

A look into Homelessness Data in America (Final Project Step2)

Janine Par

2022-05-22

Importing and Cleasing of Data

The different datasets gathered for Homeless data analysis were downloaded in excel (xlxs) and csv format. The following steps were applied to the data sources:

2021 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S. 2007-2021-PIT-Counts-by-State

- The structure of the spreadsheet have Point In Time homeless information for each year separated in every excel sheet
- I have created a loop that will read through each Sheet (years) that I'm interested (2017-2022). Each Iteration will append to the new dataframe for PIT Homeless information
- Part of the loop is identifying the year where I created a constant variable of 'year'. The value is assigned is based from the excel sheet where the data is extracted from.

```
## Set the working directory to the root of your DSC 520 directory
setwd("C:/Users/janin/OneDrive/Documents/R_repo/dsc520/")

## Load the `PIT by State 2015-2022`

# Using For loop, read sheet for year I wanted to extract.
pit_year <- c("2020","2019","2018","2017")

pit_homeless_df <- data.frame()
for (year in pit_year)
{
  # df_name <- paste("pit",year,"_df", sep = "")
  temp<- read_excel("data/homelessdata/2007-2021-PIT-Counts-by-State.xlsx", sheet =year )
  temp["year"] <- year
  #assign(x=df_name, value=temp) #data frame created for every PIT year
  #rm(temp)
  pit_homeless_df <- rbind(pit_homeless_df,temp)
  rm(temp) #Clean-up
}

head (pit_homeless_df)
```

```
## # A tibble: 6 x 542
##   State Number_of_CoCs Total_PIT_Homeless Total_Under_18 Total_Age_18_to_24
##   <chr>         <dbl>         <dbl>         <dbl>         <dbl>
## 1 AK              2          1949           326           197
```

```
## 2 AL      8      3351      528      198
## 3 AR      4      2366      195      258
## 4 AS      0      NA      NA      NA
## 5 AZ      3     10979     1722     824
## 6 CA     44    161548    16141    13391
## # ... with 537 more variables: Total_Over_24 <dbl>, Total_Female <dbl>,
## #   Total_Male <dbl>, Total_Transgender <dbl>, Total_GenderNonConform <dbl>,
## #   Total_NonHispanic <dbl>, Total_Hispanic <dbl>, Total_White <dbl>,
## #   Total_AfricanAmerican <dbl>, Total_Asian <dbl>, Total_AmericanIndian <dbl>,
## #   Total_Hawaiian <dbl>, Total_Multiple_Races <dbl>, S_ES_ <dbl>,
## #   S_ES_Under_18 <dbl>, S_ES_Age_18_to_24 <dbl>, S_ES_Over_24 <dbl>,
## #   S_ES_Female <dbl>, S_ES_Male <dbl>, S_ES_Transgender <dbl>, ...
```

The accompanying Housing Inventory Count (HIC) data 2007-2021-HIC-Counts-by-State

- Similar with the PIT information. The structure of the spreadsheet have HIC data information for each year separated in every sheet
- I have created a loop that will read through each Sheet (years) that I'm interested (2017-2022). Each Iteration will append to the new dataframe for HIC Homeless information
- Part of the loop is identifying the year where I created a constant variable of 'year'. The value is assigned is based from the excel sheet where the data is extracted from.

```
## Set the working directory to the root of your DSC 520 directory
setwd("C:/Users/janin/OneDrive/Documents/R_repo/dsc520/")

hic_year <- c("2020", "2019", "2018", "2017")
hic_homeless_df <- data.frame()

for (year in hic_year)
{
  temp<- read_excel("data/homelessdata/2007-2021-HIC-Counts-by-State.xlsx", sheet =year, skip=1 )
  temp["year"] <- year
  hic_homeless_df <- rbind(hic_homeless_df,temp)
  rm(temp) #Clean-up
}

head (hic_homeless_df)
```

```
## # A tibble: 6 x 78
##   State TOTAL_YEAR_BED 'Total Non-DV Year-Ro~' 'Total HMIS Ye~' 'HMIS Particip~'
##   <chr>      <dbl>      <dbl>      <dbl>      <dbl>
## 1 AK        1885        1347        1122        0.595
## 2 AL        2913        2291        1659        0.570
## 3 AR        1686        1193         680        0.403
## 4 AZ        6079        4943        4352        0.716
## 5 CA       53265       48649       35666        0.670
## 6 CO        8274        7693        4460        0.539
## # ... with 73 more variables: TOTAL_YEAR_BED_ES <dbl>, TOTAL_YEAR_BED_TH <dbl>,
## #   TOTAL_YEAR_BED_SH <dbl>,
## #   'Total Units for Households with Children (ES, TH, SH)' <dbl>,
## #   'Total Beds for Households with Children (ES, TH, SH)' <dbl>,
## #   'Total Beds for Households without Children (ES, TH, SH)' <dbl>,
## #   'Total Beds for Households with only Children (ES, TH, SH)' <dbl>,
## #   'Dedicated Veteran Beds (ES, TH, SH)' <dbl>, ...
```

** Merging HUD Exchange Data Because of Similarity of data structure where data is by State and year. I have merged the information to have one raw HUD dataset (homeless_df) with data elements from:

1. **2021 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S.** 2007-2021-PIT-Counts-by-State
2. **The accompanying Housing Inventory Count (HIC) data** 2007-2021-HIC-Counts-by-State

This raw data includes PIT and HIC information from HUD exchange for a State and Year (The scope is 2017-2020 for this research)

```
homeless_df <- merge(pit_homeless_df, hic_homeless_df , by=c("year", "State"))

homeless_df %>% select(State,year,Number_of_CoCs,Total_PIT_Homeless, Total_Age_18_to_24, Total_Under_18,
                      Total_Transgender,Total_GenderNonConform,Total_NonHispanic,Total_White,Total_Asian,
                      ,Total_AmericanIndian,S_ES_Multiple_Races,TOTAL_YEAR_BED, TOTAL_YEAR_BED_ES, TOT

head (homeless_df)
```

##	State	year	Number_of_CoCs	Total_PIT_Homeless	Total_Age_18_to_24
## 1	AK	2017	2	1845	186
## 2	AL	2017	8	3793	300
## 3	AR	2017	6	2467	209
## 4	AZ	2017	3	8947	660
## 5	CA	2017	43	131532	13276
## 6	CO	2017	3	10940	913
##	Total_Under_18	Total_Over_24	Total_Female	Total_Male	Total_Transgender
## 1	305	1354	765	1075	4
## 2	528	2965	1314	2453	21
## 3	265	1993	965	1499	3
## 4	1607	6680	3331	5592	22
## 5	14207	104049	42750	87609	793
## 6	2164	7863	4014	6866	37
##	Total_GenderNonConform	Total_NonHispanic	Total_White	Total_Asian	Total_Hawaiian
## 1	1	1743	641	20	69
## 2	5	3721	1587	9	1
## 3	0	2405	1447	9	7
## 4	2	6876	6086	51	46
## 5	380	90040	68784	2490	1459
## 6	23	8142	7778	51	45
##	Total_AfricanAmerican	Total_AmericanIndian	S_ES_Multiple_Races	TOTAL_YEAR_BED	
## 1	147	770	94	1828	
## 2	2064	21	56	3444	
## 3	892	24	40	2062	
## 4	1611	704	166	5880	
## 5	42282	5663	2135	44473	
## 6	1788	546	279	7071	
##	TOTAL_YEAR_BED_ES	TOTAL_YEAR_BED_TH	TOTAL_YEAR_BED_SH		
## 1	1130	698	0		
## 2	2073	1334	37		
## 3	1513	549	0		
## 4	3866	1978	36		
## 5	24799	19537	137		
## 6	3761	3285	25		

USA FACTS <https://usafacts.org/> This website includes public statistic information collected by multiple agencies including US Census and for this analysis, I have gathered the following for the year 2017 -2020 (when available):

1. US Population by State
2. Employment by State
3. Poverty by State
4. Percent of Adult with Depression by State
5. Violence and Crime Rate by State

- I have created a loop that will read through each csv file and will capture the yearly information in column
- Part of the loop is identifying the year where I created a constant variable of 'year'. The value is assigned is based from the "COLUMN" where the data is extracted from.
- While going to each file, the process append to a dataframe usfacts_df to merge all information coming from USFACTS source

```
# Data from USFACTS

# Read US Population
## Set the working directory to the root of your DSC 520 directory
setwd("C:/Users/janin/OneDrive/Documents/R_repo/dsc520/")

us_pop_df<- read.csv("data/homelessdata/USPOPULATION.csv")
colnames(us_pop_df)
```

```
## [1] "State.Name" "State"      "X1900"      "X1901"      "X1902"
## [6] "X1903"      "X1904"      "X1905"      "X1906"      "X1907"
## [11] "X1908"      "X1909"      "X1910"      "X1911"      "X1912"
## [16] "X1913"      "X1914"      "X1915"      "X1916"      "X1917"
## [21] "X1918"      "X1919"      "X1920"      "X1921"      "X1922"
## [26] "X1923"      "X1924"      "X1925"      "X1926"      "X1927"
## [31] "X1928"      "X1929"      "X1930"      "X1931"      "X1932"
## [36] "X1933"      "X1934"      "X1935"      "X1936"      "X1937"
## [41] "X1938"      "X1939"      "X1940"      "X1941"      "X1942"
## [46] "X1943"      "X1944"      "X1945"      "X1946"      "X1947"
## [51] "X1948"      "X1949"      "X1950"      "X1951"      "X1952"
## [56] "X1953"      "X1954"      "X1955"      "X1956"      "X1957"
## [61] "X1958"      "X1959"      "X1960"      "X1961"      "X1962"
## [66] "X1963"      "X1964"      "X1965"      "X1966"      "X1967"
## [71] "X1968"      "X1969"      "X1970"      "X1971"      "X1972"
## [76] "X1973"      "X1974"      "X1975"      "X1976"      "X1977"
## [81] "X1978"      "X1979"      "X1980"      "X1981"      "X1982"
## [86] "X1983"      "X1984"      "X1985"      "X1986"      "X1987"
## [91] "X1988"      "X1989"      "X1990"      "X1991"      "X1992"
## [96] "X1993"      "X1994"      "X1995"      "X1996"      "X1997"
## [101] "X1998"      "X1999"      "X2000"      "X2001"      "X2002"
## [106] "X2003"      "X2004"      "X2005"      "X2006"      "X2007"
## [111] "X2008"      "X2009"      "X2010"      "X2011"      "X2012"
## [116] "X2013"      "X2014"      "X2015"      "X2016"      "X2017"
## [121] "X2018"      "X2019"      "X2020"      "X2021"
```

```

uspop_year <- c("2020","2019","2018","2017")

us_pop_year_df <- data.frame()

for (year in uspop_year)
{
  colyear <- paste("X",year,sep = "")
  us_pop_df %>% select (State, colyear) -> temp
  temp["year"] <- year
  names(temp) <-c("State", "Population", "year")
  us_pop_year_df <- rbind(us_pop_year_df,temp)
}

```

```

## Note: Using an external vector in selections is ambiguous.
## i Use 'all_of(colyear)' instead of 'colyear' to silence this message.
## i See <https://tidyselect.r-lib.org/reference/faq-external-vector.html>.
## This message is displayed once per session.

