Communities and Crime Unnormalized Data Set

Download: Data Folder, Data Set Description

Abstract: Communities in the US. Data combines socio-economic data from the '90 Census, law enforcement data from the 1990 Law Enforcement Management and Admin Stats survey, and crime data from the 1995 FBI UCR

Data Set Characteristics:	Multivariate	Number of Instances:	2215	Area:	Social
Attribute Characteristics:	Real	Number of Attributes:	147	Date Donated	2011-03-02
Associated Tasks:	Regression	Missing Values?	Yes	Number of Web Hits:	111108

Source:

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- -- culled from 1990 US Census, 1995 US FBI Uniform Crime Report, 1990 US Law Enforcement Management and Administrative Statistics Survey, available from ICPSR at U of Michigan.
- -- Donor: Michael Redmond (redmond 'at' lasalle.edu); Computer Science; La Salle University; Philadelphia, PA, 19141, USA

Data Set Information:

The source datasets needed to be combined via programming. Many variables are included so that algorithms that select or learn weights for attributes could be tested. However, clearly unrelated attributes were not included; attributes were picked if there was any plausible connection to crime (N=125), plus the crime variables which are potential dependent variables. The variables included in the dataset involve the community, such as the percent of the population considered urban, and the median family income, and involving law enforcement, such as per capita number of police officers, and percent of officers assigned to drug units. The crime attributes (N=18) that could be predicted are the 8 crimes considered 'Index Crimes' by the FBI)(Murders, Rape, Robbery,), per capita (actually per 100,000 population) versions of each, and Per Capita Violent Crimes and Per Capita Nonviolent Crimes).

A limitation was that the LEMAS survey was of the police departments with at least 100 officers, plus a random sample of smaller departments. For our purposes, communities not found in both census and crime datasets were omitted. Many communities are missing LEMAS data.

The per capita crimes variables were calculated using population values included in the 1995 FBI data (which differ from the 1990 Census values).

The per capita violent crimes variable was calculated using population and the sum of crime variables considered violent crimes in the United States: murder, rape, robbery, and assault. There was apparently some controversy in some states concerning the counting of rapes. These resulted in missing values for rape, which resulted in missing values for per capita violent crime. Many of these omitted communities were from the midwestern USA (Minnesota, Illinois, and Michigan have many of these).

The per capita nonviolent crime variable was calculated using the sum of crime variables considered non-violent crimes in the United States: burglaries, larcenies, auto thefts and arsons. (There are many other types of crimes, these only include FBI 'Index Crimes')

Some further pre-processing of the dataset must be done. Choose the desirable dependent variable from among the 18 possible. It would not be interesting or appropriate to predict total crime (e.g. violent crime) while including subtotals (e.g. murders) as independent variables. There are also identifying variables (community name, county code, community code) that are not predictive, and would get in the way of some algorithms. Weka's Unsupervised Attribute Remove Filter can be used to remove unwanted attributes.

The FBI notes that use of this data to evaluate communities is over-simplistic, as many relevant factors are not included. For one example, communities with large numbers of visitors will have higher per capita crime (measured by residents) than communities with fewer visitors, other things being equal.

Attribute Information:

(125 predictive, 4 non-predictive, 18 potential goal)

- -- communityname: Community name not predictive for information only (string)
- -- state: US state (by 2 letter postal abbreviation)(nominal)
- -- countyCode: numeric code for county not predictive, and many missing values (numeric)
- -- communityCode: numeric code for community not predictive and many missing values (numeric)
- -- fold: fold number for non-random 10 fold cross validation, potentially useful for debugging, paired tests not predictive (numeric integer)

