

Study on Crime versus Population

You Want To Live Where?

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OUTLINE

- Data
- Definition + Algorithm
- Prediction
- Correlations
- Results
- Conclusion

DATA

- Data set used population values from 1995
 - US states: Violent and Non-violent Recordings
- Missing Values
 - Took values for violent or non-violent data and averaged in order to fill in missing Totals

Burglaries in 1995	Larcenies in 1995	Auto Theft in 1995	Arsons in 1995	TOTAL NON- Violent Crimes
40	159	26	?	75

= $\text{sum}(\underline{\quad}, \underline{\quad}, \underline{\quad}) / 3$ of values given

DEFINITION + ALGORITHM

- **For Considered Violent Crimes:**

- considered violent crimes ÷ Population of Community
- [# of murders + rapes + robberies + assaults] ÷
Population of Community

- **For Considered Non-Violent Crimes:**

- considered non-violent crimes ÷ Population of Community
- [# of burglaries + larcenies + auto thefts + arsons] ÷
Population of Community

PREDICTION

- Larger the Population;
the More Crime for
the City



RESULTS – Top 10 Populous Cities

TOP 10 LARGEST POPULATIONS	States	population of community	murders in 1995	rapes in 1995	robberies in 1995	assaults in 1995	Burglaries in 1995	Larcenies in 1995	auto Theft in 1995	arsons in 1995	TOTAL Violent Crimes	TOTAL NON-Violent Crimes	Total Violent + Total Non-violent / population	Total Violent / population	Total NON-Violent / population
New York City	NY	7322564	1946	2818	86001	62778	99207	235132	112464	4443	2097.71	6164.95	0.11%	0.03%	0.08%
Los Angeles City	CA	3485398	1076	1773	38415	42437	50232	119092	59764	5119	2414.77	6756.86	0.26%	0.07%	0.19%
Chicago City	IL	2783726	845	?	35189	39753	45670	121314	40438	1676	25262.33	7604.09	1.18%	0.91%	0.27%
Houston City	TX	1630553	446	1109	?	?	27022	61569	27519	1549	777.5	6784.1	0.46%	0.05%	0.42%
Philadelphia City	PA	1585577	439	785	11531	6821	15117	39181	23785	2282	1279.6	5253.14	0.41%	0.08%	0.33%
San Diego City	CA	1110549	133	396	4651	8283	14583	37862	19319	245	1162.84	6219.62	0.66%	0.10%	0.56%
Detroit City	MI	1027974	579	?	13591	12999	23092	42818	28061	1219	9056.333	9544.8	1.81%	0.88%	0.93%
Dallas City	TX	1006877	317	1000	7420	9439	20975	54183	17465	1324	1744.19	9015.27	1.07%	0.17%	0.90%
Phoenix City	AZ	983403	158	444	3437	7872	20617	48382	15566	309	1097.07	7817.4	0.91%	0.11%	0.79%
San Antonio City	TX	935933	220	553	2979	2973	17866	61284	11796	958	672.57	9191.32	1.05%	0.07%	0.98%

