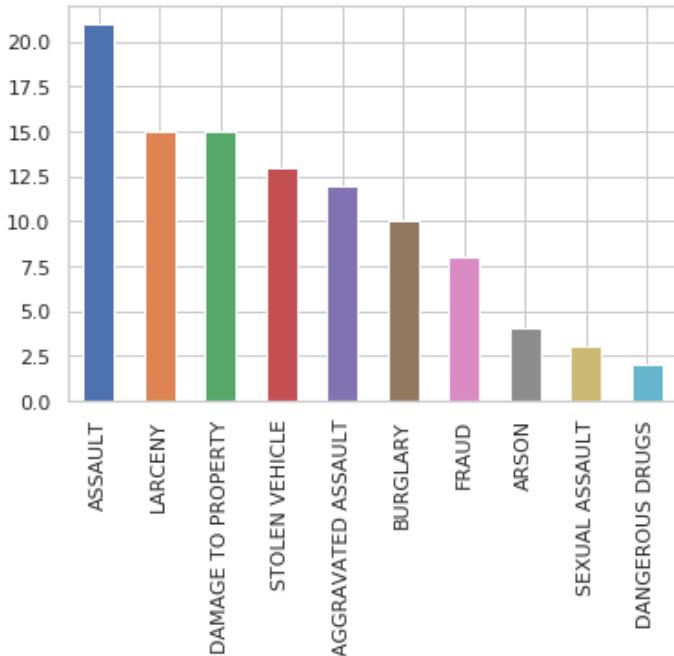
Crimes in West Virginia Park



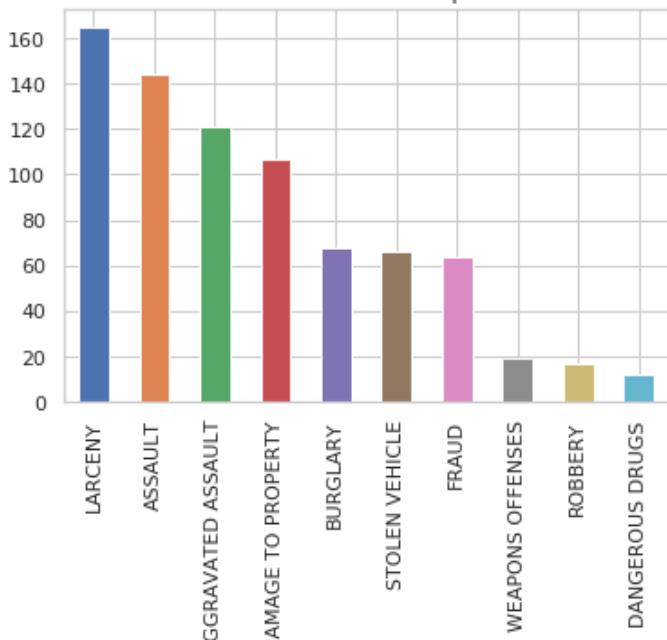
Crimes in Westwood Park



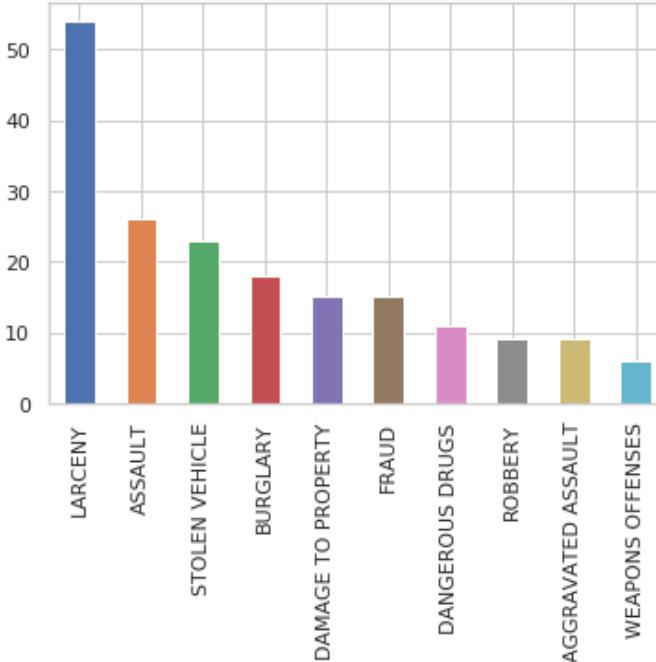
Crimes in Wildemere Park



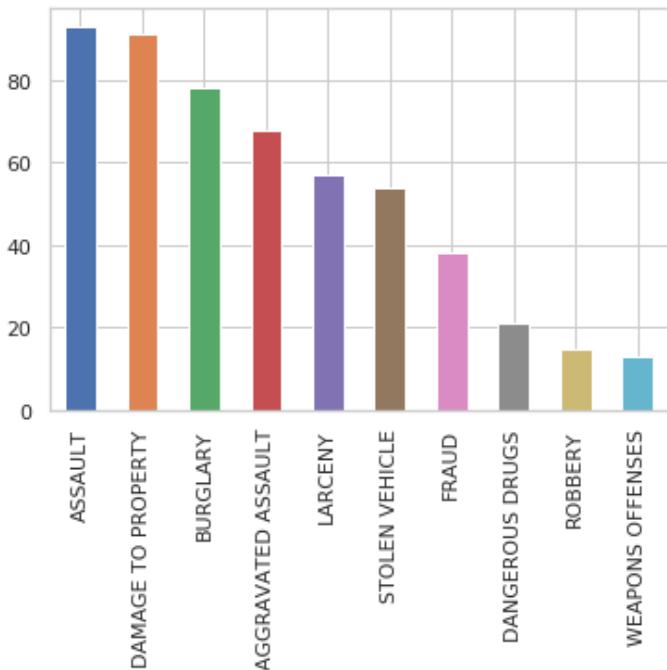
Crimes in Winship



Crimes in Woodbridge



Crimes in Yorkshire Woods



Analysis Summary

Assault and Larceny account for over 34% of total crime in Detroit. Of all crimes Aggravated Assaults accounted for 10% of total crime. While Warrendale (2273), Downtown (1945), and Midtown (1582) neighborhoods are the top 3 neighborhoods in total crime. Total crime appears to increase in the summer months from May to August. Most notably the most homicides occurred in August (32). Crimes by Hour of Day provided an interesting observation with the most crimes occur during 12-1am (5,744) then significantly decrease until 6am (1,333). Noon-1pm saw the 2nd highest of crimes reported (4,640). The 8th precinct had the most incidents reported with 10,846 a thousand more than the 9th precinct 9,769. The 8th precinct accounted for 56% more crimes than the lowest precinct, 4th with 4,772 crimes.