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-- population: population for community: (numeric - expected to be integer)
-- householdsize: mean people per household (numeric - decimal)
-- racepctblack: percentage of population that is african american (numeric - decimal)
-- racePctWhite: percentage of population that is caucasian (numeric - decimal)
-- racePctAsian: percentage of population that is of asian heritage (numeric - decimal)
-- racePctHisp: percentage of population that is of hispanic heritage (numeric - decimal)
-- agePct12t21: percentage of population that is 12-21 in age (numeric - decimal)
-- agePct12t29: percentage of population that is 12-29 in age (numeric - decimal)
-- agePct16t24: percentage of population that is 16-24 in age (numeric - decimal)
-- agePct65up: percentage of population that is 65 and over in age (numeric - decimal)
-- numbUrban: number of people living in areas classified as urban (numeric - expected to be integer)
-- pctUrban: percentage of people living in areas classified as urban (numeric - decimal)
-- medIncome: median household income (numeric - may be integer)
-- pctWWage: percentage of households with wage or salary income in 1989 (numeric - decimal)
-- pctWFarmSelf: percentage of households with farm or self employment income in 1989 (numeric - decimal)
-- pctWInvInc: percentage of households with investment / rent income in 1989 (numeric - decimal)
-- pctWSocSec: percentage of households with social security income in 1989 (numeric - decimal)
-- pctWPubAsst: percentage of households with public assistance income in 1989 (numeric - decimal)
-- pctWRetire: percentage of households with retirement income in 1989 (numeric - decimal)
-- medFamInc: median family income (differs from household income for non-family households) (numeric - may be integer)
-- perCapInc: per capita income (numeric - decimal)
-- whitePerCap: per capita income for caucasians (numeric - decimal)
-- blackPerCap: per capita income for african americans (numeric - decimal)
-- indianPerCap: per capita income for native americans (numeric - decimal)
-- AsianPerCap: per capita income for people with asian heritage (numeric - decimal)
-- OtherPerCap: per capita income for people with 'other' heritage (numeric - decimal)
-- HispPerCap: per capita income for people with hispanic heritage (numeric - decimal)
-- NumUnderPov: number of people under the poverty level (numeric - expected to be integer)
-- PctPopUnderPov: percentage of people under the poverty level (numeric - decimal)
-- PctLess9thGrade: percentage of people 25 and over with less than a 9th grade education (numeric - decimal)
-- PctNotHSGrad: percentage of people 25 and over that are not high school graduates (numeric - decimal)
-- PctBSorMore: percentage of people 25 and over with a bachelors degree or higher education (numeric - decimal)
-- PctUnemployed: percentage of people 16 and over, in the labor force, and unemployed (numeric - decimal)
-- PctEmploy: percentage of people 16 and over who are employed (numeric - decimal)
-- PctEmplManu: percentage of people 16 and over who are employed in manufacturing (numeric - decimal)
-- PctEmplProfServ: percentage of people 16 and over who are employed in professional services (numeric - decimal)
-- PctOccupManu: percentage of people 16 and over who are employed in manufacturing (numeric - decimal) #### No longer sure of difference from PctEmplManu - may
include unemployed manufacturing workers ####
-- PctOccupMgmtProf: percentage of people 16 and over who are employed in management or professional occupations (numeric - decimal)
-- MalePctDivorce: percentage of males who are divorced (numeric - decimal)
-- MalePctNevMarr: percentage of males who have never married (numeric - decimal)
-- FemalePctDiv: percentage of females who are divorced (numeric - decimal)
-- TotalPctDiv: percentage of population who are divorced (numeric - decimal)
-- PersPerFam: mean number of people per family (numeric - decimal)
-- PctFam2Par: percentage of families (with kids) that are headed by two parents (numeric - decimal)
-- PctKids2Par: percentage of kids in family housing with two parents (numeric - decimal)
-- PctYoungKids2Par: percent of kids 4 and under in two parent households (numeric - decimal)
-- PctTeen2Par: percent of kids age 12-17 in two parent households (numeric - decimal)
-- PctWorkMomYoungKids: percentage of moms of kids 6 and under in labor force (numeric - decimal)
-- PctWorkMom: percentage of moms of kids under 18 in labor force (numeric - decimal)
-- NumKidsBornNeverMar: number of kids born to never married (numeric - expected to be integer)
-- PctKidsBornNeverMar: percentage of kids born to never married (numeric - decimal)
-- NumImmig: total number of people known to be foreign born (numeric - expected to be integer)
-- PctImmigRecent: percentage of _immigrants_ who immigated within last 3 years (numeric - decimal)
-- PctImmigRec5: percentage of _immigrants_ who immigated within last 5 years (numeric - decimal)
-- PctImmigRec8: percentage of _immigrants_ who immigated within last 8 years (numeric - decimal)
-- PctImmigRec10: percentage of immigrants who immigated within last 10 years (numeric - decimal)
-- PctRecentImmig: percent of population who have immigrated within the last 3 years (numeric - decimal)
-- PctRecImmig5: percent of _population_ who have immigrated within the last 5 years (numeric - decimal)
-- PctRecImmig8: percent of _population_ who have immigrated within the last 8 years (numeric - decimal)
-- PctRecImmig10: percent of population who have immigrated within the last 10 years (numeric - decimal)
-- PctSpeakEnglOnly: percent of people who speak only English (numeric - decimal)
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-- PctNotSpeakEnglWell: percent of people who do not speak English well (numeric - decimal)
-- PctLargHouseFam: percent of family households that are large (6 or more) (numeric - decimal)

-- PersPerOwnOccHous: mean persons per owner occupied household (numeric - decimal)

-- PctPersOwnOccup: percent of people in owner occupied households (numeric - decimal)

-- PctHousLess3BR: percent of housing units with less than 3 bedrooms (numeric - decimal)

-- PctWOFullPlumb: percent of housing without complete plumbing facilities (numeric - decimal)

-- PersPerOccupHous: mean persons per household (numeric - decimal)

-- MedNumBR: median number of bedrooms (numeric - decimal)

-- PctHousOccup: percent of housing occupied (numeric - decimal)

-- RentLowQ: rental housing - lower quartile rent (numeric - decimal)

-- RentHighQ: rental housing - upper quartile rent (numeric - decimal)

-- PersPerRentOccHous: mean persons per rental household (numeric - decimal)

-- Hous Vacant: number of vacant households (numeric - expected to be integer)

-- PctHousOwnOcc: percent of households owner occupied (numeric - decimal)