RESULTS – Bottom 10 Populous Cities

BOTTOM 10 POPULATIONS	States	population of community	murders in 1995	rapes in 1995	robberies in 1995	assaults in 1995	Burglaries in 1995	Larcenies in 1995	auto Theft in 1995	arsons in 1995	TOTAL Violent Crimes	TOTAL NON-Violent Crimes	Total Violent + Total NonViolent / population	Total Violent / population	Total NON-Violent / population
Hermiston City	OR	10040	0	4	3	13	101	526	40	1	177.73	5936.19	60.90%	1.77%	59.13%
Vermillion City	SD	10034	0	2	1	5	52	218	7	0	76.24	2639.86	27.07%	0.76%	26.31%
Fulton City	MO	10033	0	5	6	31	80	336	11	1	397.28	4048.43	44.31%	3.96%	40.35%
Galena Park City	TX	10033	0	2	7	43	91	154	32	1	499.33	2669.48	31.58%	4.98%	26.61%
Jasper City	IN	10030	0	0	1	26	35	191	3	1	246.55	2100.26	23.40%	2.46%	20.94%
Covington City	GA	10026	1	14	43	97	385	944	121	1	1334.6	12493.54	137.92%	13.31%	124.61%
Live Oak City	TX	10023	0	2	4	23	56	347	30	0	259.79	3878.89	41.29%	2.59%	38.70%
Brownsville City	TN	10019	0	11	16	132	176	338	51	1	1522.7	5420.42	69.30%	15.20%	54.10%
Arkadelphia City	AR	10014	1	0	4	0	24	271	14	0	47.11	2911.52	29.54%	0.47%	29.07%
Lake City City	FL	10005	1	5	33	177	275	993	56	3	2119.93	13023.85	151.36%	21.19%	130.17%

RESULTS – Top 10 Total Crime Percentage Cities

TOP 10 LARGEST (Total Non-V + V percentages)	States	population of community	murders in 1995	rapes in 1995	robberies in 1995	assaults in 1995	Burglaries in 1995	Larcenies in 1995	auto Theft in 1995	arsons in 1995	TOTAL Violent Crimes	TOTAL NON-Violent Crimes	Total Violent + Total NonViolent / population	Total Violent / population	Total NON-Violent / population
Tukwila City	WA	11874	3	41	70	95	301	2481	288	14	1634.34	24116.36	216.87%	13.76%	203.10%
East Longmeadow Town	MA	13367	0	3	6	29	93	3557	70	3	276.81	27119.76	204.96%	2.07%	202.89%
Palatka City	FL	10201	1	26	72	196	494	1238	65	10	2650.26	16233.94	185.12%	25.98%	159.14%
Lake City City	FL	10005	1	5	33	177	275	993	56	3	2119.93	13023.85	151.36%	21.19%	130.17%
South Salt Lake City	UT	10129	0	7	22	40	239	1253	120	7	602.73	14142.21	145.57%	5.95%	139.62%
Dania City	FL	13024	4	20	140	211	537	1416	293	7	2649.8	15920.01	142.58%	20.35%	122.24%
Covington City	GA	10026	1	14	43	97	385	944	121	1	1334.6	12493.54	137.92%	13.31%	124.61%
Douglas City	GA	10464	3	3	19	177	432	986	62	4	1724.14	12666.44	137.52%	16.48%	121.05%
Commerce City	CA	12135	1	8	136	176	252	839	617	6	2584.96	13802.54	135.04%	21.30%	113.74%
Richmond Heights City	MO	10448	0	2	37	40	71	1141	89	1	749.31	12349.43	125.37%	7.17%	118.20%

RESULTS – Top 10 Violent Crime Percentage Cities

TOP 10 VIOLENT PERCENTAGES	States	population of community	murders in 1995	rapes 1995	in robberies in 1995	assaults in 1995	Burglaries in 1995	Larcenies in 1995	in auto Theft in 1995	arsons in 1995	TOTAL Violent Crimes	TOTAL NON-Violent Crimes	Total Violent + Total NonViolent / population	Total Violent / population	Total NON-Violent / population
Palatka City	FL	10201	1	26	72	196	494	1238	65	10	2650.26	16233.94	185.12%	25.98%	159.14%
Grenada City	MS	10864	3	15	41	211	195	665	46	1	2333.62	7839.24	93.64%	21.48%	72.16%
Commerce City	CA	12135	1	8	136	176	252	839	617	6	2584.96	13802.54	135.04%	21.30%	113.74%
Lake City City	FL	10005	1	5	33	177	275	993	56	3	2119.93	13023.85	151.36%	21.19%	130.17%
Vernon City	TX	12001	2	17	12	262	262	294	10	9	2451.06	4810.11	60.50%	20.42%	40.08%
Dania City	FL	13024	4	20	140	211	537	1416	293	7	2649.8	15920.01	142.58%	20.35%	122.24%
West Columbia City	SC	10588	1	10	62	156	271	1003	69	3	1889.44	11105.61	122.73%	17.85%	104.89%
South Miami City	FL	10404	0	3	96	95	344	683	179	2	1759	10952.94	122.18%	16.91%	105.28%
Douglas City	GA	10464	3	3	19	177	432	986	62	4	1724.14	12666.44	137.52%	16.48%	121.05%
Fairfield City	AL	12200	3	11	79	149	199	716	191	?	1938.17	368.6667	18.91%	15.89%	3.02%