VISUALIZATION

Homicide Heatmap

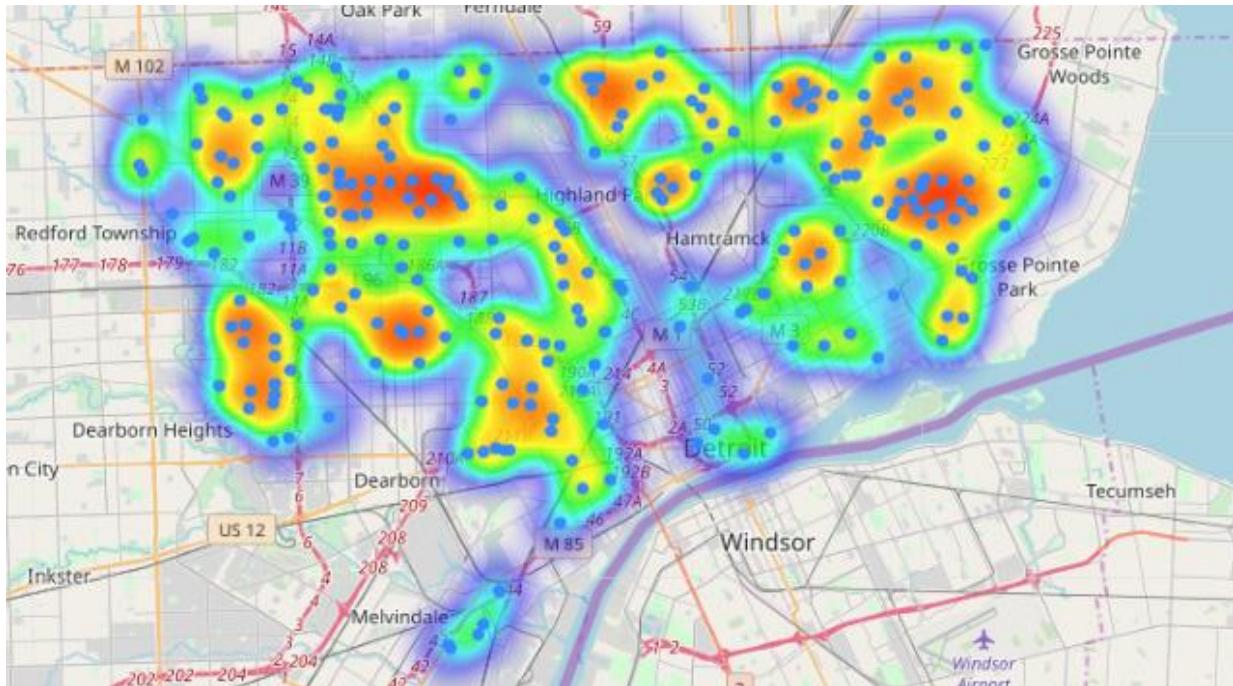


Figure 3. Homicide heatmap of 255 reported homicides from 2018.



Figure 4. City view homicide heatmap.



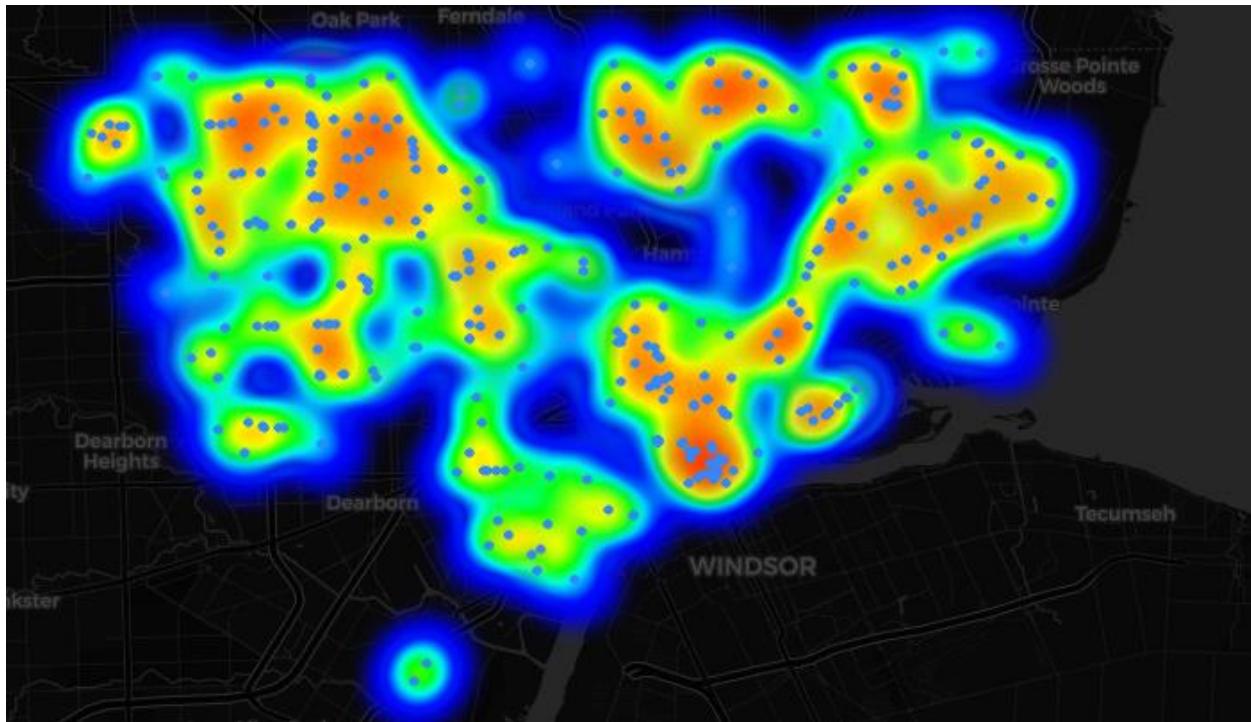
OUIL (Drunk Driving) Heatmap

Figure 5. OUIL (Drunk Driving) heatmap.