-- MedYrHousBuilt: median year housing units built (numeric - may be integer)

-- OwnOccMedVal: owner occupied housing - median value (numeric - decimal)

-- PctVacantBoarded: percent of vacant housing that is boarded up (numeric - decimal)

-- OwnOccLowQuart: owner occupied housing - lower quartile value (numeric - decimal)

-- OwnOccHiQuart: owner occupied housing - upper quartile value (numeric - decimal)

-- PctLargHouseOccup: percent of all occupied households that are large (6 or more people) (numeric - decimal)

-- PctPersDenseHous: percent of persons in dense housing (more than 1 person per room) (numeric - decimal)

-- PctVacMore6Mos: percent of vacant housing that has been vacant more than 6 months (numeric - decimal)

-- RentMedian: rental housing - median rent (Census variable H32B from file STF1A) (numeric - decimal)

-- PctHousNoPhone: percent of occupied housing units without phone (in 1990, this was rare!) (numeric - decimal)

-- OwnOccQrange: owner occupied housing - difference between upper quartile and lower quartile values (numeric - decimal)

- -- RentQrange: rental housing difference between upper quartile and lower quartile rent (numeric decimal)
 -- MedRent: median gross rent (Census variable H43A from file STF3A includes utilities) (numeric decimal)
- -- MedRentPctHousInc: median gross rent as a percentage of household income (numeric decimal)
- -- MedOwnCostPctInc: median owners cost as a percentage of household income for owners with a mortgage (numeric decimal)
- -- MedOwnCostPctIncNoMtg: median owners cost as a percentage of household income for owners without a mortgage (numeric decimal)
- -- NumInShelters: number of people in homeless shelters (numeric expected to be integer)
- -- NumStreet: number of homeless people counted in the street (numeric expected to be integer)
- -- PctForeignBorn: percent of people foreign born (numeric decimal)
- -- PctBornSameState: percent of people born in the same state as currently living (numeric decimal)
- -- PctSameHouse85: percent of people living in the same house as in 1985 (5 years before) (numeric decimal)
- -- PctSameCity85: percent of people living in the same city as in 1985 (5 years before) (numeric decimal)
- -- PctSameState85: percent of people living in the same state as in 1985 (5 years before) (numeric decimal)
- -- LemasSwornFT: number of sworn full time police officers (numeric expected to be integer)
- -- LemasSwFTPerPop: sworn full time police officers per 100K population (numeric decimal)
- -- LemasSwFTFieldOps: number of sworn full time police officers in field operations (on the street as opposed to administrative etc) (numeric expected to be integer)
- -- LemasSwFTFieldPerPop: sworn full time police officers in field operations (on the street as opposed to administrative etc) per 100K population (numeric decimal)
- -- LemasTotalReg: total requests for police (numeric expected to be integer)
- -- LemasTotReqPerPop: total requests for police per 100K popuation (numeric decimal)
- -- PolicReqPerOffic: total requests for police per police officer (numeric decimal)
- -- PolicPerPop: police officers per 100K population (numeric decimal)
- -- RacialMatchCommPol: a measure of the racial match between the community and the police force. High values indicate proportions in community and police force are similar (numeric decimal)
- -- PctPolicWhite: percent of police that are caucasian (numeric decimal)
- -- PctPolicBlack: percent of police that are african american (numeric decimal)
- -- PctPolicHisp: percent of police that are hispanic (numeric decimal)
- -- PctPolicAsian: percent of police that are asian (numeric decimal)
- -- PctPolicMinor: percent of police that are minority of any kind (numeric decimal)
- -- OfficAssgnDrugUnits: number of officers assigned to special drug units (numeric expected to be integer)
- -- NumKindsDrugsSeiz: number of different kinds of drugs seized (numeric expected to be integer)
- -- PolicAveOTWorked: police average overtime worked (numeric decimal)
- -- LandArea: land area in square miles (numeric decimal)
- -- PopDens: population density in persons per square mile (numeric decimal)
- -- PctUsePubTrans: percent of people using public transit for commuting (numeric decimal)
- -- PolicCars: number of police cars (numeric expected to be integer)
- -- PolicOperBudg: police operating budget (numeric may be integer)
- -- LemasPctPolicOnPatr: percent of sworn full time police officers on patrol (numeric decimal)
- -- LemasGangUnitDeploy: gang unit deployed (numeric integer but really nominal 0 means NO, 10 means YES, 5 means Part Time)
- -- LemasPctOfficDrugUn: percent of officers assigned to drug units (numeric decimal)
- -- PolicBudgPerPop: police operating budget per population (numeric decimal)
- -- murders: number of murders in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
- -- murdPerPop: number of murders per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- rapes: number of rapes in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
- -- rapesPerPop: number of rapes per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- robberies: number of robberies in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
- -- robbbPerPop: number of robberies per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- assaults: number of assaults in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
 -- assaultPerPop: number of assaults per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- burglaries: number of burglaries in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
- -- burglPerPop: number of burglaries per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- larcenies: number of larcenies in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
- -- larcPerPop: number of larcenies per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- autoTheft: number of auto thefts in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)
- -- autoTheftPerPop: number of auto thefts per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- arsons: number of arsons in 1995 (numeric expected to be integer) potential GOAL attribute (to be predicted)

variable, Minimum, Maximum, Mean, Standard Deviation, Correlation w/ ViolPerPop, Median, Mode, Missing

