



From Rent to Roaming: The Impact of Rental prices on U.S Homelessness

Group Members: Everardo Garcia, Maritza Ahumada, Viktor Kabelkov, Marco Nigro,
and Dylan Sui

Introduction

The New York Times

Homelessness Rose to Record Level This Year, Government Says

The rise of 12 percent was the biggest one-year jump since the federal government began an annual count in 2007.

The Washington Post
Democracy Dies in Darkness

D.C., MD. & VA. The District Maryland Virginia Crime & Public Safety Local Education Obituaries Transportation Capital

Homelessness is at a record high in America. Volunteerism is declining.

A sharp rise in the number of people unsheltered for the first time drove the uptick. Meanwhile, fewer Americans are stepping up to help.



Perspective by Estela Dorral
Columnist

December 21, 2023 at 12:16 p.m. EST

The Washington Post
Democracy Dies in Darkness

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ECONOMY

A job? Check. A place to live? Not so much.

All over the country, companies are having a hard time hiring workers because there's no affordable — or available — housing nearby



By Rachel Siegel

November 18, 2023 at 6:00 a.m. EST

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U.S.

U.S. Homeless Count Surges 12% to Highest-Recorded Level

The Wall Street Journal previously reported nation on track for highest-recorded increase

By Jon Kamp [Follow](#) and Shannon Najmabadi [Follow](#)

Updated Dec. 15, 2023 3:33 p.m. ET

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Rising Rents Are Hitting American Suburbs Hardest

Suburban rent growth exceeds its urban counterpart in 28 of 33 metro areas, a new study finds

Many white-collar workers who left city apartments early in the pandemic are renting in the suburbs for longer periods because of higher interest rates.
ALLISON DINNER/PAHUTTERSTOCK

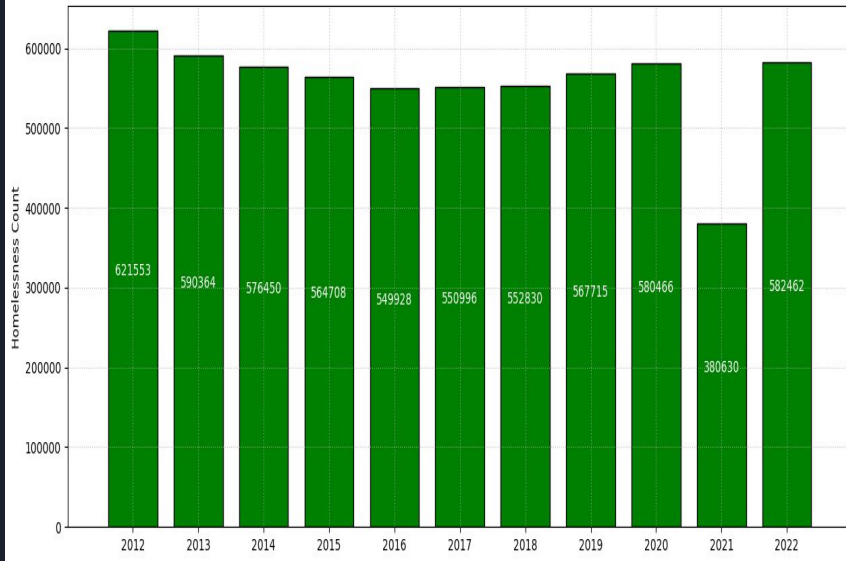
By Will Parker [Follow](#)

Sep. 6, 2023 12:04 a.m. ET

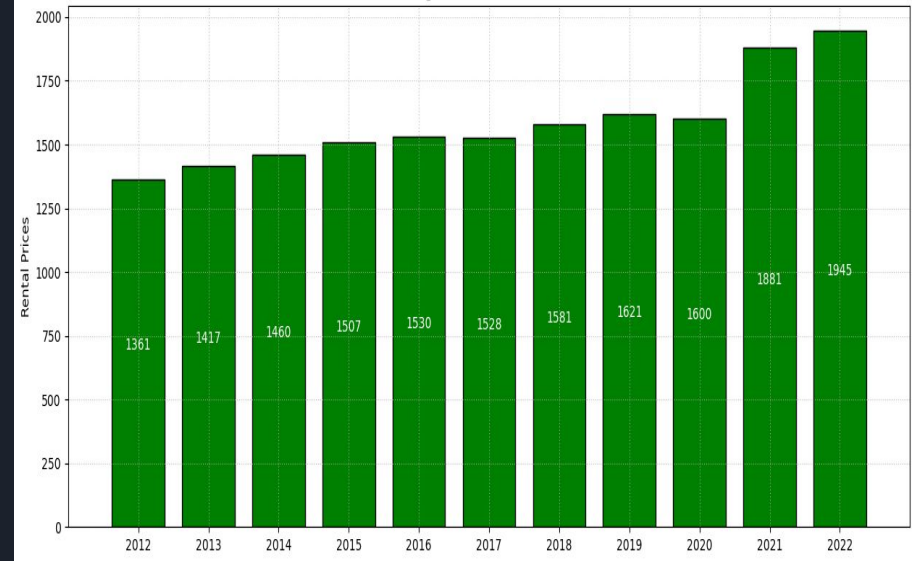
Does the number of homeless people correlate with rental prices?