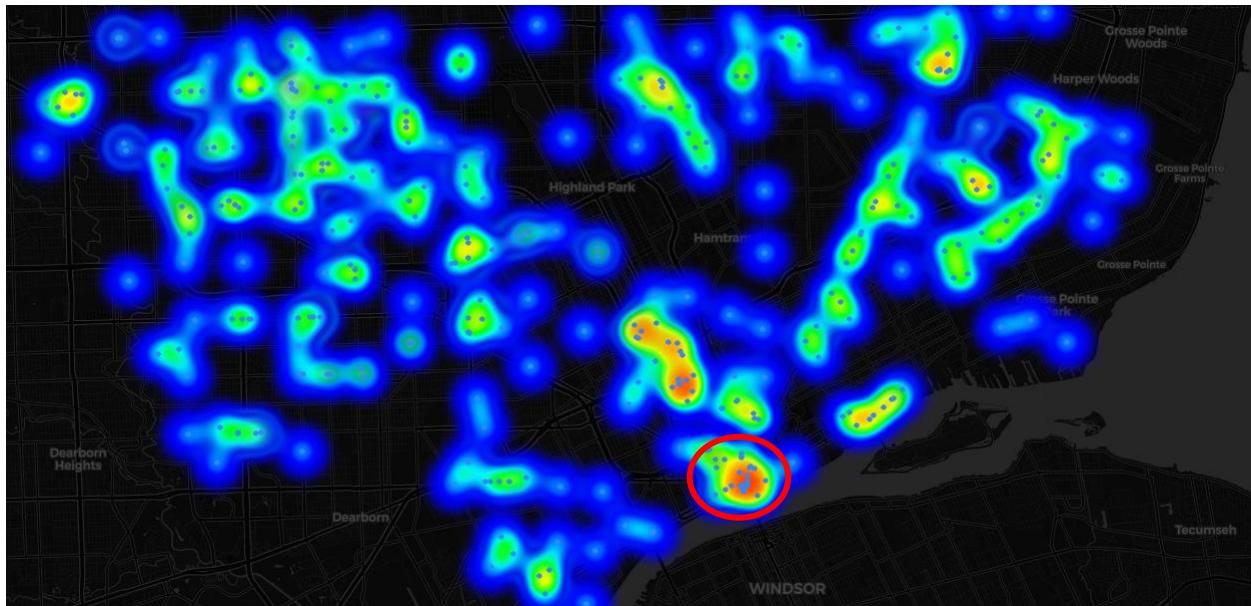


Figure 6. City view OUIL heatmap with midtown and downtown hotspots.





Figure 7. Street view OUIL Downtown hotspot.

Arson Heatmap

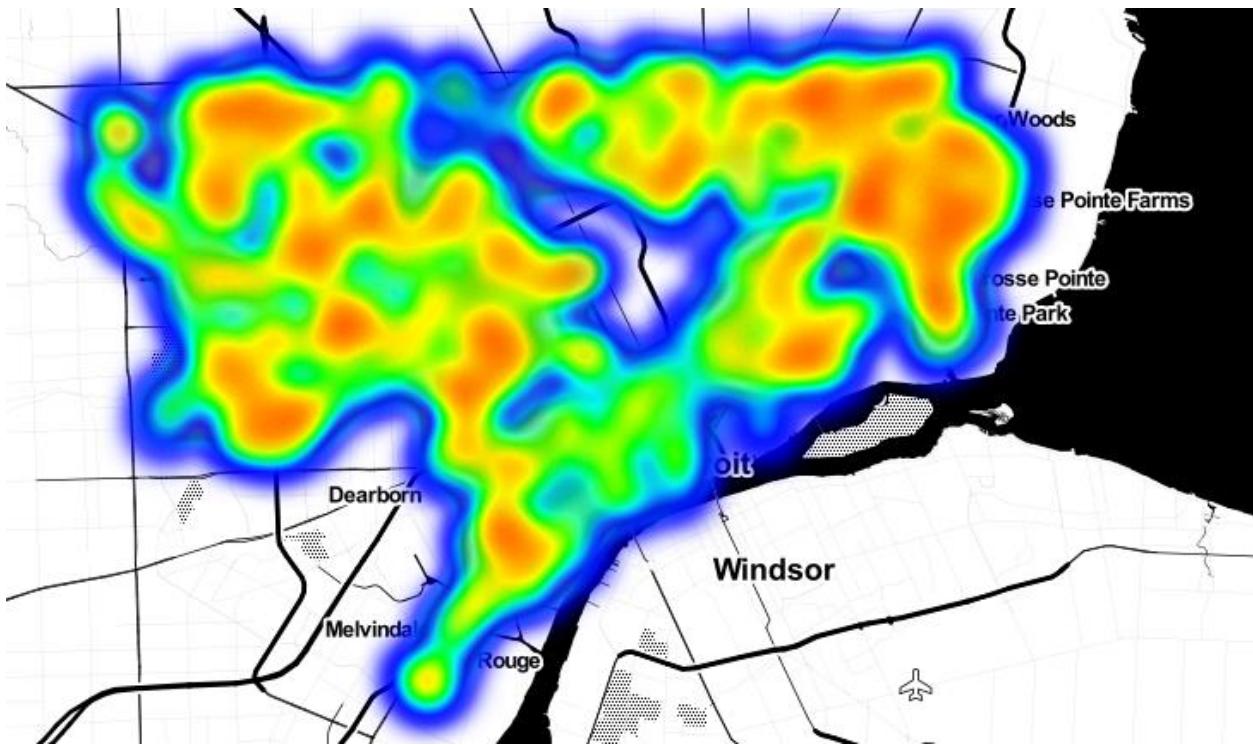


Figure 8. City view Arson heatmap.



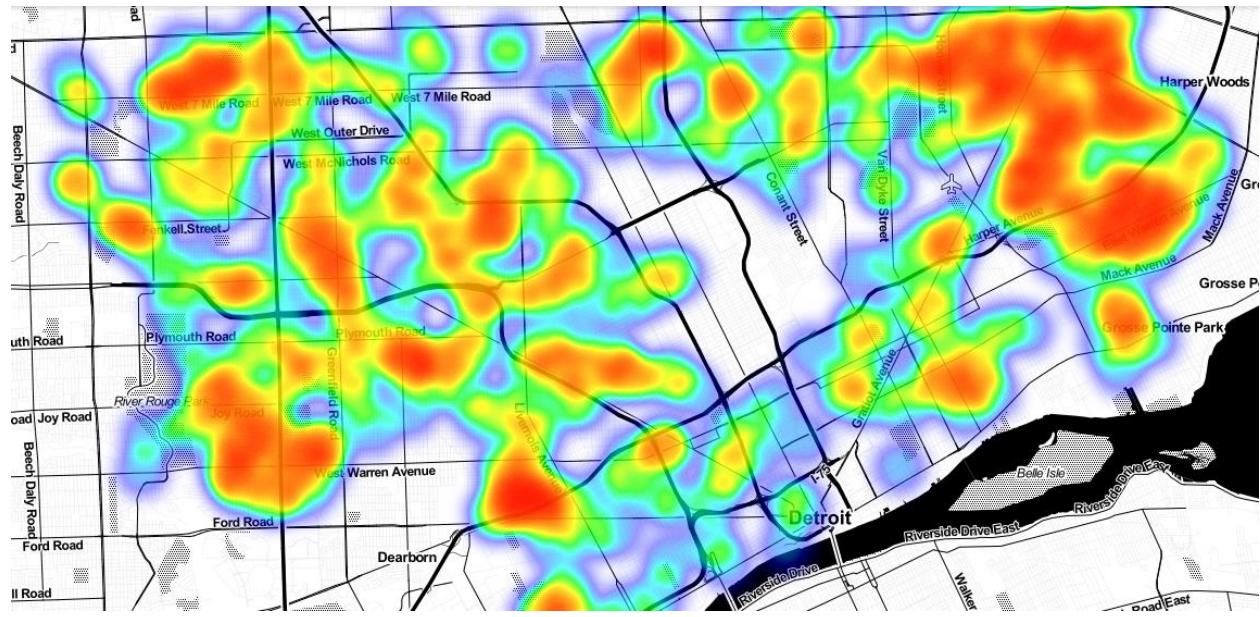


Figure 9. Street view heatmap of arsons.