```

```
head(us_pop_year_df)
```

```

##   State Population year
## 1    AL      4921532 2020
## 2    AK       731158 2020
## 3    AZ      7421401 2020
## 4    AR      3030522 2020
## 5    CA      39368078 2020
## 6    CO       5807719 2020

```

```

rm(us_pop_df) #Cleanup raw data

# Employment US Facts per state
us_emp_df<- read.csv("data/homelessdata/employment_usafacts.csv")

#uspop_year <- c("2020","2019","2018","2017")

us_emp_year_df <- data.frame()

for (year in uspop_year)
{
  colyear <- paste("X",year,sep = "")
  us_emp_df %>% select (State, colyear) -> temp
  temp["year"] <- year
  head(temp)
  names(temp) <-c("State", "Employment", "year")
  us_emp_year_df <- rbind(us_emp_year_df,temp)
}

head(us_emp_year_df)

```

```

##   State Employment year
## 1    AL           NA 2020
## 2    AK           NA 2020

```

```
## 3    AZ      NA 2020
## 4    AR      NA 2020
## 5    CA      NA 2020
## 6    CO      NA 2020
```

```
rm(us_emp_df) #Cleanup Raw Data

# Merge Variables USFACTS
usfacts_df <- merge(us_pop_year_df,us_emp_year_df, by =c("year", "State"))

# poverty US Facts per state
us_poverty_df<- read.csv("data/homelessdata/people_in_poverty_usafacts.csv")

us_poverty_year_df <- data.frame()

for (year in uspop_year)
{
  colyear <- paste("X",year,sep = "")
  us_poverty_df %>% select (State, colyear) -> temp
  temp["year"] <- year
  head(temp)
  names(temp) <-c("State", "Poverty", "year")
  us_poverty_year_df <- rbind(us_poverty_year_df,temp)
}

head(us_poverty_year_df)
```

```
##    State Poverty year
## 1    AL      NA 2020
## 2    AK      NA 2020
## 3    AZ      NA 2020
## 4    AR      NA 2020
## 5    CA      NA 2020
## 6    CO      NA 2020
```

```
rm(us_poverty_df) #clean up raw data

usfacts_df <- merge(usfacts_df,us_poverty_year_df, by =c("year", "State"))

# Depression
us_meddepresspct_df<- read.csv("data/homelessdata/percent_of_adults_with_depression_usafacts.csv")

us_meddepresspct_year_df <- data.frame()

for (year in uspop_year)
{
  colyear <- paste("X",year,sep = "")
  us_meddepresspct_df %>% select (State, colyear) -> temp
  temp["year"] <- year
  head(temp)
```

```
names(temp) <-c("State", "DepressPCT", "year")
us_meddepresspct_year_df <- rbind(us_meddepresspct_year_df,temp)
}
```

```
head(us_meddepresspct_year_df)
```

```
##   State DepressPCT year
## 1    AL          NA 2020
## 2    AK          NA 2020
## 3    AZ          NA 2020
## 4    AR          NA 2020
## 5    CA          NA 2020
## 6    CO          NA 2020
```

```
rm (us_meddepresspct_df) #clean-up raw data
```

```
usfacts_df <- merge(usfacts_df,us_meddepresspct_year_df, by =c("year", "State"))
```

```
# Violence and Crime
```

```
us_violencecrime_df<- read.csv("data/homelessdata/violent_crimes_usafacts.csv")
```

```
colnames(us_violencecrime_df)
```

```
## [1] "Statename" "State"      "X1979"      "X1980"      "X1981"      "X1982"
## [7] "X1983"      "X1984"      "X1985"      "X1986"      "X1987"      "X1988"
## [13] "X1989"      "X1990"      "X1991"      "X1992"      "X1993"      "X1994"
## [19] "X1995"      "X1996"      "X1997"      "X1998"      "X1999"      "X2000"
## [25] "X2001"      "X2002"      "X2003"      "X2004"      "X2005"      "X2006"
## [31] "X2007"      "X2008"      "X2009"      "X2010"      "X2011"      "X2012"
## [37] "X2013"      "X2014"      "X2015"      "X2016"      "X2017"      "X2018"
## [43] "X2019"      "X2020"
```

```
us_violencecrime_year_df <- data.frame()
```

```
for (year in uspop_year)
{
  colyear <- paste("X",year,sep = "")
  us_violencecrime_df %>% select (State, colyear) -> temp
  temp["year"] <- year
  head(temp)
  names(temp) <-c("State", "CrimeViolence", "year")
  us_violencecrime_year_df <- rbind(us_violencecrime_year_df,temp)
  rm(temp)
}
```

```
head(us_violencecrime_year_df)
```

```
##   State CrimeViolence year
## 1    AL          22322 2020
## 2    AK          6126 2020
```

```
## 3    AZ      35980 2020
## 4    AR      20363 2020
## 5    CA     174026 2020
## 6    CO      24570 2020
```

```
rm(us_violencecrime_df) #Cleanup raw data
```

```
usfacts_df <- merge(usfacts_df,us_violencecrime_year_df, by =c("year", "State"))
```

FAIR MARKET RENTS (40TH PERCENTILE RENTS) <https://www.huduser.gov/portal/datasets/fmr.html> This dataset contains Fair Market Rents (FMRs) for each state.

- I have extracted the excel spreadsheet per state and created a loop to read data for each yearly spreadsheet.
- I created a constant variable year and assign a value based on the file the data came from.
- While going to each file, the process append the dataset to usfacts_df to merge this information with the USFACTS dataframe

```
# Mean housing
```

```
setwd("C:/Users/janin/OneDrive/Documents/R_repo/dsc520/")
```

```
pop_year <- c("2020","2019","2018","2017")
```

```
houserent_mean_year <- data.frame()
```

```
for (year in pop_year)
```

```
{
```

```
  excel_name <- paste("data/homelessdata/FY",year,"_50_County_rev.xlsx", sep = "")
  print(excel_name)
  temp<- read_excel(excel_name)
  temp["year"] <- year
  temp %>% select(rent50_1, rent50_2,rent50_3,rent50_4, state_alpha, year) -> temp1
  names(temp1) <-c("rent50_1", "rent50_2","rent50_3","rent50_4", "State", "year")
  houserent_mean_year <- rbind(houserent_mean_year,temp1)
  rm(temp) #Clean-up
  rm(temp1) #Clean-up
}
```

```
## [1] "data/homelessdata/FY2020_50_County_rev.xlsx"
```

```
## [1] "data/homelessdata/FY2019_50_County_rev.xlsx"
```

```
## [1] "data/homelessdata/FY2018_50_County_rev.xlsx"
```

```
## [1] "data/homelessdata/FY2017_50_County_rev.xlsx"
```

```
head(houserent_mean_year)
```

```
## # A tibble: 6 x 6
```

```
##   rent50_1 rent50_2 rent50_3 rent50_4 State year
##   <dbl>    <dbl>    <dbl>    <dbl> <chr> <chr>
## 1     699      920     1209     1560 TX   2020
## 2     699      920     1209     1560 TX   2020
## 3     699      920     1209     1560 TX   2020
## 4     397      452      591      713 PR   2020
## 5     397      452      591      713 PR   2020
## 6     397      452      591      713 PR   2020
```



```
usfacts_df <- merge(usfacts_df,houserent_mean_year, by =c("year", "State"))
```

NOAA National Climatic Data Center of the United States This dataset contains current average temperature per state. This process reads the dataset and append to usfacts_df to merge this information with the USFACTS dataframe

```
# Extracted
setwd("C:/Users/janin/OneDrive/Documents/R_repo/dsc520/")

state_ave_weather_df <- read_excel("data/homelessdata/average_weather_state.xlsx")

head(state_ave_weather_df)
```

```
## # A tibble: 6 x 5
##   Statename State ave_f ave_c weather_rank
##   <chr>      <chr> <dbl> <dbl>      <dbl>
## 1 Alabama  AL      62.8  17.1         7
## 2 Alaska   AK      26.6   -3        50
## 3 Arizona  AZ      60.3  15.7        10
## 4 Arkansas AR      60.4  15.8         9
## 5 California CA      59.4  15.2        12
## 6 Colorado CO      45.1   7.3        39
```

```
usfacts_df <- merge(usfacts_df,state_ave_weather_df, by =c("State"))
```

*** To create the Final data, I have merged the homeless_df with the HUD Exchange Information specific on homelessness and usfacts_df with state information that I believe can factor homelessness. Data is breakdown per State and Year.