RESULTS – Top 10 Non-Violent Crime Percentage Cities

TOP 10 NON-VIOLENT PERCENTS	States	population of community	Murders in 1995	in rapes 1995	in robberies in 1995	assaults in 1995	<i>Burglaries in 1995</i>	<i>Larcenies in 1995</i>	<i>auto Theft in 1995</i>	<i>arsons 1995</i>	TOTAL Violent Crimes	TOTAL NON-Violent Crimes	Total Violent + Total NonViolent / population	Total Violent / population	Total NON-Violent / population
Tukwila City	WA	11874	3	41	70	95	301	2481	288	14	1634.34	24116.36	216.87%	13.76%	203.10%
East Longmeadow Town	MA	13367	0	3	6	29	93	3557	70	3	276.81	27119.76	204.96%	2.07%	202.89%
Palatka City	FL	10201	1	26	72	196	494	1238	65	10	2650.26	16233.94	185.12%	25.98%	159.14%
South Salt Lake City	UT	10129	0	7	22	40	239	1253	120	7	602.73	14142.21	145.57%	5.95%	139.62%
Lake City City	FL	10005	1	5	33	177	275	993	56	3	2119.93	13023.85	151.36%	21.19%	130.17%
Covington City	GA	10026	1	14	43	97	385	944	121	1	1334.6	12493.54	137.92%	13.31%	124.61%
Dania City	FL	13024	4	20	140	211	537	1416	293	7	2649.8	15920.01	142.58%	20.35%	122.24%
Douglas City	GA	10464	3	3	19	177	432	986	62	4	1724.14	12666.44	137.52%	16.48%	121.05%
Richmond Heights City	MO	10448	0	2	37	40	71	1141	89	1	749.31	12349.43	125.37%	7.17%	118.20%
Commerce City	CA	12135	1	8	136	176	252	839	617	6	2584.96	13802.54	135.04%	21.30%	113.74%

WEBSTER GROVES, MO

population	murders	rapes	robberies	assaults	TOTAL Violent Crimes
22987	1	0	11	17	124.69
<i>Burglaries</i>	<i>Larcenies</i>	<i>Auto Theft</i>	<i>Arsons</i>	<i>TOTAL NON-Violent Crimes</i>	
71	316	34	6	1835.93	

**Webster Groves
Stands:
1696 / 2216
total cities**

Total Violent + Total Non-Violent / population	Total Violent / population	Total NON-Violent / population
8.53%	0.54%	7.99%

CORRELATIONS



- **Has unclear Correlation –**
 - not specific to location
- Larger Population; Smaller Crime Percentage
- Interesting: Least Populous City =
 - 5th on Top 10 Non-Violent Percentages
 - 4th on Top 10 Violent Percentages

CORRELATION – From Results

TOP 10 LARGEST POPULATIONS

New York City
Los Angeles City
Chicago City
Houston City
Philadelphia City
San Diego City
Detroit City
Dallas City
Phoenix City
San Antonio City

10 SMALLEST (Total Non-Violent + Violent Percentages)

Hartselle City
San Jose City
Vestavia Hills City
Minneapolis City
Dumas City
Houston City
Philadelphia City
Goshen Town
Los Angeles City
New York City



CONCLUSION

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Questions?



Thank you!

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