- -- arsonsPerPop: number of arsons per 100K population (numeric decimal) potential GOAL attribute (to be predicted)
- -- ViolentCrimesPerPop: total number of violent crimes per 100K popuation (numeric decimal) GOAL attribute (to be predicted)
- -- nonViolPerPop: total number of non-violent crimes per 100K popuation (numeric decimal) potential GOAL attribute (to be predicted)

Summary Statistics:

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pop,10005,7322564,53117.9842,204620.2529,0.212353809,22792,12361,0
perHoush, 1.6, 5.28, 2.707327314, 0.334119654, -0.020110177, 2.66, 2.6, 0
pctBlack, 0, 96.67, 9.33510158, 14.2471563, 0.628367756, 2.87, 0.24, 0
pctWhite, 2.68, 99.63, 83.97981941, 16.41908022, -0.676848823, 90.35, 98.04, 0
pctAsian, 0.03, 57.46, 2.67020316, 4.473843444, 0.031949477, 1.23, 0.41, 0
pctHisp, 0.12, 95.29, 7.950176072, 14.58983204, 0.253596415, 2.18, 0.78, 0
pct12-21,4.58,54.4,14.44583747,4.518622844,0.023535103,13.62,13.62,0
pct12-29,9.38,70.51,27.64483973,6.181517075,0.105908765,26.78,26.78,0
pct16-24,4.64,63.62,13.97514221,5.970746729,0.045251915,12.54,11.61,0
pct65up, 1.66, 52.77, 11.83639278, 4.777565216, 0.055637064, 11.73, 11.06, 0
persUrban, 0,7322564,47734.72009,205606.6933, 0.21384036,18041, 0, 0
pctUrban,0,100,70.46530926,44.08027532,0.086294263,100,100,0
medIncome,8866,123625,33984.69616,13424.68001,-0.397407452,31441,27095,0
pctWwage,31.68,96.76,78.31275847,7.950672435,-0.289829747,78.61,85.12,0
pctWfarm, 0.6.53, 0.881841986, 0.689005635, -0.148357317, 0.69, 0.54, 0
pctWdiv,5.81,89.04,43.75093454,12.78792465,-0.557786505,42.88,41.65,0
pctWsocsec, 4.81, 76.39, 26.40941761, 8.295604161, 0.107881101, 26.59, 21.51, 0
pctPubAsst, 0.18, 44.82, 6.801444695, 4.700334848, 0.563107116, 5.61, 2.27, 0
pctRetire, 3.46, 45.51, 15.96900226, 4.622553011, -0.098964807, 15.65, 13.14, 0
medFamIncome, 10447, 139008, 39857.05508, 14251.20603, -0.411864109, 36678, 30546, 0
perCapInc,5237,63302,15603.5246,6281.558523,-0.315255977,14101,11252,0
whitePerCap,5472,68850,16567.69842,6346.840251,-0.185898177,15073,12735,0
blackPerCap,0,212120,11541.74944,9232.102062,-0.209243037,9777,0,0
NAperCap,0,480000,12229.19142,14853.83618,-0.060250637,9895,0,0
asianPerCap,0,106165,14227.98962,9881.266395,-0.128086386,12250,0,0
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otherPerCap,0,137000,9442.765131,7926.466713,-0.103288444,8186,0,1