- This information can be sliced to use Top state with homelessness or look at it in General population (all state)
- We can look at a specific year information within the period of 2017 - 2020
- I would like to look more on the homelessness demographic information but the challenge is that information is not available in public or may require permission to obtain which make sense because of the confidentiality of personal identifiable information. This limit this analysis and will not include identifying Person Risk factors to homelessness or being chronic homeless.

```
us_homeless_df <- merge(homeless_df,usfacts_df, by =c("year", "State"))

head(us_homeless_df, n=100)
```

```
##   year State Number_of_CoCs Total_PIT_Homeless Total_Age_18_to_24
## 1  2017   AK              2             1845             186
## 2  2017   AK              2             1845             186
## 3  2017   AK              2             1845             186
## 4  2017   AK              2             1845             186
## 5  2017   AK              2             1845             186
## 6  2017   AK              2             1845             186
## 7  2017   AK              2             1845             186
## 8  2017   AK              2             1845             186
## 9  2017   AK              2             1845             186
```

## 10	2017	AK	2	1845	186
## 11	2017	AK	2	1845	186
## 12	2017	AK	2	1845	186
## 13	2017	AK	2	1845	186
## 14	2017	AK	2	1845	186
## 15	2017	AK	2	1845	186
## 16	2017	AK	2	1845	186
## 17	2017	AK	2	1845	186
## 18	2017	AK	2	1845	186
## 19	2017	AK	2	1845	186
## 20	2017	AK	2	1845	186
## 21	2017	AK	2	1845	186
## 22	2017	AK	2	1845	186
## 23	2017	AK	2	1845	186
## 24	2017	AK	2	1845	186
## 25	2017	AK	2	1845	186
## 26	2017	AK	2	1845	186
## 27	2017	AK	2	1845	186
## 28	2017	AK	2	1845	186
## 29	2017	AK	2	1845	186
## 30	2017	AL	8	3793	300
## 31	2017	AL	8	3793	300
## 32	2017	AL	8	3793	300
## 33	2017	AL	8	3793	300
## 34	2017	AL	8	3793	300
## 35	2017	AL	8	3793	300
## 36	2017	AL	8	3793	300
## 37	2017	AL	8	3793	300
## 38	2017	AL	8	3793	300
## 39	2017	AL	8	3793	300
## 40	2017	AL	8	3793	300
## 41	2017	AL	8	3793	300
## 42	2017	AL	8	3793	300
## 43	2017	AL	8	3793	300
## 44	2017	AL	8	3793	300
## 45	2017	AL	8	3793	300
## 46	2017	AL	8	3793	300
## 47	2017	AL	8	3793	300
## 48	2017	AL	8	3793	300
## 49	2017	AL	8	3793	300
## 50	2017	AL	8	3793	300
## 51	2017	AL	8	3793	300
## 52	2017	AL	8	3793	300
## 53	2017	AL	8	3793	300
## 54	2017	AL	8	3793	300
## 55	2017	AL	8	3793	300
## 56	2017	AL	8	3793	300
## 57	2017	AL	8	3793	300
## 58	2017	AL	8	3793	300
## 59	2017	AL	8	3793	300
## 60	2017	AL	8	3793	300
## 61	2017	AL	8	3793	300
## 62	2017	AL	8	3793	300
## 63	2017	AL	8	3793	300

## 64	2017	AL	8	3793	300	
## 65	2017	AL	8	3793	300	
## 66	2017	AL	8	3793	300	
## 67	2017	AL	8	3793	300	
## 68	2017	AL	8	3793	300	
## 69	2017	AL	8	3793	300	
## 70	2017	AL	8	3793	300	
## 71	2017	AL	8	3793	300	
## 72	2017	AL	8	3793	300	
## 73	2017	AL	8	3793	300	
## 74	2017	AL	8	3793	300	
## 75	2017	AL	8	3793	300	
## 76	2017	AL	8	3793	300	
## 77	2017	AL	8	3793	300	
## 78	2017	AL	8	3793	300	
## 79	2017	AL	8	3793	300	
## 80	2017	AL	8	3793	300	
## 81	2017	AL	8	3793	300	
## 82	2017	AL	8	3793	300	
## 83	2017	AL	8	3793	300	
## 84	2017	AL	8	3793	300	
## 85	2017	AL	8	3793	300	
## 86	2017	AL	8	3793	300	
## 87	2017	AL	8	3793	300	
## 88	2017	AL	8	3793	300	
## 89	2017	AL	8	3793	300	
## 90	2017	AL	8	3793	300	
## 91	2017	AL	8	3793	300	
## 92	2017	AL	8	3793	300	
## 93	2017	AL	8	3793	300	
## 94	2017	AL	8	3793	300	
## 95	2017	AL	8	3793	300	
## 96	2017	AL	8	3793	300	
## 97	2017	AR	6	2467	209	
## 98	2017	AR	6	2467	209	
## 99	2017	AR	6	2467	209	
## 100	2017	AR	6	2467	209	
##	Total_Under_18 Total_Over_24 Total_Female Total_Male Total_Transgender					
## 1		305	1354	765	1075	4
## 2		305	1354	765	1075	4
## 3		305	1354	765	1075	4
## 4		305	1354	765	1075	4
## 5		305	1354	765	1075	4
## 6		305	1354	765	1075	4
## 7		305	1354	765	1075	4
## 8		305	1354	765	1075	4
## 9		305	1354	765	1075	4
## 10		305	1354	765	1075	4
## 11		305	1354	765	1075	4
## 12		305	1354	765	1075	4
## 13		305	1354	765	1075	4
## 14		305	1354	765	1075	4
## 15		305	1354	765	1075	4
## 16		305	1354	765	1075	4

## 17	305	1354	765	1075	4
## 18	305	1354	765	1075	4
## 19	305	1354	765	1075	4
## 20	305	1354	765	1075	4
## 21	305	1354	765	1075	4
## 22	305	1354	765	1075	4
## 23	305	1354	765	1075	4
## 24	305	1354	765	1075	4
## 25	305	1354	765	1075	4
## 26	305	1354	765	1075	4
## 27	305	1354	765	1075	4
## 28	305	1354	765	1075	4
## 29	305	1354	765	1075	4
## 30	528	2965	1314	2453	21
## 31	528	2965	1314	2453	21
## 32	528	2965	1314	2453	21
## 33	528	2965	1314	2453	21
## 34	528	2965	1314	2453	21
## 35	528	2965	1314	2453	21
## 36	528	2965	1314	2453	21
## 37	528	2965	1314	2453	21
## 38	528	2965	1314	2453	21
## 39	528	2965	1314	2453	21
## 40	528	2965	1314	2453	21
## 41	528	2965	1314	2453	21
## 42	528	2965	1314	2453	21
## 43	528	2965	1314	2453	21
## 44	528	2965	1314	2453	21
## 45	528	2965	1314	2453	21
## 46	528	2965	1314	2453	21
## 47	528	2965	1314	2453	21
## 48	528	2965	1314	2453	21
## 49	528	2965	1314	2453	21
## 50	528	2965	1314	2453	21
## 51	528	2965	1314	2453	21
## 52	528	2965	1314	2453	21
## 53	528	2965	1314	2453	21
## 54	528	2965	1314	2453	21
## 55	528	2965	1314	2453	21
## 56	528	2965	1314	2453	21
## 57	528	2965	1314	2453	21
## 58	528	2965	1314	2453	21
## 59	528	2965	1314	2453	21
## 60	528	2965	1314	2453	21
## 61	528	2965	1314	2453	21
## 62	528	2965	1314	2453	21
## 63	528	2965	1314	2453	21
## 64	528	2965	1314	2453	21
## 65	528	2965	1314	2453	21
## 66	528	2965	1314	2453	21
## 67	528	2965	1314	2453	21
## 68	528	2965	1314	2453	21
## 69	528	2965	1314	2453	21
## 70	528	2965	1314	2453	21

## 71	528	2965	1314	2453	21
## 72	528	2965	1314	2453	21
## 73	528	2965	1314	2453	21
## 74	528	2965	1314	2453	21
## 75	528	2965	1314	2453	21
## 76	528	2965	1314	2453	21
## 77	528	2965	1314	2453	21
## 78	528	2965	1314	2453	21
## 79	528	2965	1314	2453	21
## 80	528	2965	1314	2453	21
## 81	528	2965	1314	2453	21
## 82	528	2965	1314	2453	21
## 83	528	2965	1314	2453	21
## 84	528	2965	1314	2453	21
## 85	528	2965	1314	2453	21
## 86	528	2965	1314	2453	21
## 87	528	2965	1314	2453	21
## 88	528	2965	1314	2453	21
## 89	528	2965	1314	2453	21
## 90	528	2965	1314	2453	21
## 91	528	2965	1314	2453	21
## 92	528	2965	1314	2453	21
## 93	528	2965	1314	2453	21
## 94	528	2965	1314	2453	21
## 95	528	2965	1314	2453	21
## 96	528	2965	1314	2453	21
## 97	265	1993	965	1499	3
## 98	265	1993	965	1499	3
## 99	265	1993	965	1499	3
## 100	265	1993	965	1499	3
##	Total_GenderNonConform	Total_NonHisp	Total_White	Total_Asian	Total_Hawaiian
## 1	1	1743	641	20	69
## 2	1	1743	641	20	69
## 3	1	1743	641	20	69
## 4	1	1743	641	20	69
## 5	1	1743	641	20	69
## 6	1	1743	641	20	69
## 7	1	1743	641	20	69
## 8	1	1743	641	20	69
## 9	1	1743	641	20	69
## 10	1	1743	641	20	69
## 11	1	1743	641	20	69
## 12	1	1743	641	20	69
## 13	1	1743	641	20	69
## 14	1	1743	641	20	69
## 15	1	1743	641	20	69
## 16	1	1743	641	20	69
## 17	1	1743	641	20	69
## 18	1	1743	641	20	69
## 19	1	1743	641	20	69
## 20	1	1743	641	20	69
## 21	1	1743	641	20	69
## 22	1	1743	641	20	69
## 23	1	1743	641	20	69