Sex Offenses Heatmap

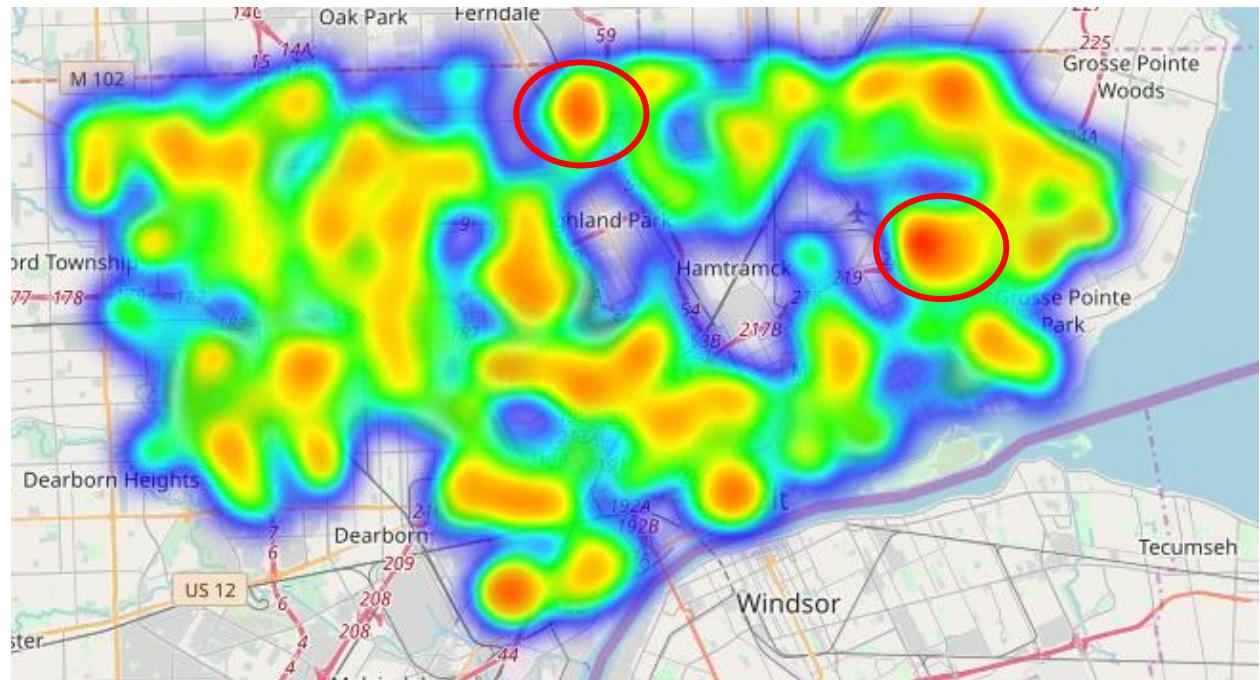


Figure 10. Sex Offense heatmap



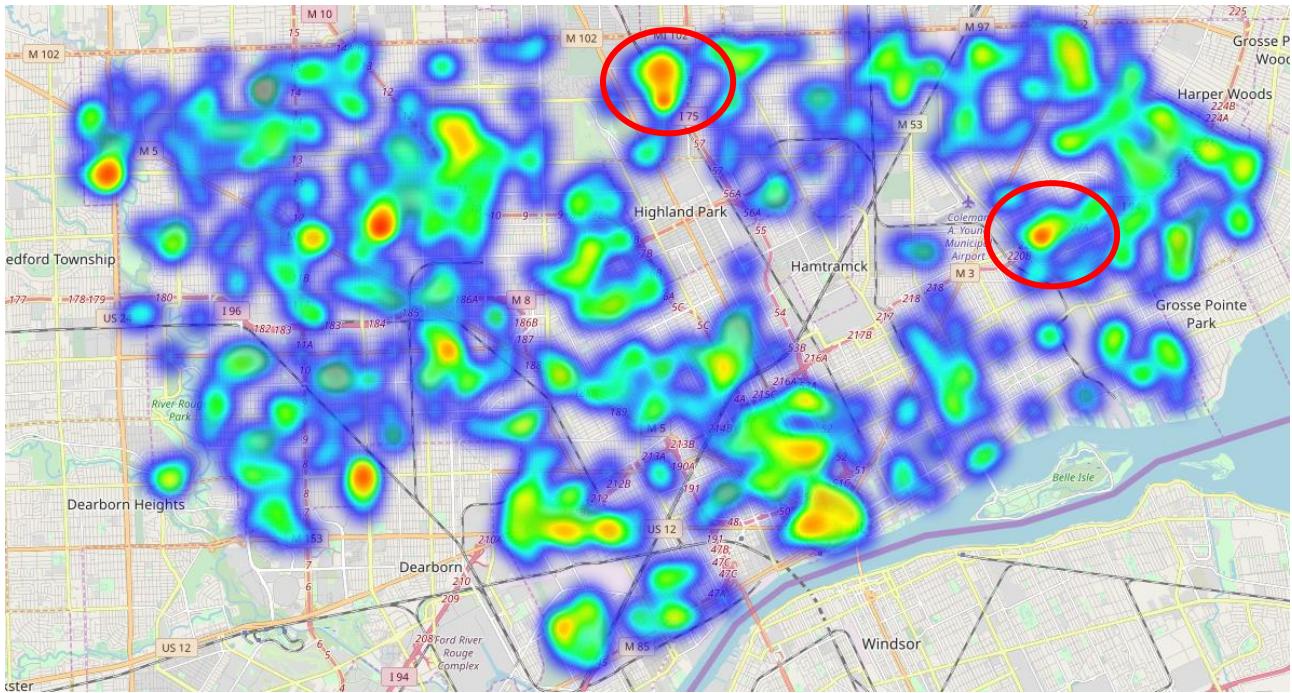


Figure 11. City view of sex offense heatmap with State Faire Grounds and City Airport hotspots.