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hispPerCap,0,54648,11018.99819,5884.063446,-0.219349786,9721,0,0
persPoverty,78,1384994,7590.853273,39361.46001,0.240253072,2142,470,0
pctPoverty, 0.64, 58, 11.62053725, 8.600352277, 0.505349223, 9.33, 3.26, 0
pctLowEdu, 0.2, 49.89, 9.186645598, 6.66670296, 0.371421768, 7.74, 5.78, 0
pctNotHSgrad, 1.46, 73.66, 22.30511964, 10.98951654, 0.46759552, 21.38, 11.27, 0
pctCollGrad, 1.63, 79.18, 23.05687585, 12.68721342, -0.299897539, 19.65, 14.2, 0
pctUnemploy, 1.32, 31.23, 6.045241535, 2.89561824, 0.483440771, 5.45, 4.36, 0
pctEmploy,24.82,84.67,62.02161174,8.31204498,-0.31764382,62.44,62.6,0
pctEmployMfg,2.05,50.03,18.22890745,8.099280979,-0.04712343,17.3,25.38,0
pctEmployProfServ, 8.69, 62.67, 24.53229797, 6.659470242, -0.064554813, 23.39, 21.52, 0
pctOccupManu, 1.37, 44.27, 13.81916479, 6.430263859, 0.283898507, 13.15, 16.52, 0
pctOccupMgmt,6.48,64.97,28.2092009,9.326123364,-0.324430512,26.24,28.31,0
pctMaleDivorc, 2.13, 20.08, 9.12758465, 2.802747328, 0.510455756, 9.15, 10.82, 0
pctMaleNevMar, 12.06, 76.6, 30.68351693, 8.127990901, 0.271229742, 29, 26.78, 0
pctFemDivorc, 3.35, 23.92, 12.32530023, 3.262612867, 0.537302801, 12.52, 14.36, 0
pctAllDivorc, 2.83, 22.23, 10.81251467, 3.000883481, 0.536548564, 10.9, 11.77, 0
persPerFam, 2.29, 4.64, 3.129697517, 0.240742507, 0.149955382, 3.1, 3.13, 0
pct2Par,22.97,93.6,74.05912867,10.52595184,-0.698640874,75.03,72.16,0
pctKids2Par,18.3,92.58,71.22725508,12.04504833,-0.728058986,72.53,63.25,0
pctKids-4w2Par,8.7,100,81.86542212,12.26373565,-0.658436367,83.99,100,0
pct12-17w2Par,20.2,97.34,75.52178781,10.36526212,-0.655627787,76.92,77.49,0
pctWorkMom-6,24.42,87.97,60.54264108,8.008936744,-0.02162507,60.71,63.48,0
pctWorkMom-18,41.95,89.37,68.85479458,6.679959744,-0.146173218,69.23,65.64,0
kidsBornNevrMarr,0,527557,2141.418962,14692.58284,0.240337327,352,139,0
pctKidsBornNevrMarr,0,27.35,3.115498871,3.127681493,0.738089083,2.04,0.97,0
numForeignBorn, 20, 2082931, 6277.273589, 55419.65383, 0.144585649, 1024, 147, 0
pctFgnImmig-3,0,64.29,13.525693,9.780097693,0.156688654,12.26,0,0
pctFgnImmig-5,0,76.16,20.42128668,12.41035515,0.201445794,19.08,0,0
pctFgnImmig-8,0,80.81,27.54418059,14.36881288,0.236607959,26.72,0,0
pctFgnImmig-10,0,88,34.73392777,16.32732237,0.281536984,34.79,0,0
pctlmmig-3,0,13.71,1.099124153,1.595766262,0.215616823,0.5,0,0
pctImmig-5,0,19.93,1.697462754,2.46105956,0.232900674,0.75,0,0
pctImmig-8,0,25.34,2.307503386,3.286647928,0.23889175,1.04,0,0
pctImmig-10,0,32.63,2.943760722,4.246468259,0.250865298,1.31,0,0
pctSpeakOnlyEng,6.15,98.98,87.07499323,14.07608745,-0.219031839,92.18,93.57,0
pctNotSpeakEng,0,38.33,2.405792325,4.210367661,0.27243614,0.92,0.44,0
pctLargHousFam, 0.96, 34.87, 5.38661851, 3.794309411, 0.341601121, 4.28, 3.71, 0
pctLargHous, 0.44, 30.87, 3.91578781, 3.175770454, 0.257215583, 3.05, 2.98, 0
persPerOccupHous, 1.58, 4.52, 2.615841986, 0.315646341, -0.017700909, 2.57, 2.44, 0
persPerOwnOccup, 1.61, 4.48, 2.74048307, 0.297420849, -0.099169625, 2.71, 2.65, 0
persPerRenterOccup, 1.55, 4.73, 2.367137698, 0.391805778, 0.240564095, 2.29, 2.17, 0
pctPersOwnOccup,13.93,97.24,66.36945372,14.18258845,-0.507329566,65.91,63.79,0
pctPopDenseHous, 0.05, 59.49, 4.132437923, 5.599131346, 0.395855647, 2.34, 1.31, 0
pctSmallHousUnits,3.06,95.34,45.40534086,13.77834736,0.454469731,46.39,53.15,0
medNumBedrm, 1, 4, 2.640632054, 0.512686001, -0.347149961, 3, 3, 0
houseVacant, 36, 172768, 1748.368849, 6503.866478, 0.289690649, 558, 246, 0
pctHousOccup,37.47,99,92.93397291,5.04073584,-0.256836226,94.21,95.38,0
pctHousOwnerOccup, 16.86, 96.49, 63.36829797, 13.9700567, -0.45535904, 62.83, 56.17, 0
pctVacantBoarded,0,39.89,2.778523702,3.592396207,0.479910148,1.66,0,0
pctVacant6up, 3.12, 82.13, 34.77388713, 13.91146771, 0.030768767, 34.1, 37.5, 0
medYrHousBuilt, 1939, 1987, 1962.623476, 11.16655501, -0.111201128, 1964, 1939, 0
pctHousWOphone,0,23.88,4.289823928,4.088174777,0.473717673,2.85,0,0
pctHousWOplumb,0,5.33,0.425273138,0.426188232,0.311226836,0.32,0,0
ownHousLowQ,14999,500001,88695.80226,66670.78153,-0.194912005,65500,34000,0