Homeless Count vs Rental Average Prices in the US since 2012

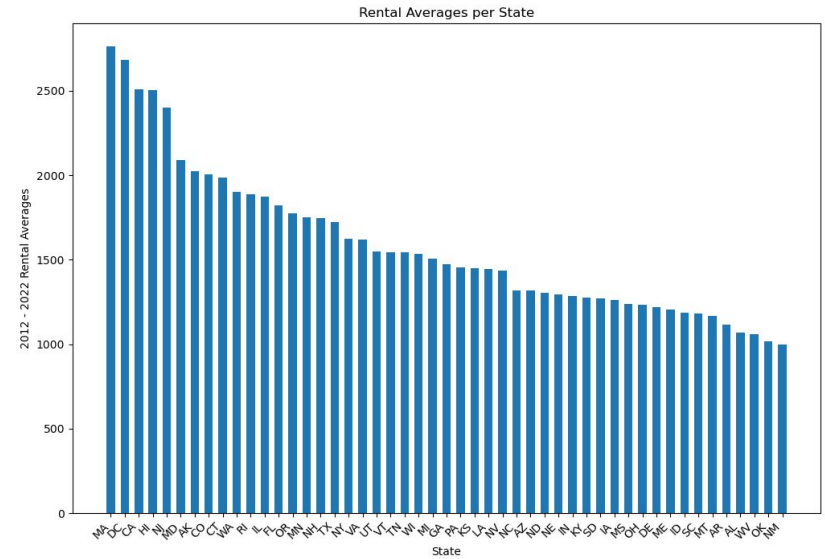
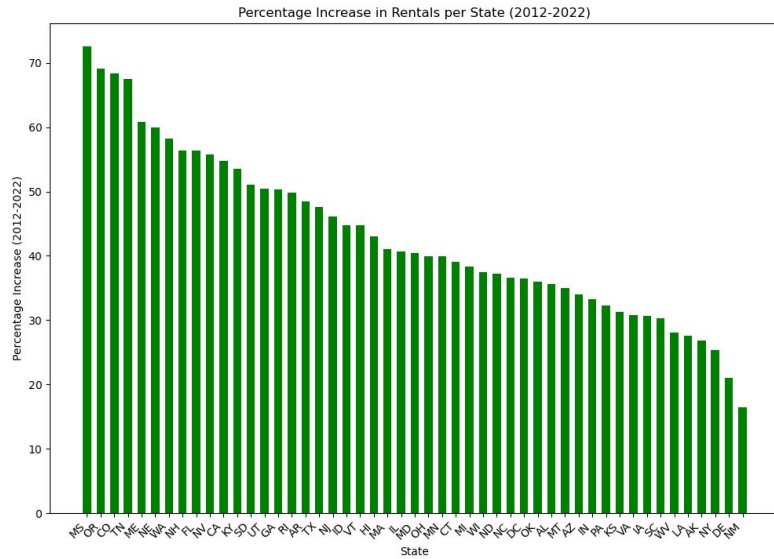
HUD Homeless Count in the US since 2012