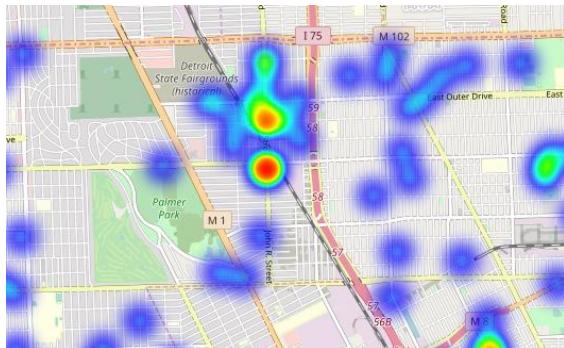


Figure 12. State Faire Grounds hotspot.

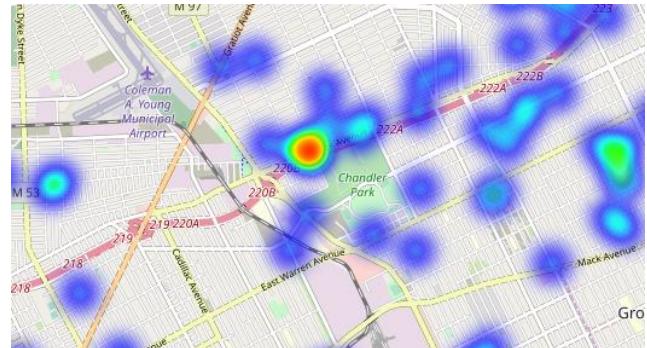


Figure 13. City Airport hotspot.



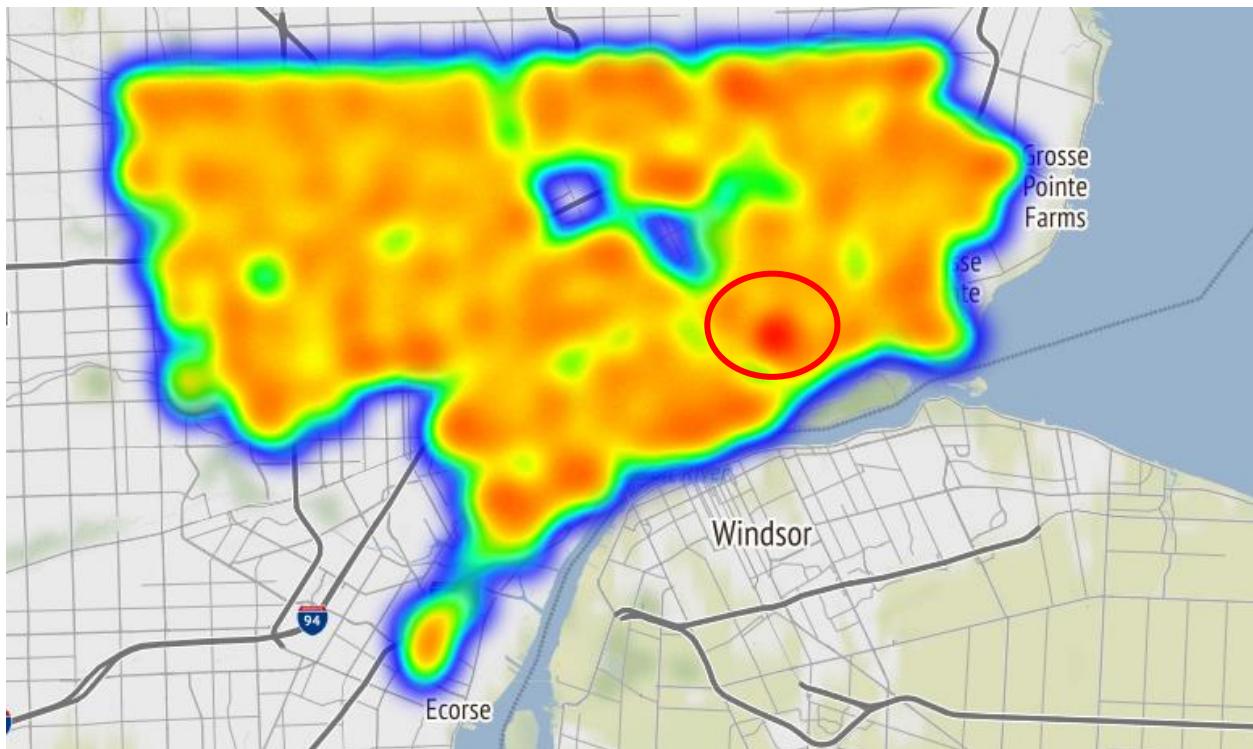
Runaway Heatmap

Figure 14. Runaway heatmap of Detroit.

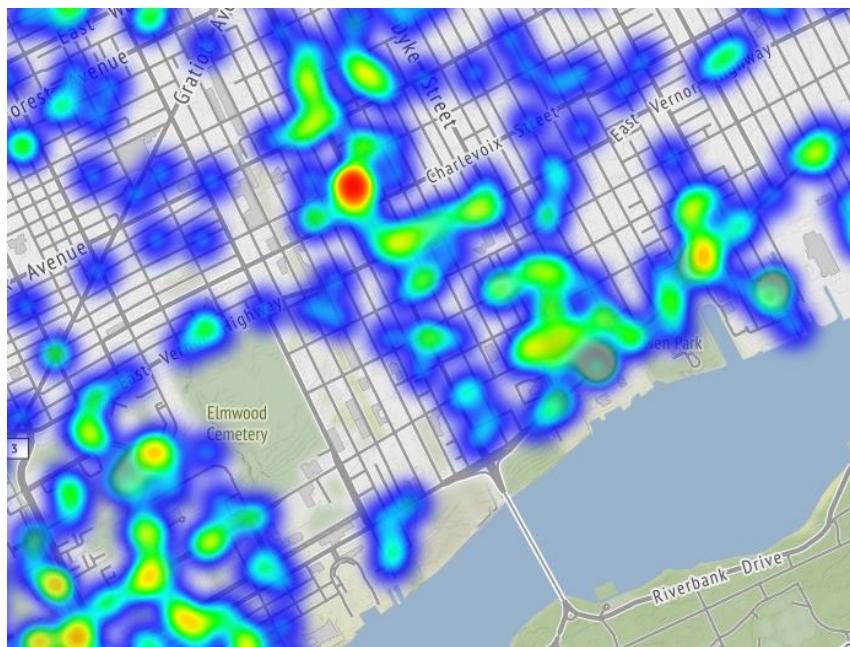


Figure 15. Charlevoix & East Grand - Runaway hotspot.