ownHousMed,19500,500001,113097.5233,81906.36228,-0.17822542,82800,500001,0
ownHousUperQ,28200,500001,145318.2578,99030.91382,-0.166029142,106700,500001,0
ownHousQrange,0,331000,56622.45553,39106.49804,-0.086578248,43400,28100,0
rentLowQ,99,1001,329.9665914,144.1384609,-0.245708342,307,252,0
rentMed, 120, 1001, 428.537246, 170.7066437, -0.232797807, 397, 316, 0
rentUpperQ,182,1001,527.2528217,199.29078,-0.223893683,486,1001,0
rentQrange ,0,803,197.2862302,85.20568803,-0.110281171,171,139,0
medGrossRent, 192, 1001, 501.4663657, 169.2717347, -0.231754244, 467, 1001, 0
medRentpctHousInc,14.9,35.1,26.29810384,2.979297132,0.315536838,26.1,24.7,0
medOwnCostpct,14,32.7,20.99015801,2.987621666,0.061058949,21,22.6,0
medOwnCostPctWO,10.1,23.4,13.01020316,1.419678674,0.063296009,12.8,11.8,0
persEmergShelt,0,23383,66.95349887,564.253149,0.19494198,0,0,0
persHomeless, 0, 10447, 17.8234763, 245.4525529, 0.136446046, 0, 0, 0
pctForeignBorn, 0.18, 60.4, 7.340302483, 8.418475989, 0.193229615, 4.31, 2.97, 0
pctBornStateResid.6.75.93.14.61.5396298.16.75006116.-0.070943862.64.49.74.45.0
pctSameHouse-5,11.83,78.56,51.53859594,10.51792598,-0.14008735,52.17,54.85,0
pctSameCounty-5,27.95,96.59,77.41107901,10.87818569,0.082634597,79.49,81.47.0
pctSameState-5,32.83,99.9,88.11186456,7.287836465,-0.006663834,90.03,92.69,0
numPolice,65,25655,499.1982507,1681.472251,0.194219827,173,100,1872
policePerPop,29.4,3437.23,246.4909621,273.7991617,0.073197363,196.01,#N/A,1872
policeField, 14, 22496, 432.5597668, 1493.708385, 0.186477279, 152, 94, 1872
policeFieldPerPop,19.21,3290.62,210.8447813,235.4788145,0.065928304,170.27,183.22,1872
policeCalls,2100,8328470,252404.9883,689449.7817,0.230023206,90000,50000,1872
policCallPerPop,2704.8,1926281.5,120651.7189,148211.3422,0.14854896,91034.6,#N/A,1872
policCallPerOffic, 20.8, 2162.5, 523.658309, 307.8390067, 0.145798061, 443.2, 422.6, 1872
policePerPop2,29.4,3437.2,246.493586,273.7984086,0.073203166,196,171.5,1872
racialMatch, 42.15, 100, 85.4996793, 10.94131216, -0.469374164, 87.93, 100, 1872
pctPolicWhite, 1.6, 100, 82.5158309, 15.33261214, -0.392584252, 86.18, 100, 1872
pctPolicBlack, 0,67.31, 9.263294461, 11.02142376, 0.513568853, 5, 0, 1872
pctPolicHisp,0,98.4,5.459766764,10.60453332,0.056080974,2.04,0,1872
pctPolicAsian, 0, 18.57, 0.681282799, 1.706344058, 0.072778715, 0, 0, 1872
pctPolicMinority,0,98.4,15.2422449,14.82675626,0.416418453,11.37,0,1872
officDrugUnits,0,1773,26.28862974,100.8219209,0.166934688,12,6,1872
```

numDiffDrugsSeiz,1,15,8.816326531,2.836390802,0.115940631,9,9,1872 policAveOT,0,634.7,119.1142857,92.49518559,0.010162351,98.7,0,1872 landArea, 0.9, 3569.8, 27.41995485, 109.8226001, 0.075697852, 13.7, 4.9, 0 popDensity, 10,44229.9,2783.835034,2828.993341,0.256966815,2027.3,3217.7,0 pctUsePubTrans,0,54.33,3.041124153,4.91291686,0.190478991,1.22,0,0 policCarsAvail,20,3187,185.4781341,318.5428335,0.313164478,86,55,1872 policOperBudget,2380215,1617293056,32176019.34,110456627.5,0.195267289,11164110,8000000,1872 pctPolicPatrol, 10.85, 99.94, 87.13093294, 10.34961235, -0.093114808, 89.58, 93.07, 1872 gangUnit,0,10,4.285714286,4.064537838,0.109156269,5,0,1872 pctOfficDrugUnit,0,48.44,0.980162528,2.877127691,0.318474028,0,0,0 policBudgetPerPop,15260.4,2422367,153577.8712,203040.8861,0.056100531,114582,#N/A,1872 murders, 0, 1946, 7.764785553, 58.16646847, 0.248259306, 1,0,0 murdPerPop,0,91.09,5.859295711,9.156828742,0.671541352,2.17,0,0 rapes,0,2818,28.04633782,105.6161353,0.336087881,7,0,208 rapesPerPop,0,401.35,36.25848032,34.23974957,0.581533276,26.92,0,208 robberies, 0,86001,237.9521229,2250.720788, 0.208547391, 19,1,1 robbbPerPop,0,2264.13,162.6125971,234.4866243,0.828574083,74.8,0,1 assaults,0,62778,326.5281562,1987.947941,0.301016534,56,12,13 assaultPerPop,0,4932.5,378.0046049,438.2385994,0.945565838,226.525,0,13 burglaries, 2,99207,761.2368897,3111.702756,0.316504514,205,79,3 burglPerPop, 16.92, 11881.02, 1033.430203, 763.3544416, 0.698552626, 822.715, 728.93, 3 larcenies, 10, 235132, 2137.629295, 7600.573464, 0.2950221, 747, 547, 3 larcPerPop,77.86,25910.55,3372.97915,1901.316145,0.509410495,3079.51,4631.1,3 autoTheft,1,112464,516.6925859,3258.164244,0.244925811,75,16,3 autoTheftPerPop,6.55,4968.59,473.9656284,504.6660256,0.636484339,302.355,213.62,3 arsons,0,5119,30.90772128,180.1252481,0.232824758,5,0,91 arsonsPerPop,0,436.37,32.15368173,39.24090028,0.416718515,21.08,0,91 violentPerPop,0,4877.06,589.0789218,614.7845182,1,374.06,223.06,221 nonViolPerPop,116.79,27119.76,4908.241804,2739.708901,0.675374243,4425.45,4295.96,97