## 24	1	1743	641	20	69
## 25	1	1743	641	20	69
## 26	1	1743	641	20	69
## 27	1	1743	641	20	69
## 28	1	1743	641	20	69
## 29	1	1743	641	20	69
## 30	5	3721	1587	9	1
## 31	5	3721	1587	9	1
## 32	5	3721	1587	9	1
## 33	5	3721	1587	9	1
## 34	5	3721	1587	9	1
## 35	5	3721	1587	9	1
## 36	5	3721	1587	9	1
## 37	5	3721	1587	9	1
## 38	5	3721	1587	9	1
## 39	5	3721	1587	9	1
## 40	5	3721	1587	9	1
## 41	5	3721	1587	9	1
## 42	5	3721	1587	9	1
## 43	5	3721	1587	9	1
## 44	5	3721	1587	9	1
## 45	5	3721	1587	9	1
## 46	5	3721	1587	9	1
## 47	5	3721	1587	9	1
## 48	5	3721	1587	9	1
## 49	5	3721	1587	9	1
## 50	5	3721	1587	9	1
## 51	5	3721	1587	9	1
## 52	5	3721	1587	9	1
## 53	5	3721	1587	9	1
## 54	5	3721	1587	9	1
## 55	5	3721	1587	9	1
## 56	5	3721	1587	9	1
## 57	5	3721	1587	9	1
## 58	5	3721	1587	9	1
## 59	5	3721	1587	9	1
## 60	5	3721	1587	9	1
## 61	5	3721	1587	9	1
## 62	5	3721	1587	9	1
## 63	5	3721	1587	9	1
## 64	5	3721	1587	9	1
## 65	5	3721	1587	9	1
## 66	5	3721	1587	9	1
## 67	5	3721	1587	9	1
## 68	5	3721	1587	9	1
## 69	5	3721	1587	9	1
## 70	5	3721	1587	9	1
## 71	5	3721	1587	9	1
## 72	5	3721	1587	9	1
## 73	5	3721	1587	9	1
## 74	5	3721	1587	9	1
## 75	5	3721	1587	9	1
## 76	5	3721	1587	9	1
## 77	5	3721	1587	9	1

## 78	5	3721	1587	9	1
## 79	5	3721	1587	9	1
## 80	5	3721	1587	9	1
## 81	5	3721	1587	9	1
## 82	5	3721	1587	9	1
## 83	5	3721	1587	9	1
## 84	5	3721	1587	9	1
## 85	5	3721	1587	9	1
## 86	5	3721	1587	9	1
## 87	5	3721	1587	9	1
## 88	5	3721	1587	9	1
## 89	5	3721	1587	9	1
## 90	5	3721	1587	9	1
## 91	5	3721	1587	9	1
## 92	5	3721	1587	9	1
## 93	5	3721	1587	9	1
## 94	5	3721	1587	9	1
## 95	5	3721	1587	9	1
## 96	5	3721	1587	9	1
## 97	0	2405	1447	9	7
## 98	0	2405	1447	9	7
## 99	0	2405	1447	9	7
## 100	0	2405	1447	9	7
##	Total_AfricanAmerican	Total_AmericanIndian	S_ES_Multiple_Races		
## 1	147	770	94		
## 2	147	770	94		
## 3	147	770	94		
## 4	147	770	94		
## 5	147	770	94		
## 6	147	770	94		
## 7	147	770	94		
## 8	147	770	94		
## 9	147	770	94		
## 10	147	770	94		
## 11	147	770	94		
## 12	147	770	94		
## 13	147	770	94		
## 14	147	770	94		
## 15	147	770	94		
## 16	147	770	94		
## 17	147	770	94		
## 18	147	770	94		
## 19	147	770	94		
## 20	147	770	94		
## 21	147	770	94		
## 22	147	770	94		
## 23	147	770	94		
## 24	147	770	94		
## 25	147	770	94		
## 26	147	770	94		
## 27	147	770	94		
## 28	147	770	94		
## 29	147	770	94		
## 30	2064	21	56		

## 31	2064	21	56
## 32	2064	21	56
## 33	2064	21	56
## 34	2064	21	56
## 35	2064	21	56
## 36	2064	21	56
## 37	2064	21	56
## 38	2064	21	56
## 39	2064	21	56
## 40	2064	21	56
## 41	2064	21	56
## 42	2064	21	56
## 43	2064	21	56
## 44	2064	21	56
## 45	2064	21	56
## 46	2064	21	56
## 47	2064	21	56
## 48	2064	21	56
## 49	2064	21	56
## 50	2064	21	56
## 51	2064	21	56
## 52	2064	21	56
## 53	2064	21	56
## 54	2064	21	56
## 55	2064	21	56
## 56	2064	21	56
## 57	2064	21	56
## 58	2064	21	56
## 59	2064	21	56
## 60	2064	21	56
## 61	2064	21	56
## 62	2064	21	56
## 63	2064	21	56
## 64	2064	21	56
## 65	2064	21	56
## 66	2064	21	56
## 67	2064	21	56
## 68	2064	21	56
## 69	2064	21	56
## 70	2064	21	56
## 71	2064	21	56
## 72	2064	21	56
## 73	2064	21	56
## 74	2064	21	56
## 75	2064	21	56
## 76	2064	21	56
## 77	2064	21	56
## 78	2064	21	56
## 79	2064	21	56
## 80	2064	21	56
## 81	2064	21	56
## 82	2064	21	56
## 83	2064	21	56
## 84	2064	21	56

## 85	2064	21	56
## 86	2064	21	56
## 87	2064	21	56
## 88	2064	21	56
## 89	2064	21	56
## 90	2064	21	56
## 91	2064	21	56
## 92	2064	21	56
## 93	2064	21	56
## 94	2064	21	56
## 95	2064	21	56
## 96	2064	21	56
## 97	892	24	40
## 98	892	24	40
## 99	892	24	40
## 100	892	24	40
##	TOTAL_YEAR_BED	TOTAL_YEAR_BED_ES	TOTAL_YEAR_BED_TH TOTAL_YEAR_BED_SH
## 1	1828	1130	698 0
## 2	1828	1130	698 0
## 3	1828	1130	698 0
## 4	1828	1130	698 0
## 5	1828	1130	698 0
## 6	1828	1130	698 0
## 7	1828	1130	698 0
## 8	1828	1130	698 0
## 9	1828	1130	698 0
## 10	1828	1130	698 0
## 11	1828	1130	698 0
## 12	1828	1130	698 0
## 13	1828	1130	698 0
## 14	1828	1130	698 0
## 15	1828	1130	698 0
## 16	1828	1130	698 0
## 17	1828	1130	698 0
## 18	1828	1130	698 0
## 19	1828	1130	698 0
## 20	1828	1130	698 0
## 21	1828	1130	698 0
## 22	1828	1130	698 0
## 23	1828	1130	698 0
## 24	1828	1130	698 0
## 25	1828	1130	698 0
## 26	1828	1130	698 0
## 27	1828	1130	698 0
## 28	1828	1130	698 0
## 29	1828	1130	698 0
## 30	3444	2073	1334 37
## 31	3444	2073	1334 37
## 32	3444	2073	1334 37
## 33	3444	2073	1334 37
## 34	3444	2073	1334 37
## 35	3444	2073	1334 37
## 36	3444	2073	1334 37
## 37	3444	2073	1334 37

## 38	3444	2073	1334	37
## 39	3444	2073	1334	37
## 40	3444	2073	1334	37
## 41	3444	2073	1334	37
## 42	3444	2073	1334	37
## 43	3444	2073	1334	37
## 44	3444	2073	1334	37
## 45	3444	2073	1334	37
## 46	3444	2073	1334	37
## 47	3444	2073	1334	37
## 48	3444	2073	1334	37
## 49	3444	2073	1334	37
## 50	3444	2073	1334	37
## 51	3444	2073	1334	37
## 52	3444	2073	1334	37
## 53	3444	2073	1334	37
## 54	3444	2073	1334	37
## 55	3444	2073	1334	37
## 56	3444	2073	1334	37
## 57	3444	2073	1334	37
## 58	3444	2073	1334	37
## 59	3444	2073	1334	37
## 60	3444	2073	1334	37
## 61	3444	2073	1334	37
## 62	3444	2073	1334	37
## 63	3444	2073	1334	37
## 64	3444	2073	1334	37
## 65	3444	2073	1334	37
## 66	3444	2073	1334	37
## 67	3444	2073	1334	37
## 68	3444	2073	1334	37
## 69	3444	2073	1334	37
## 70	3444	2073	1334	37
## 71	3444	2073	1334	37
## 72	3444	2073	1334	37
## 73	3444	2073	1334	37
## 74	3444	2073	1334	37
## 75	3444	2073	1334	37
## 76	3444	2073	1334	37
## 77	3444	2073	1334	37
## 78	3444	2073	1334	37
## 79	3444	2073	1334	37
## 80	3444	2073	1334	37
## 81	3444	2073	1334	37
## 82	3444	2073	1334	37
## 83	3444	2073	1334	37
## 84	3444	2073	1334	37
## 85	3444	2073	1334	37
## 86	3444	2073	1334	37
## 87	3444	2073	1334	37
## 88	3444	2073	1334	37
## 89	3444	2073	1334	37
## 90	3444	2073	1334	37
## 91	3444	2073	1334	37