Visualization Summary

Heatmaps are a great way to visualize data with colors as intensity for high concentrations of crime. The more intense red is, the more crimes were reported at the location. The homicide heatmap identified 2 significant hotspots on the eastside and westside. OUILs or drunk driving has hotspots across the city with largest concentrations being in downtown and midtown. Sex offense hotspots were identified at the state faire grounds and city airport. Street view runaway heatmap provided hotspots at E. Grand and Charlevoix.

CONCLUSION



Detroit has a long history of violence and crime, until recently the city began experiencing a decline in crime. The data for the analysis in this report was provided from City of Detroit's Open Portal. Crimes by Hour of Day provided an interesting observation with the most crimes occur during 12-1 am than any other time of day. Homicide heatmap spotlighted 2 main hotspots on the east and west sides. Many of offense categories were distributed evenly across the city such as assaults and larceny.

With Detroit starting to see growth, investors from around the world, and booming real estate market the outlook for Detroit is promising.

APPENDIX

Crimes by Offense Description

ACCIDENT, HIT & RUN	672
AGGRAVATED / FELONIOUS ASSAULT	8865
ALCOHOL - MINOR IN POSSESSION	1
ANIMAL - CRUELTY	1
ARSON	734
ASSAULT AND BATTERY/SIMPLE ASSAULT	15199
BURGLARY - ENTRY WITHOUT FORCE (INTENT TO COMMIT)	869
BURGLARY - FORCED ENTRY	6455
CHILD NEGLECT	1
COCAINE - POSSESS	2
COMMERCIALIZED SEX - ASSISTING / PROMOTING PROSTITUTION	24
COMMERCIALIZED SEX - PROSTITUTION	851
CSC 1ST DEGREE - OBJECT	42
CSC 1ST DEGREE - ORAL / ANAL	203
CSC 1ST DEGREE - PENIS / VAGINA	375
CSC 2ND DEGREE - FORCIBLE CONTACT	309
CSC 3RD DEGREE - OBJECT	11
CSC 3RD DEGREE - ORAL / ANAL	65



CSC 3RD DEGREE - PENIS / VAGINA	143
CSC 4TH DEGREE - FORCIBLE CONTACT	243
DAMAGE TO PRIVATE PROPERTY	1
DAMAGE TO PROPERTY	8283
DISORDERLY CONDUCT - GENERAL	301
ENTRY WITHOUT PERMISSION (NO INTENT)	246
ESCAPE / FLIGHT	2
EXTORTION	46
FAMILY - ABUSE / NEGLECT NONVIOLENT	187
FAMILY - OTHER	75
FORGERY / COUNTERFEITING	243
FRAUD - CREDIT CARD/AUTOMATIC TELLER MACHINE	1420
FRAUD - FALSE PRETENSE / SWINDLE / CONFIDENCE GAME	1445
FRAUD - IMPersonATION	2080
FRAUD - NON SUFFICIENT FUNDS CHECKS	72
FRAUD - WELFARE	17
FRAUD BY WIRE	101
GAMBLING - BETTING / WAGERING	2
HARASSING COMMUNICATIONS	4
HEALTH AND SAFETY	8
HEROIN - POSSESS	1
HOMICIDE - JUSTIFIABLE	14
IMPERSONATING OF A POLICE OFFICER	3
INTIMIDATION	2
INTIMIDATION / STALKING	861
INVASION OF PRIVACY - OTHER	10
KIDNAPPING / ABDUCTION	292
LARCENy - FROM A COIN OPERATED MACHINE	9
LARCENy - OTHER	3253
LARCENy - PERSONAL PROPERTY FROM MOTOR VEHICLE	4169
LARCENy - POCKETPICKING	125
LARCENy - PURSE SNATCHING	131
LARCENy - THEFT FROM BUILDING	2996
LARCENy - THEFT OF MOTOR VEHICLE PARTS / ACCESSORIES	2363
LARCENy FROM GROUNDS	274
LARCENy OF GASOLINE - SELF SERVICE STATION	8
LIQUOR VIOLATIONS - OTHER	71
MARIJUANA - POSSESS	9
MISCELLANEOUS CRIMINAL OFFENSE	296
MOTOR VEHICLE AS STOLEN PROPERTY (RECOVERED ONLY)	373
MOTOR VEHICLE FRAUD	33
MOTOR VEHICLE THEFT	6122
MURDER / NON-NEGIGENT MANSLAUGHTER (VOLUNTARY)	300
NARCOTIC EQUIPMENT VIOLATIONS	88
NEGLIGENCE HOMICIDE - VEHICLE / BOAT / SNOWMOBILE / ORV	15
NEGLIGENCE HOMICIDE / MANSLAUGHTER (INVOLUNTARY)	1
OBSTRUCTING JUSTICE	1095
OBSTRUCTING POLICE	207
OPERATING UNDER THE INFLUENCE OF LIQUOR OR DRUGS	1



PARENTAL KIDNAPPING	28
PEEPING TOM	1
PERSONAL PROTECTION ORDER - VIOLATION	1
POSSESSION OF A STOLEN VEHICLE	1
POSSESSION OF BURGLARY TOOLS	8
PROBATION VIOLATION	3
PUBLIC PEACE - OTHER	3
RETAIL FRAUD - MISREPRESENTATION	11
RETAIL FRAUD - THEFT	1083
ROBBERY	2284
ROBBERY - ARMED	5
RUNAWAY	475
SEX OFFENSE - OTHER	124
SEXUAL PENETRATION NONFORCIBLE - BLOOD / AFFINITY	1
SEXUAL PENETRATION NONFORCIBLE - OTHER	1
SOLICITATION (ALL CRIMES EXCEPT PROSTITUTION)	5
STOLEN PROPERTY	129
THREATS / HARASSMENT BY USE OF TELEPHONE	3
TOBACCO - POSSESSION BY MINOR	1
TRESPASS	212
UNAUTHOIRZED USE OF A MOTOR VEHICLE (JOY RIDING)	1
VIOLATION OF CONTROLED SUBSTANCE ACT - (VCSA)	3078
WEAPONS - CARRYING A CONCEALED WEAPON (CCW)	1
WEAPONS - FIREARM IN AUTOMOBILE (CCW)	1
WEAPONS OFFENSE - CONCEALED	836
WEAPONS OFFENSE - OTHER	234