Statistics for nominal State variable:

State, Count

AK,3

AL,43

AR,25

AZ,20

CA,279

CO,25

CT,71

DC,1

DE,1

FL,90

GA,37

IA,20

ID,7

IL,40 IN,48

KS,1

KY,26

LA,22

MA,123

MD,12

ME,17

MI,108

MN,66

MO,42 MS,20

NC,46

ND,8

NH,21

NJ,211

NM,10 NV,5

NY,46

OH,111

OK,36

OR,31

PA,101 **RI,26**

SC,28

SD,9

TN,35

TX,162 UT,24

VA,33

VT,4

WA,40

WI,60

WV,14

WY,7

Distribution of the main Goal Variable (Violent Crimes per Population):

Range Frequency (On boundary goes in the lower bin; e.g. exactly 200 goes in 100-200)

0,1

1-100,285

100-200,306 200-300,265

300-400,185 400-500,151 500-600,131 600-700,100 700-800,77 800-900,72 900-1000,61 1000-1100,38 1100-1200,33 1200-1300,50 1300-1400,35 1400-1500,30 1500-1600,28 1600-1700,28 1700-1800,14 1800-1900,12 1900-2000,14 More,78 .arff header for weka: @relation crimeunnormalized @attribute communityname string @attribute State @attribute countyCode numeric @attribute communityCode numeric

@attribute State
{AK,AL,AR,AZ,CA,CO,CT,DC,DE,FL,GA,IA,ID,IL,IN,KS,KY,LA,MA,MD,ME,MI,MN,MO,MS,NC,ND,NH,NJ,NM,NV,NY,OH,OK,OR,PA,RI,SC,SD,TN,TX,UT,VA,VT,WA,WI,WV,WY}
@attribute countyCode numeric
@attribute communityCode numeric
@attribute fold numeric
@attribute pop numeric
@attribute pop numeric
@attribute perHoush numeric
@attribute petBlack numeric
@attribute pctBlack numeric
@attribute pctWhite numeric
@attribute pctWhite numeric
@attribute pctAsian numeric
@attribute pctAsian numeric

@attribute pct12-29 numeric@attribute pct16-24 numeric@attribute pct65up numeric

@attribute pct12-21 numeric

@attribute persUrban numeric
@attribute pctUrban numeric

@attribute medIncome numeric

@attribute pctWwage numeric @attribute pctWfarm numeric

@attribute pctWdiv numeric
@attribute pctWsocsec numeric

@attribute pctPubAsst numeric @attribute pctRetire numeric

@attribute medFamIncome numeric @attribute perCapInc numeric

@attribute whitePerCap numeric @attribute blackPerCap numeric

@attribute NAperCap numeric @attribute asianPerCap numeric @attribute otherPerCap numeric

@attribute hispPerCap numeric @attribute persPoverty numeric

@attribute pctPoverty numeric @attribute pctLowEdu numeric

@attribute pctNotHSgrad numeric @attribute pctCollGrad numeric

@attribute pctUnemploy numeric@attribute pctEmploy numeric@attribute pctEmployMfg numeric

@attribute pctEmployProfServ numeric @attribute pctOccupManu numeric

@attribute pctOccupMgmt numeric
@attribute pctMaleDivorc numeric

@attribute pctMaleNevMar numeric @attribute pctFemDivorc numeric

@attribute pctAllDivorc numeric
@attribute persPerFam numeric
@attribute pct2Par numeric

@attribute pctKids2Par numeric @attribute pctKids-4w2Par numeric

@attribute pct12-17w2Par numeric
@attribute pctWorkMom-6 numeric
@attribute pctWorkMom-18 numeric

@attribute kidsBornNevrMarr numeric @attribute pctKidsBornNevrMarr numeric

@attribute numForeignBorn numeric @attribute pctFgnImmig-3 numeric

@attribute pctFgnImmig-5 numeric

@attribute pctFgnImmig-8 numeric @attribute pctFgnImmig-10 numeric

@attribute pctl-gnimmig-10 numeric
@attribute pctlmmig-3 numeric