## 92	3444	2073	1334	37			
## 93	3444	2073	1334	37			
## 94	3444	2073	1334	37			
## 95	3444	2073	1334	37			
## 96	3444	2073	1334	37			
## 97	2062	1513	549	0			
## 98	2062	1513	549	0			
## 99	2062	1513	549	0			
## 100	2062	1513	549	0			
##	Population	Employment	Poverty	DepressPCT	CrimeViolence	rent50_1	rent50_2
## 1	740983	329200	87000	0.185	6338	978	1128
## 2	740983	329200	87000	0.185	6338	792	1052
## 3	740983	329200	87000	0.185	6338	899	1037
## 4	740983	329200	87000	0.185	6338	1081	1374
## 5	740983	329200	87000	0.185	6338	1068	1398
## 6	740983	329200	87000	0.185	6338	1009	1341
## 7	740983	329200	87000	0.185	6338	922	1226
## 8	740983	329200	87000	0.185	6338	836	1068
## 9	740983	329200	87000	0.185	6338	991	1265
## 10	740983	329200	87000	0.185	6338	1395	1609
## 11	740983	329200	87000	0.185	6338	1191	1374
## 12	740983	329200	87000	0.185	6338	1153	1330
## 13	740983	329200	87000	0.185	6338	828	1100
## 14	740983	329200	87000	0.185	6338	827	1099
## 15	740983	329200	87000	0.185	6338	665	875
## 16	740983	329200	87000	0.185	6338	1182	1571
## 17	740983	329200	87000	0.185	6338	931	1195
## 18	740983	329200	87000	0.185	6338	1122	1295
## 19	740983	329200	87000	0.185	6338	891	1144
## 20	740983	329200	87000	0.185	6338	1226	1415
## 21	740983	329200	87000	0.185	6338	1349	1723
## 22	740983	329200	87000	0.185	6338	825	952
## 23	740983	329200	87000	0.185	6338	699	892
## 24	740983	329200	87000	0.185	6338	1202	1555
## 25	740983	329200	87000	0.185	6338	1372	1752
## 26	740983	329200	87000	0.185	6338	1357	1803
## 27	740983	329200	87000	0.185	6338	1144	1320
## 28	740983	329200	87000	0.185	6338	989	1315
## 29	740983	329200	87000	0.185	6338	1061	1370
## 30	4877989	2018700	735000	0.238	25469	529	672
## 31	4877989	2018700	735000	0.238	25469	536	636
## 32	4877989	2018700	735000	0.238	25469	553	710
## 33	4877989	2018700	735000	0.238	25469	480	621
## 34	4877989	2018700	735000	0.238	25469	684	831
## 35	4877989	2018700	735000	0.238	25469	665	800
## 36	4877989	2018700	735000	0.238	25469	503	669
## 37	4877989	2018700	735000	0.238	25469	631	836
## 38	4877989	2018700	735000	0.238	25469	566	709
## 39	4877989	2018700	735000	0.238	25469	475	621
## 40	4877989	2018700	735000	0.238	25469	735	886
## 41	4877989	2018700	735000	0.238	25469	908	1047
## 42	4877989	2018700	735000	0.238	25469	538	621
## 43	4877989	2018700	735000	0.238	25469	538	621
## 44	4877989	2018700	735000	0.238	25469	539	716

## 45	4877989	2018700	735000	0.238	25469	560	658
## 46	4877989	2018700	735000	0.238	25469	557	689
## 47	4877989	2018700	735000	0.238	25469	529	639
## 48	4877989	2018700	735000	0.238	25469	515	621
## 49	4877989	2018700	735000	0.238	25469	812	937
## 50	4877989	2018700	735000	0.238	25469	812	937
## 51	4877989	2018700	735000	0.238	25469	467	621
## 52	4877989	2018700	735000	0.238	25469	812	937
## 53	4877989	2018700	735000	0.238	25469	545	725
## 54	4877989	2018700	735000	0.238	25469	812	937
## 55	4877989	2018700	735000	0.238	25469	702	841
## 56	4877989	2018700	735000	0.238	25469	570	658
## 57	4877989	2018700	735000	0.238	25469	467	621
## 58	4877989	2018700	735000	0.238	25469	568	714
## 59	4877989	2018700	735000	0.238	25469	501	666
## 60	4877989	2018700	735000	0.238	25469	545	665
## 61	4877989	2018700	735000	0.238	25469	538	621
## 62	4877989	2018700	735000	0.238	25469	735	886
## 63	4877989	2018700	735000	0.238	25469	545	678
## 64	4877989	2018700	735000	0.238	25469	545	678
## 65	4877989	2018700	735000	0.238	25469	494	621
## 66	4877989	2018700	735000	0.238	25469	467	621
## 67	4877989	2018700	735000	0.238	25469	735	886
## 68	4877989	2018700	735000	0.238	25469	485	644
## 69	4877989	2018700	735000	0.238	25469	684	831
## 70	4877989	2018700	735000	0.238	25469	494	621
## 71	4877989	2018700	735000	0.238	25469	553	710
## 72	4877989	2018700	735000	0.238	25469	638	797
## 73	4877989	2018700	735000	0.238	25469	528	664
## 74	4877989	2018700	735000	0.238	25469	812	937
## 75	4877989	2018700	735000	0.238	25469	506	672
## 76	4877989	2018700	735000	0.238	25469	538	621
## 77	4877989	2018700	735000	0.238	25469	510	621
## 78	4877989	2018700	735000	0.238	25469	646	859
## 79	4877989	2018700	735000	0.238	25469	665	800
## 80	4877989	2018700	735000	0.238	25469	467	621
## 81	4877989	2018700	735000	0.238	25469	570	758
## 82	4877989	2018700	735000	0.238	25469	543	722
## 83	4877989	2018700	735000	0.238	25469	474	621
## 84	4877989	2018700	735000	0.238	25469	492	654
## 85	4877989	2018700	735000	0.238	25469	538	621
## 86	4877989	2018700	735000	0.238	25469	518	689
## 87	4877989	2018700	735000	0.238	25469	563	650
## 88	4877989	2018700	735000	0.238	25469	783	954
## 89	4877989	2018700	735000	0.238	25469	564	713
## 90	4877989	2018700	735000	0.238	25469	735	886
## 91	4877989	2018700	735000	0.238	25469	600	718
## 92	4877989	2018700	735000	0.238	25469	592	778
## 93	4877989	2018700	735000	0.238	25469	547	717
## 94	4877989	2018700	735000	0.238	25469	530	705
## 95	4877989	2018700	735000	0.238	25469	594	707
## 96	4877989	2018700	735000	0.238	25469	564	713
## 97	3003855	1248700	436000	0.248	16996	486	611
## 98	3003855	1248700	436000	0.248	16996	496	659

## 99	3003855	1248700	436000	0.248	16996	543	722
## 100	3003855	1248700	436000	0.248	16996	538	696
##	rent50_3	rent50_4	Statename	ave_f	ave_c	weather_rank	
## 1	1411	1555	Alaska	26.6	-3.0	50	
## 2	1415	1633	Alaska	26.6	-3.0	50	
## 3	1342	1610	Alaska	26.6	-3.0	50	
## 4	2000	2421	Alaska	26.6	-3.0	50	
## 5	1828	2421	Alaska	26.6	-3.0	50	
## 6	1952	2363	Alaska	26.6	-3.0	50	
## 7	1534	1903	Alaska	26.6	-3.0	50	
## 8	1336	1472	Alaska	26.6	-3.0	50	
## 9	1583	1964	Alaska	26.6	-3.0	50	
## 10	2013	2218	Alaska	26.6	-3.0	50	
## 11	1858	2133	Alaska	26.6	-3.0	50	
## 12	1781	2343	Alaska	26.6	-3.0	50	
## 13	1601	1938	Alaska	26.6	-3.0	50	
## 14	1375	1515	Alaska	26.6	-3.0	50	
## 15	1095	1542	Alaska	26.6	-3.0	50	
## 16	2260	2516	Alaska	26.6	-3.0	50	
## 17	1560	1903	Alaska	26.6	-3.0	50	
## 18	1885	2282	Alaska	26.6	-3.0	50	
## 19	1431	1577	Alaska	26.6	-3.0	50	
## 20	1770	1950	Alaska	26.6	-3.0	50	
## 21	2230	2675	Alaska	26.6	-3.0	50	
## 22	1191	1478	Alaska	26.6	-3.0	50	
## 23	1225	1230	Alaska	26.6	-3.0	50	
## 24	2264	2414	Alaska	26.6	-3.0	50	
## 25	2192	2415	Alaska	26.6	-3.0	50	
## 26	2256	2799	Alaska	26.6	-3.0	50	
## 27	1922	2326	Alaska	26.6	-3.0	50	
## 28	1647	1813	Alaska	26.6	-3.0	50	
## 29	1902	2127	Alaska	26.6	-3.0	50	
## 30	943	1184	Alabama	62.8	17.1	7	
## 31	796	908	Alabama	62.8	17.1	7	
## 32	955	1128	Alabama	62.8	17.1	7	
## 33	818	1029	Alabama	62.8	17.1	7	
## 34	1067	1145	Alabama	62.8	17.1	7	
## 35	1088	1410	Alabama	62.8	17.1	7	
## 36	890	956	Alabama	62.8	17.1	7	
## 37	1050	1152	Alabama	62.8	17.1	7	
## 38	905	977	Alabama	62.8	17.1	7	
## 39	904	1012	Alabama	62.8	17.1	7	
## 40	1136	1536	Alabama	62.8	17.1	7	
## 41	1524	1751	Alabama	62.8	17.1	7	
## 42	884	887	Alabama	62.8	17.1	7	
## 43	784	1094	Alabama	62.8	17.1	7	
## 44	989	1027	Alabama	62.8	17.1	7	
## 45	953	1054	Alabama	62.8	17.1	7	
## 46	911	1052	Alabama	62.8	17.1	7	
## 47	844	1050	Alabama	62.8	17.1	7	
## 48	818	887	Alabama	62.8	17.1	7	
## 49	1258	1405	Alabama	62.8	17.1	7	
## 50	1258	1405	Alabama	62.8	17.1	7	
## 51	853	856	Alabama	62.8	17.1	7	