Crimes by Charge Description

ACCIDENT, HIT & RUN	714
AGGRAVATED / FELONIOUS ASSAULT	8143
ALCOHOL - MINOR IN POSSESSION	2
ANIMAL - CRUELTY	1
ARSON	728
ASSAULT AND BATTERY/SIMPLE ASSAULT	13705
BURGLARY - ENTRY WITHOUT FORCE (INTENT TO COMMIT)	890
BURGLARY - FORCED ENTRY	6531
CHILD NEGLECT	1
COCAINE - POSSESS	1
COMMERCIALIZED SEX - ASSISTING / PROMOTING PROSTITUTION	26
COMMERCIALIZED SEX - PROSTITUTION	850
CSC 1ST DEGREE - OBJECT	41
CSC 1ST DEGREE - ORAL / ANAL	197
CSC 1ST DEGREE - PENIS / VAGINA	367
CSC 2ND DEGREE - FORCIBLE CONTACT	295
CSC 3RD DEGREE - OBJECT	10
CSC 3RD DEGREE - ORAL / ANAL	61
CSC 3RD DEGREE - PENIS / VAGINA	143
CSC 4TH DEGREE - FORCIBLE CONTACT	235

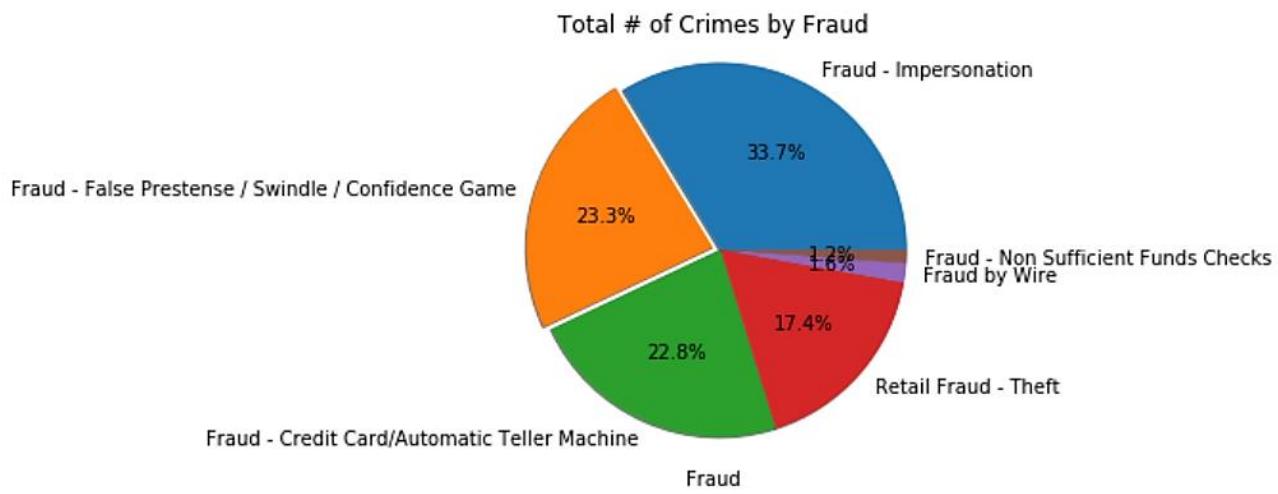


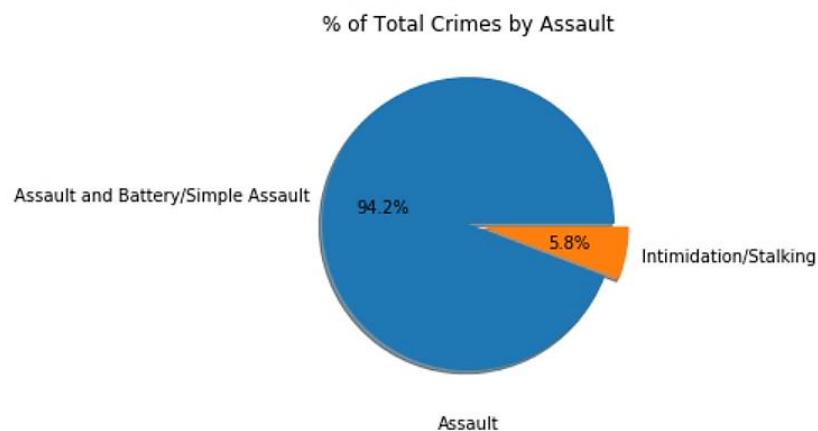
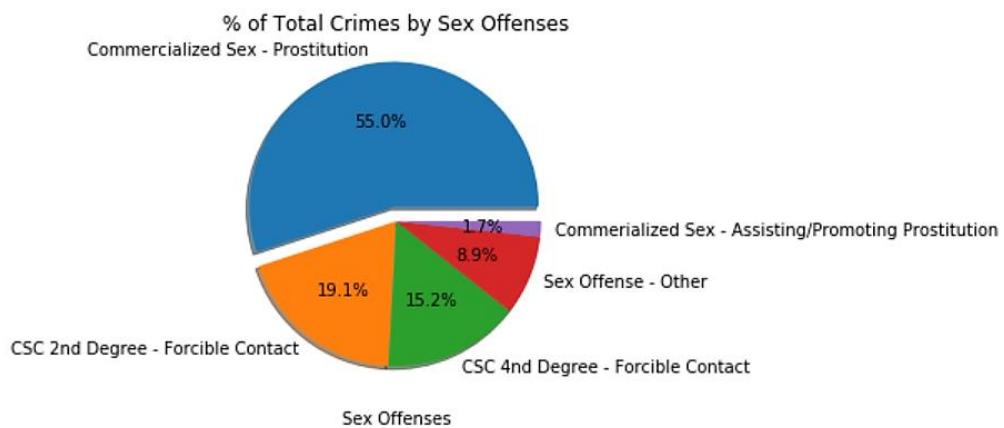
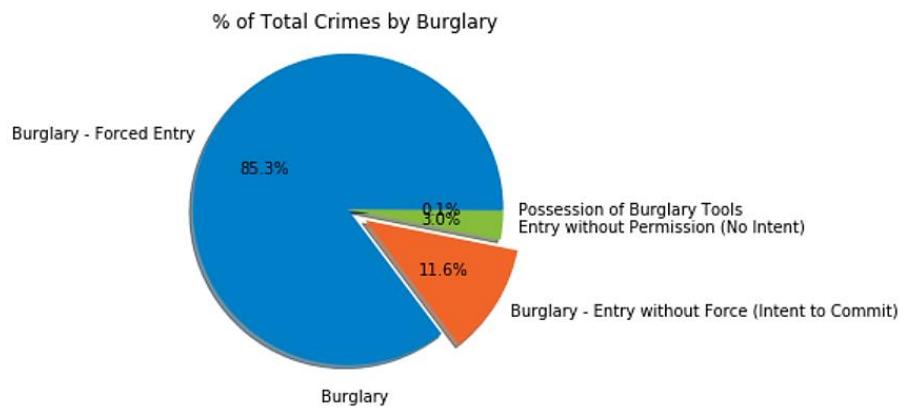
DAMAGE TO PRIVATE PROPERTY	1
DAMAGE TO PROPERTY	9823
DISORDERLY CONDUCT - DISTURBING THE PEACE	1
DISORDERLY CONDUCT - GENERAL	360
ENTRY WITHOUT PERMISSION (NO INTENT)	232
EXTORTION	44
FAMILY - ABUSE / NEGLECT NONVIOLENT	210
FAMILY - OTHER	77
FORGERY / COUNTERFEITING	234
FRAUD - CREDIT CARD/AUTOMATIC TELLER MACHINE	1445
FRAUD - FALSE PRETENSE / SWINDLE / CONFIDENCE GAME	1461
FRAUD - IMPersonATION	2094
FRAUD - NON SUFFICIENT FUNDS CHECKS	75
FRAUD - WELFARE	17
FRAUD BY WIRE	102
GAMBLING - BETTING / WAGERING	2
HARASSING COMMUNICATIONS	4
HEALTH AND SAFETY	8
HEROIN - POSSESS	1
HOMICIDE - JUSTIFIABLE	14
IMPERSONATING OF A POLICE OFFICER	2
INTIMIDATION	2
INTIMIDATION / STALKING	836
INVASION OF PRIVACY - OTHER	16
KIDNAPPING / ABDUCTION	187
LARCENY - FROM A COIN OPERATED MACHINE	7
LARCENY - OTHER	3400
LARCENY - PERSONAL PROPERTY FROM MOTOR VEHICLE	4123
LARCENY - POCKETPICKING	129
LARCENY - PURSE SNATCHING	141
LARCENY - THEFT FROM BUILDING	2975
LARCENY - THEFT OF MOTOR VEHICLE PARTS / ACCESSORIES	2362
LARCENY FROM GROUNDS	271
LARCENY OF GASOLINE - SELF SERVICE STATION	8
LIQUOR VIOLATIONS - OTHER	71
MARIJUANA -POSSESS	9
MISCELLANEOUS CRIMINAL OFFENSE	316
MOTOR VEHICLE AS STOLEN PROPERTY (RECOVERED ONLY)	350
MOTOR VEHICLE FRAUD	35
MOTOR VEHICLE THEFT	6268
MURDER / NON-NEGIGENT MANSLAUGHTER (VOLUNTARY)	239
NARCOTIC EQUIPMENT VIOLATIONS	112
NEGLIGENT HOMICIDE - VEHICLE / BOAT / SNOWMOBILE / ORV	15
NEGLIGENT HOMICIDE / MANSLAUGHTER (INVOLUNTARY)	1
OBSTRUCTING JUSTICE	1203
OBSTRUCTING POLICE	298
PARENTAL KIDNAPPING	24
PERSONAL PROTECTION ORDER - VIOLATION	1
POSSESSION OF A STOLEN VEHICLE	1