Average Rental in US since 2012

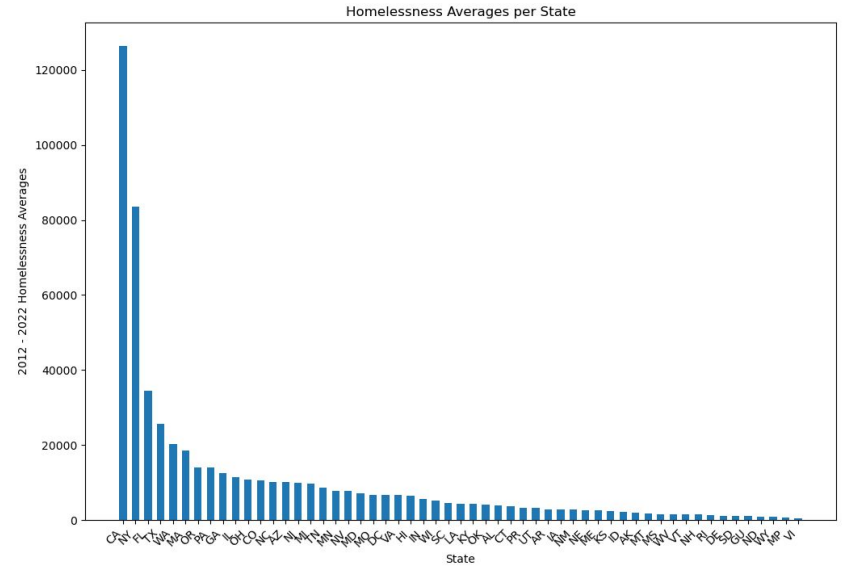
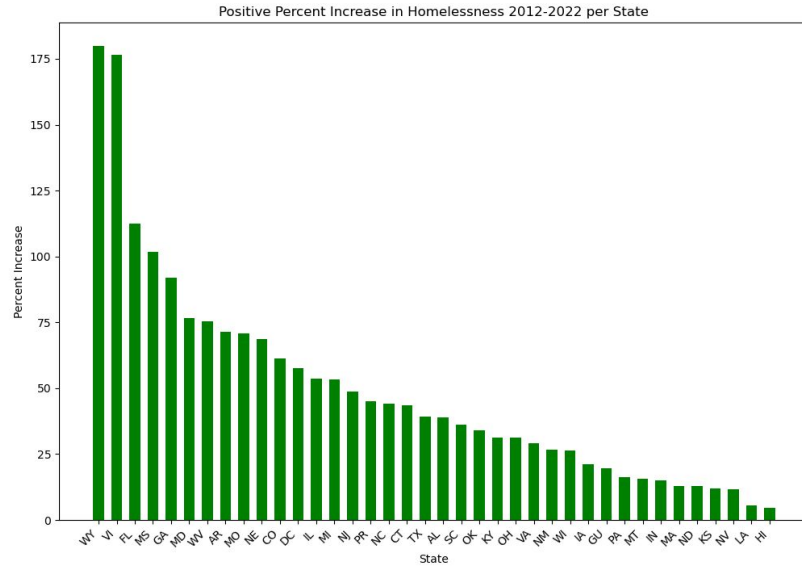


Rental Prices

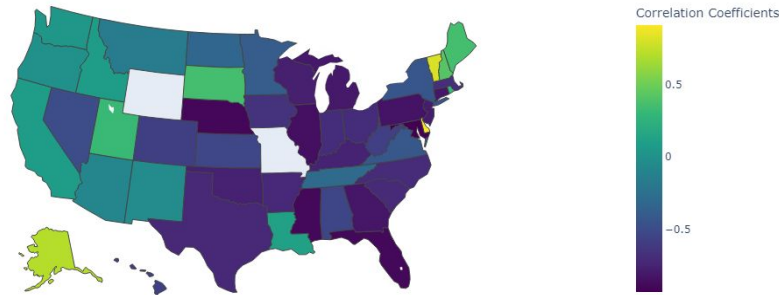


Homelessness per State

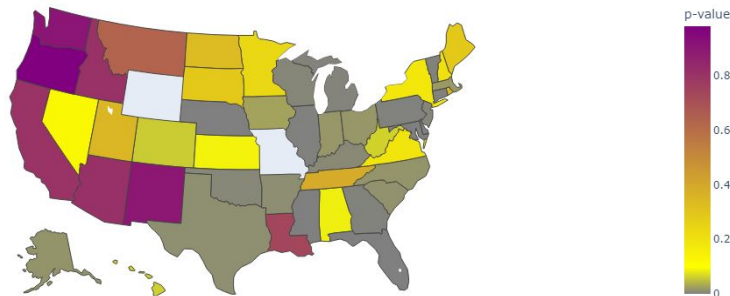
Homelessness percentage increase per state



Exploring the Relationship Between homelessness and Rental Prices

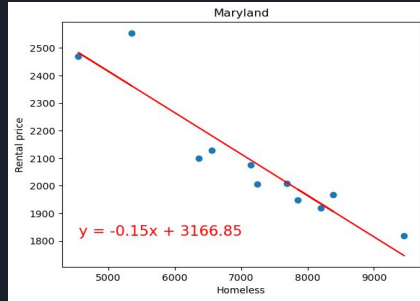


Several states in the East, Central, and Southern USA show a negative correlation between the number of homeless individuals and rental prices. In contrast, many states in the West show no clear correlation. Only a few states, such as Alaska, Delaware, and Vermont, demonstrate a positive correlation, indicating that an increase in rental prices is associated with a rise in the number of homeless individuals.