## 52	1258	1405	Alabama	62.8	17.1	7
## 53	907	1036	Alabama	62.8	17.1	7
## 54	1258	1405	Alabama	62.8	17.1	7
## 55	1171	1482	Alabama	62.8	17.1	7
## 56	958	1159	Alabama	62.8	17.1	7
## 57	884	887	Alabama	62.8	17.1	7
## 58	954	1020	Alabama	62.8	17.1	7
## 59	879	1173	Alabama	62.8	17.1	7
## 60	832	917	Alabama	62.8	17.1	7
## 61	860	1046	Alabama	62.8	17.1	7
## 62	1136	1536	Alabama	62.8	17.1	7
## 63	903	947	Alabama	62.8	17.1	7
## 64	903	947	Alabama	62.8	17.1	7
## 65	884	887	Alabama	62.8	17.1	7
## 66	887	1094	Alabama	62.8	17.1	7
## 67	1136	1536	Alabama	62.8	17.1	7
## 68	884	888	Alabama	62.8	17.1	7
## 69	1067	1145	Alabama	62.8	17.1	7
## 70	884	887	Alabama	62.8	17.1	7
## 71	955	1128	Alabama	62.8	17.1	7
## 72	997	1099	Alabama	62.8	17.1	7
## 73	912	915	Alabama	62.8	17.1	7
## 74	1258	1405	Alabama	62.8	17.1	7
## 75	873	979	Alabama	62.8	17.1	7
## 76	884	887	Alabama	62.8	17.1	7
## 77	884	887	Alabama	62.8	17.1	7
## 78	1157	1402	Alabama	62.8	17.1	7
## 79	1088	1410	Alabama	62.8	17.1	7
## 80	807	891	Alabama	62.8	17.1	7
## 81	948	1045	Alabama	62.8	17.1	7
## 82	903	1031	Alabama	62.8	17.1	7
## 83	876	887	Alabama	62.8	17.1	7
## 84	894	1152	Alabama	62.8	17.1	7
## 85	896	1003	Alabama	62.8	17.1	7
## 86	981	984	Alabama	62.8	17.1	7
## 87	837	923	Alabama	62.8	17.1	7
## 88	1244	1440	Alabama	62.8	17.1	7
## 89	950	1156	Alabama	62.8	17.1	7
## 90	1136	1536	Alabama	62.8	17.1	7
## 91	1045	1265	Alabama	62.8	17.1	7
## 92	973	1117	Alabama	62.8	17.1	7
## 93	1027	1046	Alabama	62.8	17.1	7
## 94	882	1009	Alabama	62.8	17.1	7
## 95	971	975	Alabama	62.8	17.1	7
## 96	950	1156	Alabama	62.8	17.1	7
## 97	836	897	Arkansas	60.4	15.8	9
## 98	857	908	Arkansas	60.4	15.8	9
## 99	903	995	Arkansas	60.4	15.8	9
## 100	871	1058	Arkansas	60.4	15.8	9

```
#kable(usfacts_df, caption="US Homeless Data 2017 - 2020")
```

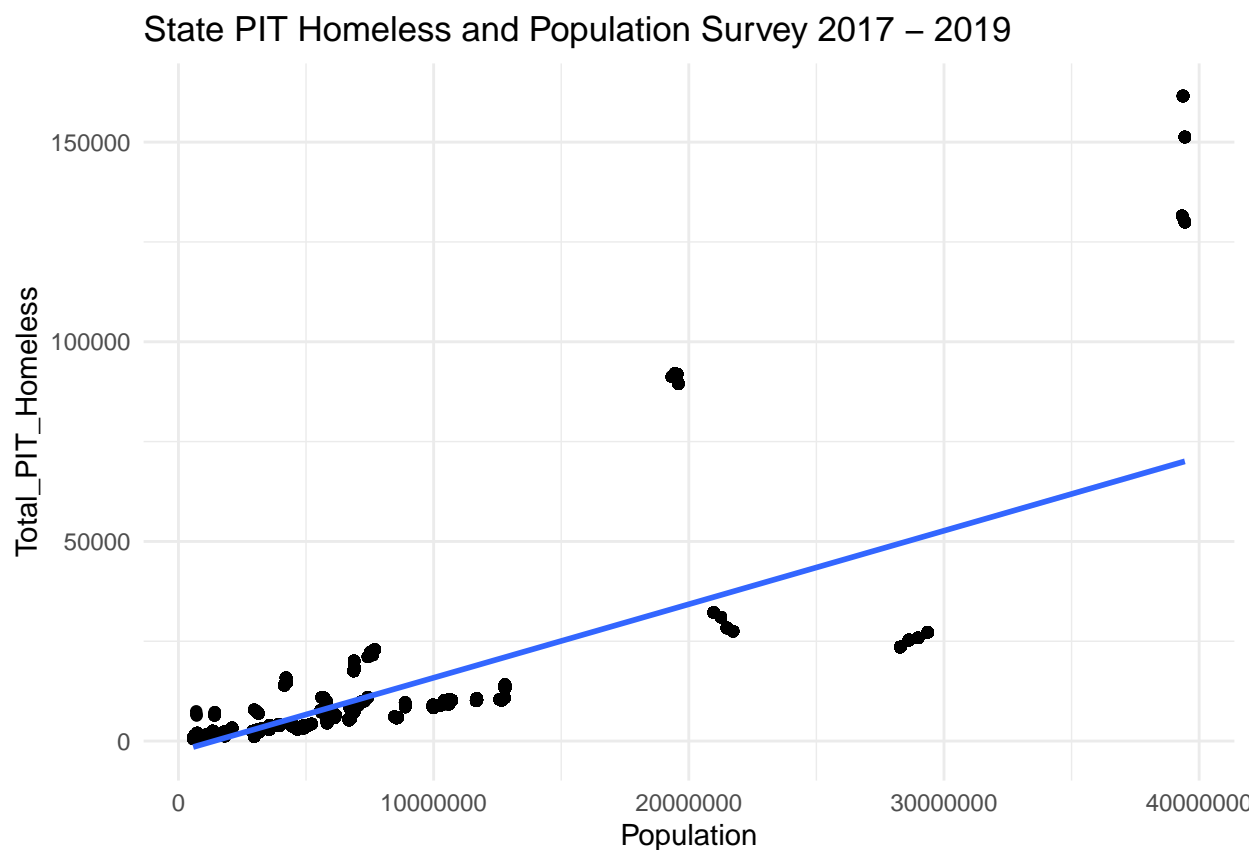
```
#New Variables
```

```
us_homeless_df$homeless_pop_ratio<- us_homeless_df$Total_PIT_Homeless/us_homeless_df$Population
```

The following scatter plots are generated to identify relationship of the different USFACTS variables with the PIT Homeless count.

```
#ggplot(us_homeless_df, aes(homeless_pop_ratio)) + geom_histogram(bins = 10, aes(y = ..density..)) + gg
# Adding regression line to identify relationship between the PIT Homeless count with the different fac
#ggplot(data=us_homeless_df, aes(x=State, y=Total_PIT_Homeless)) + geom_bar() + ggtitle("State PIT Home
ggplot(data=us_homeless_df, aes(x=Population, y=Total_PIT_Homeless)) + geom_point() + geom_smooth(method="lm")
```

```
## 'geom_smooth()' using formula 'y ~ x'
```



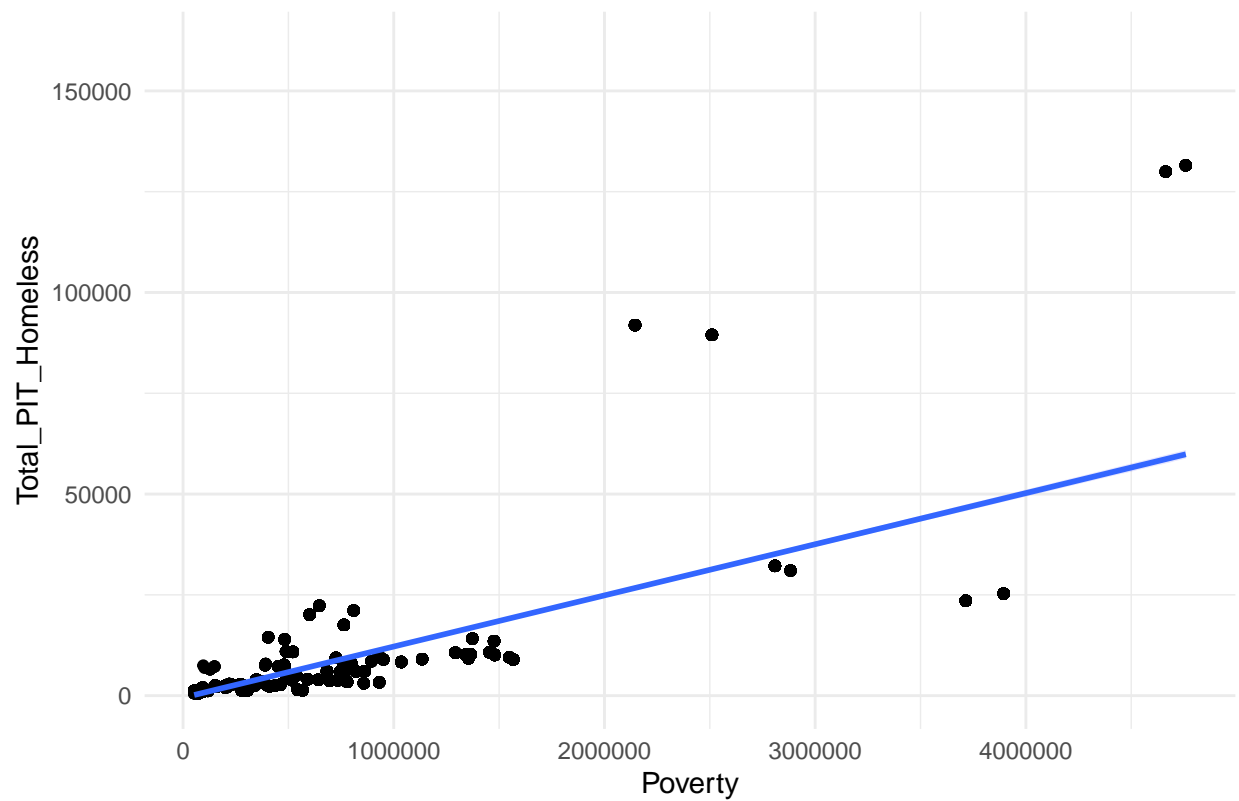
```
ggplot(data=us_homeless_df, aes(x=Poverty, y=Total_PIT_Homeless)) + geom_point() + geom_smooth(method="lm")
```

```
## 'geom_smooth()' using formula 'y ~ x'
```

```
## Warning: Removed 9367 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 9367 rows containing missing values (geom_point).
```