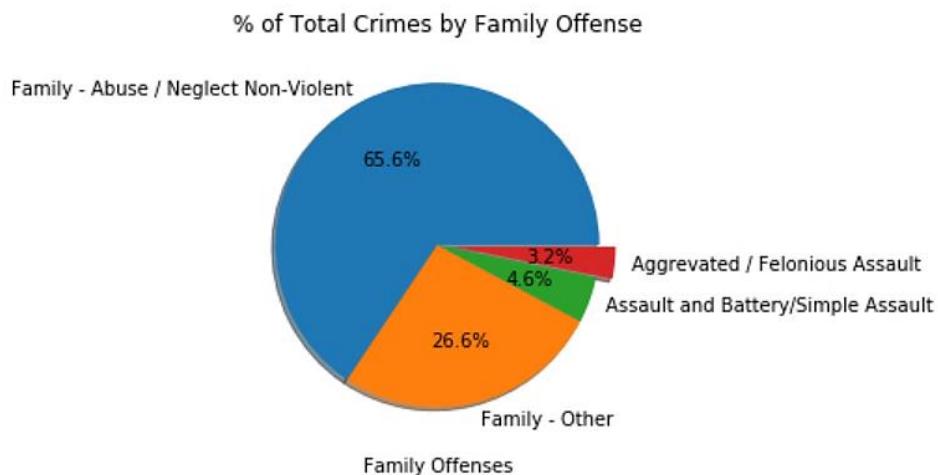


POSSESSION OF BURGLARY TOOLS	11
PROBATION VIOLATION	3
PUBLIC PEACE - OTHER	3
RESISTING A POLICE OFFICER	1
RETAIL FRAUD - MISREPRESENTATION	10
RETAIL FRAUD - THEFT	1110
ROBBERY	2226
ROBBERY - ARMED	5
RUNAWAY	478
SEX OFFENSE - OTHER	137
SEXUAL PENETRATION NONFORCIBLE - BLOOD / AFFINITY	1
SEXUAL PENETRATION NONFORCIBLE - OTHER	1
SOLICITATION (ALL CRIMES EXCEPT PROSTITUTION)	5
STALKING - MISDEMEANOR	1
STOLEN PROPERTY	122
THREATS / HARASSMENT BY USE OF TELEPHONE	3
TOBACCO - POSSESSION BY MINOR	1
TRESPASS	242
UNAUTHOIRZED USE OF A MOTOR VEHICLE (JOY RIDING)	1
VIOLATION OF CONTROLED SUBSTANCE ACT - (VCSA)	2861
WEAPONS - CARRYING A CONCEALED WEAPON (CCW)	1
WEAPONS - FIREARM IN AUTOMOBILE (CCW)	1
WEAPONS OFFENSE - CONCEALED	1137
WEAPONS OFFENSE - EXPLOSSIVES	1
WEAPONS OFFENSE - OTHER	344

Pie Charts of Individual Offense Category's







Note on Anonymized Addresses

DPD works with the Department of Innovation and Technology (DoIT) to de-identify location information for both 911 calls and reported crimes to protect victim and caller information. Each record has two sets of location information - address and XY coordinates. The address field represents the location of the incident, and the XY coordinates are populated based on the geo-verified location of that address.

The anonymization process systematically takes the point of the original XY coordinates and places them randomly within 180 feet along the street from the original point. If the point appears on either side of the street, it does so randomly, and it is not an indication of where the original event occurred. The XY coordinate fields provided in this dataset are the new, anonymized location. To mask the address field where there is a street number provided by the caller, the last two digits of the address field are removed and replaced with "00."



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- [1] City of Detroit. (May 6, 2019). *DPD: All Crime Incidents, December 6, 2016 - Present*. Detroit: Detroit Open Portal. <https://data.detroitmi.gov/Public-Safety/DPD-All-Crime-Incidents-December-6-2016-Present/6gdg-y3kf>
- [2] Motor City 911. (2019). *Detroit Police Precincts*. Detroit. <http://www.motorcity911.com/precincts/>
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