@attribute pctImmig-5 numeric @attribute pctImmig-8 numeric @attribute pctImmig-10 numeric @attribute pctSpeakOnlyEng numeric @attribute pctNotSpeakEng numeric @attribute pctLargHousFam numeric @attribute pctLargHous numeric @attribute persPerOccupHous numeric @attribute persPerOwnOccup numeric @attribute persPerRenterOccup numeric @attribute pctPersOwnOccup numeric @attribute pctPopDenseHous numeric @attribute pctSmallHousUnits numeric @attribute medNumBedrm numeric @attribute houseVacant numeric @attribute pctHousOccup numeric @attribute pctHousOwnerOccup numeric @attribute pctVacantBoarded numeric @attribute pctVacant6up numeric @attribute medYrHousBuilt numeric @attribute pctHousWOphone numeric @attribute pctHousWOplumb numeric @attribute ownHousLowQ numeric @attribute ownHousMed numeric @attribute ownHousUperQ numeric @attribute ownHousQrange numeric @attribute rentLowQ numeric @attribute rentMed numeric @attribute rentUpperQ numeric @attribute rentQrange numeric @attribute medGrossRent numeric @attribute medRentpctHousInc numeric @attribute medOwnCostpct numeric @attribute medOwnCostPctWO numeric @attribute persEmergShelt numeric @attribute persHomeless numeric @attribute pctForeignBorn numeric @attribute pctBornStateResid numeric @attribute pctSameHouse-5 numeric @attribute pctSameCounty-5 numeric @attribute pctSameState-5 numeric @attribute numPolice numeric @attribute policePerPop numeric @attribute policeField numeric @attribute policeFieldPerPop numeric @attribute policeCalls numeric @attribute policCallPerPop numeric @attribute policCallPerOffic numeric @attribute policePerPop2 numeric @attribute racialMatch numeric @attribute pctPolicWhite numeric @attribute pctPolicBlack numeric @attribute pctPolicHisp numeric @attribute pctPolicAsian numeric @attribute pctPolicMinority numeric @attribute officDrugUnits numeric @attribute numDiffDrugsSeiz numeric @attribute policAveOT numeric @attribute landArea numeric @attribute popDensity numeric @attribute pctUsePubTrans numeric @attribute policCarsAvail numeric @attribute policOperBudget numeric @attribute pctPolicPatrol numeric @attribute gangUnit numeric @attribute pctOfficDrugUnit numeric @attribute policBudgetPerPop numeric @attribute murders numeric @attribute murdPerPop numeric @attribute rapes numeric @attribute rapesPerPop numeric @attribute robberies numeric @attribute robbbPerPop numeric @attribute assaults numeric @attribute assaultPerPop numeric @attribute burglaries numeric @attribute burglPerPop numeric @attribute larcenies numeric @attribute larcPerPop numeric @attribute autoTheft numeric @attribute autoTheftPerPop numeric @attribute arsons numeric @attribute arsonsPerPop numeric @attribute violentPerPop numeric @attribute nonViolPerPop numeric @data

Relevant Papers:

Past Usage

- 1. [Redmond and Highley 2009] Redmond, M., and Highley, T., Empirical Analysis of Case-Editing Approaches for Numeric Prediction. In International Joint Conference on Computer, Information, and Systems Sciences and Engineering (CISSE) subconference International Conference on Systems, Computing Sciences and Software Engineering (SCSS). University of Bridgeport, CT, December 2009.
- -- All numeric data was normalized (0-1), ViolentCrimesPerPop was predicted (all other crime attributes were eliminated)
- -- Best mean absolute error obtained was .096 (on normalized data)
- 2. [Buczak and Gifford 2010] Buczak, A. L. and Gifford, C. M., Fuzzy Association Rule Mining for Community Crime Pattern Discovery. In Workshop on Intelligence and Security Informatics at 16th Conference on Knowledge Discovery and Data Mining (ISI-KDD-2010). Washington DC. July 2010.
- -- Data was further processed

Citation Request:

Please cite the UCI Machine Learning Repository and my sources:

- U. S. Department of Commerce, Bureau of the Census, Census Of Population And Housing 1990 United States: Summary Tape File 1a & 3a (Computer Files),
- U.S. Department Of Commerce, Bureau Of The Census Producer, Washington, DC and Inter-university Consortium for Political and Social Research Ann Arbor, Michigan. (1992)
- U.S. Department of Justice, Bureau of Justice Statistics, Law Enforcement Management And Administrative Statistics (Computer File) U.S. Department Of Commerce, Bureau Of The Census Producer, Washington, DC and Inter-university Consortium for Political and Social Research Ann Arbor, Michigan. (1992)
- U.S. Department of Justice, Federal Bureau of Investigation, Crime in the United States (Computer File) (1995)



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