State PIT Homeless and Poverty Survey 2017 – 2019



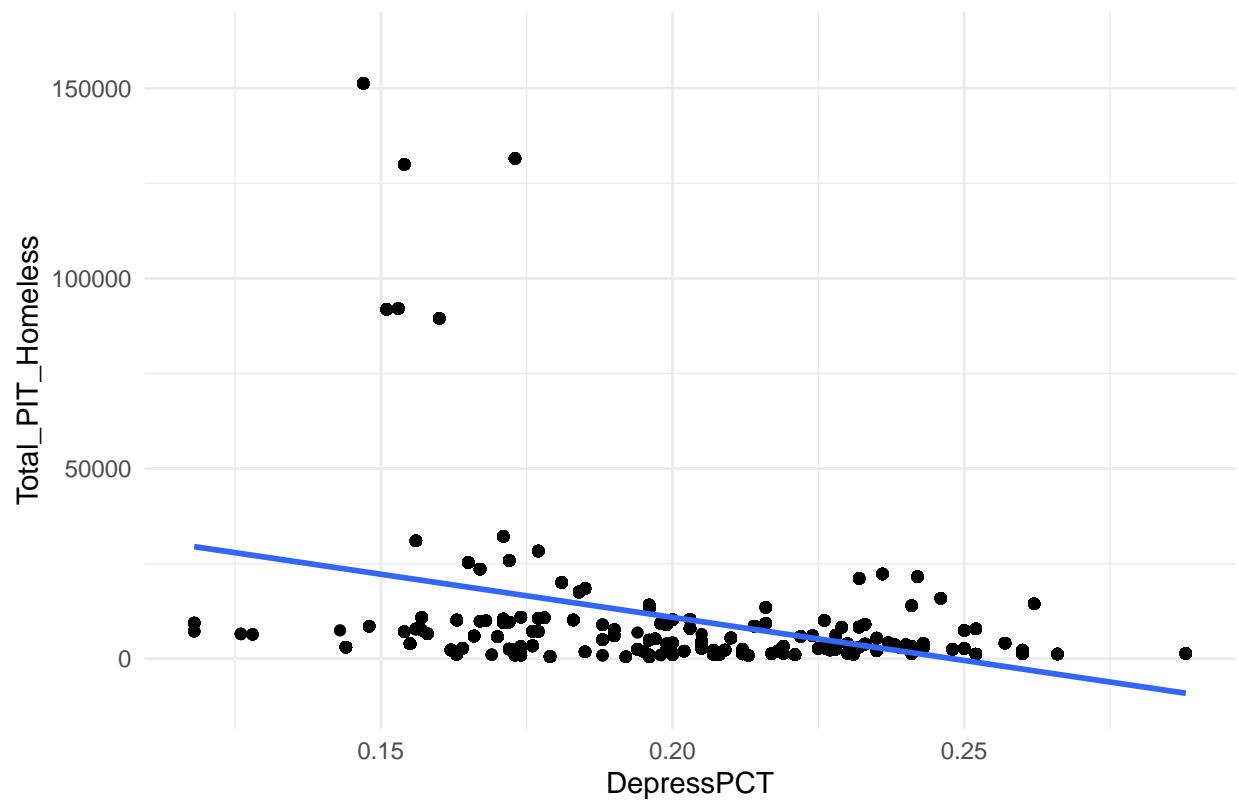
```
ggplot(data=us_homeless_df, aes(x=DepressPCT, y=Total_PIT_Homeless)) + geom_point() + geom_smooth(method="lm")
```

```
## 'geom_smooth()' using formula 'y ~ x'
```

```
## Warning: Removed 4704 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 4704 rows containing missing values (geom_point).
```

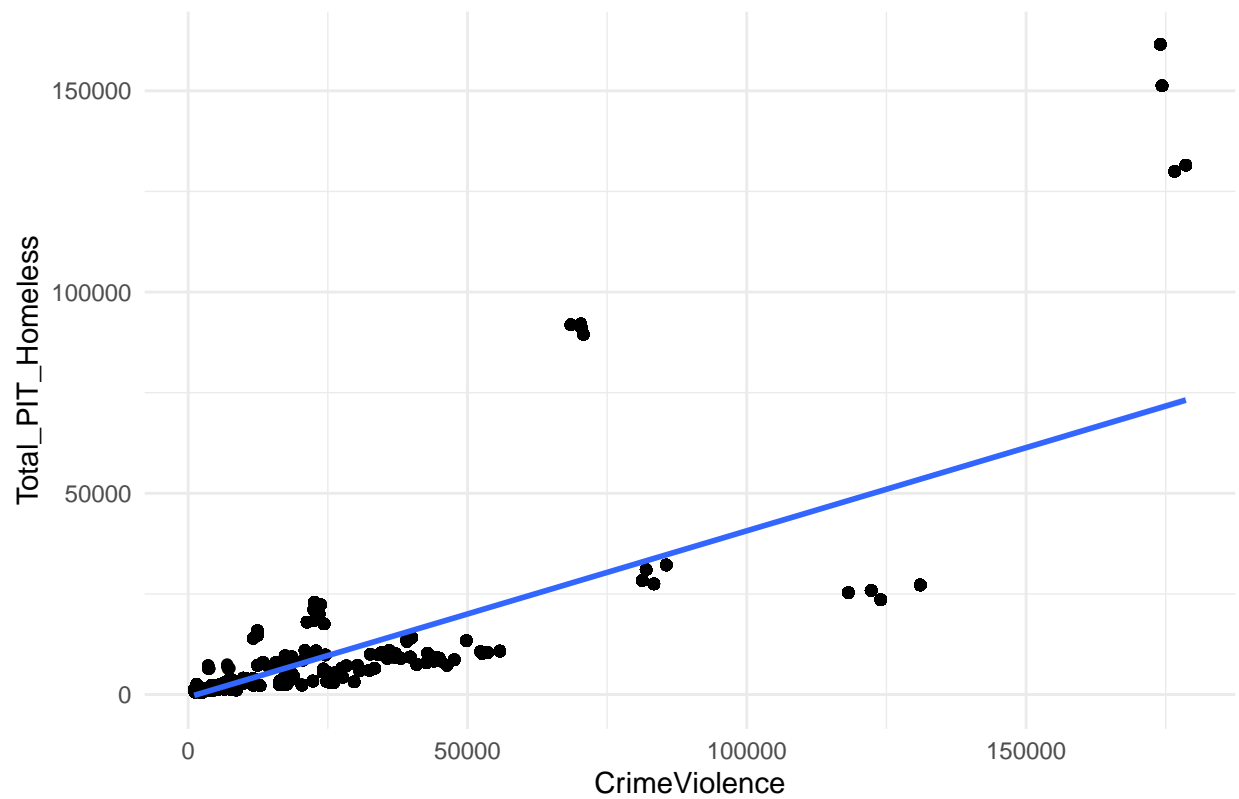

State PIT Homeless and Rate of people with Depression Survey 2017 –



```
ggplot(data=us_homeless_df, aes(x=CrimeViolence, y=Total_PIT_Homeless)) + geom_point() + geom_smooth(me
```

```
## 'geom_smooth()' using formula 'y ~ x'
```

State PIT Homeless and CrimeViolence 2017 – 2019



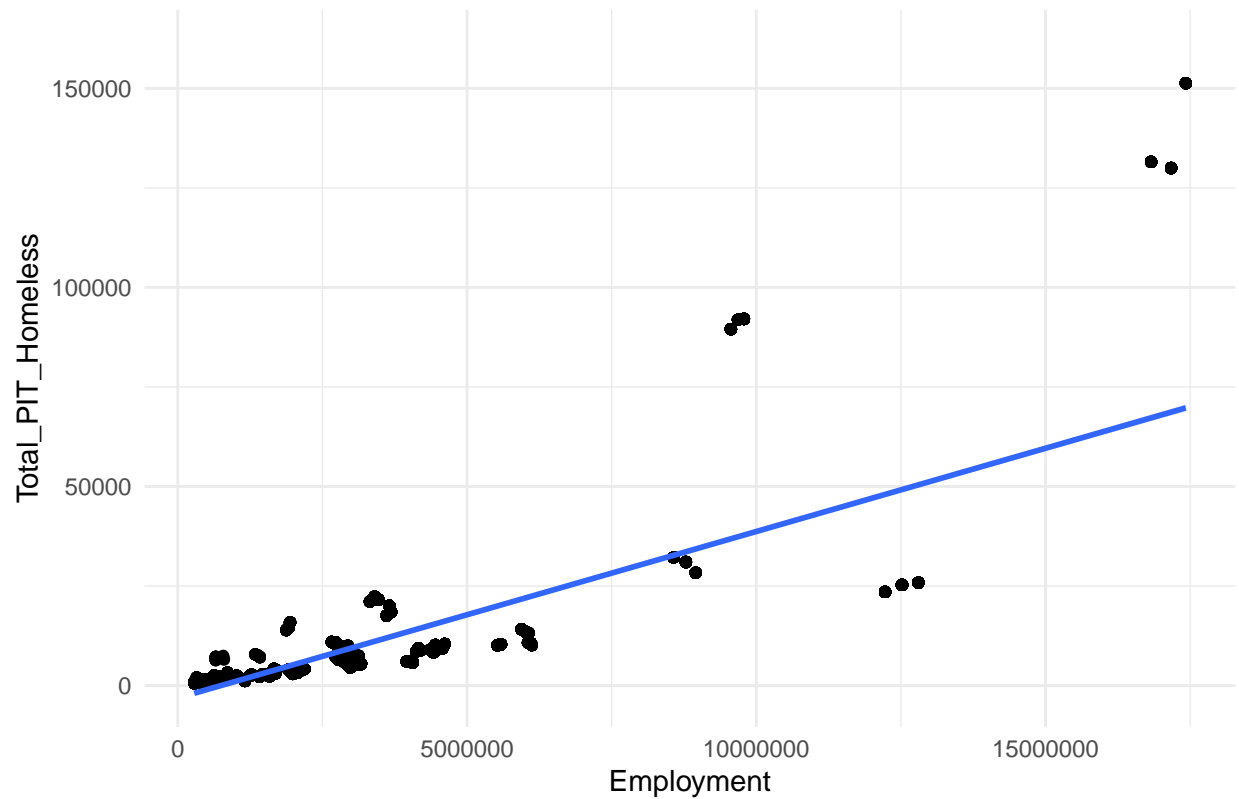
```
ggplot(data=us_homeless_df, aes(x=Employment, y=Total_PIT_Homeless)) + geom_point() + geom_smooth(method="lm")
```

```
## 'geom_smooth()' using formula 'y ~ x'
```

```
## Warning: Removed 4683 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 4683 rows containing missing values (geom_point).
```

State PIT Homeless and Employment Rate 2017 – 2019

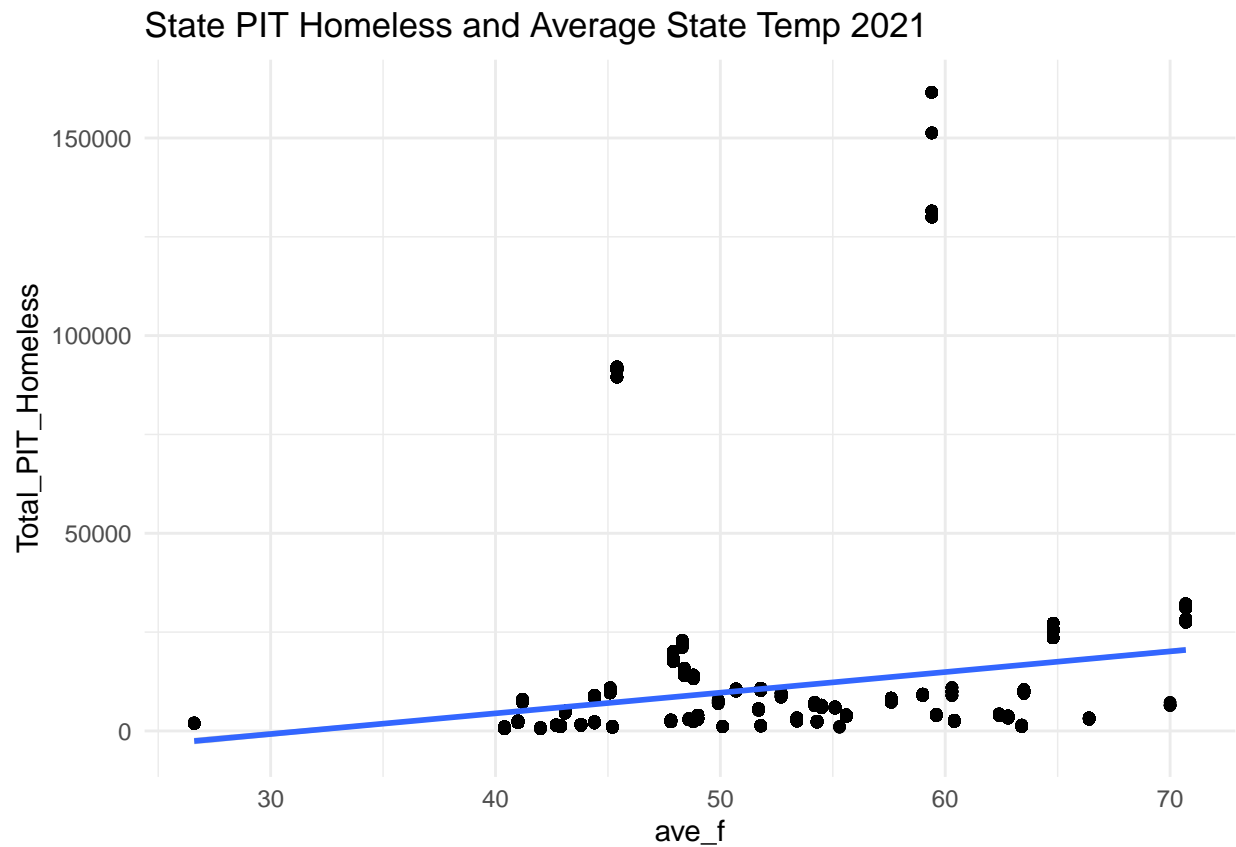


```
ggplot(data=us_homeless_df, aes(x=ave_f, y=Total_PIT_Homeless) ) + geom_point() + geom_smooth(method="lm")
```

```
## 'geom_smooth()' using formula 'y ~ x'
```

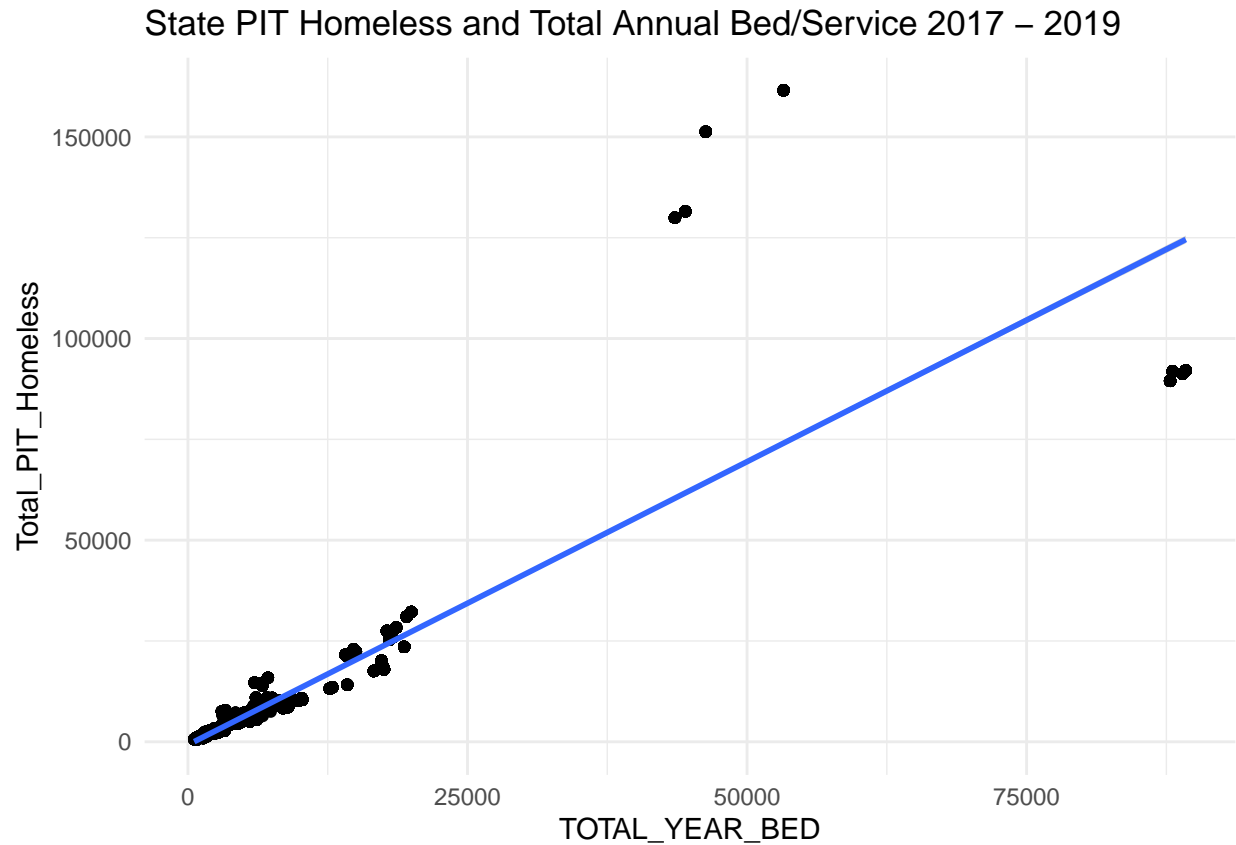
```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 4 rows containing missing values (geom_point).
```



```
ggplot(data=us_homeless_df, aes(x=TOTAL_YEAR_BED, y=Total_PIT_Homeless) ) + geom_point() + geom_smooth()
```

```
## 'geom_smooth()' using formula 'y ~ x'
```



Questions for future steps and Do you plan on incorporating any machine learning techniques to answer your research questions? Explain.

- Next step is to run Correlation Analysis using these different USFACTS variables with the Total PIT Homelessness and report the result.
- Data in the final dataset contains possible predictors that are quantitative continuous variables and the plot generated seem to indicate linear relationship with the TOTAL PIT Homelessness thus this can be used for generating a multiple linear regression model.