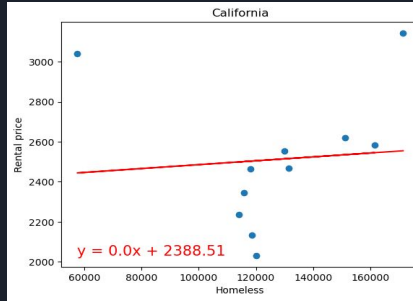
The quantification of the correlation analysis.

Negative - Correlation



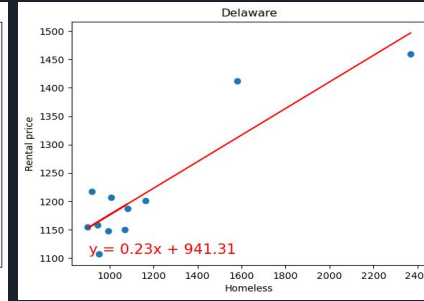
Correlation coefficient : -0.93

No - Correlation

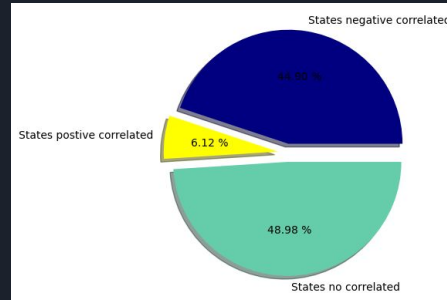


Correlation coefficient : 0.09

Positive - Correlation



Correlation coefficient : 0.91



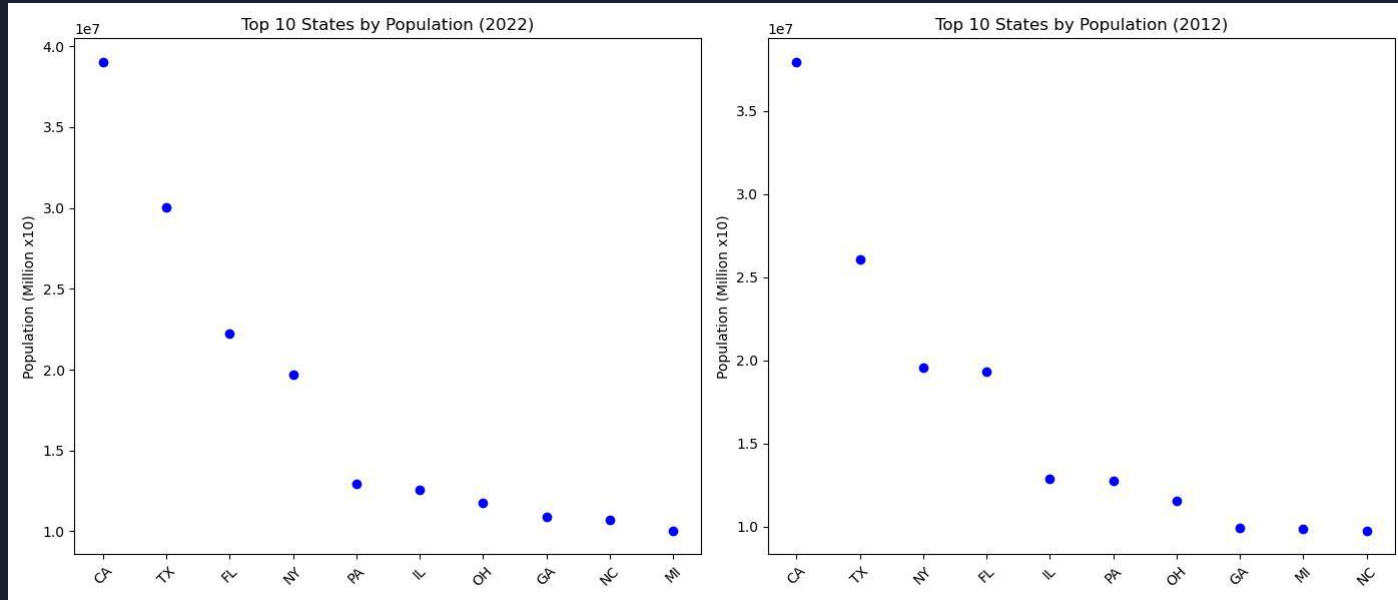
Critical_value = 5.99
Statistic_value = 16.45
p_value = 0.0003

Across states, there is a consistent pattern of either no correlation or a negative correlation between homelessness and rental prices, revealing two major trends: in the western USA, rental price variation is unrelated to homelessness, while in the East, Central, and Southern states, an increase in homelessness is linked to a reduction in rental prices, possibly as a response to the growing homeless population.

Top 10 states in USA by highest population in 2022 and 2012.

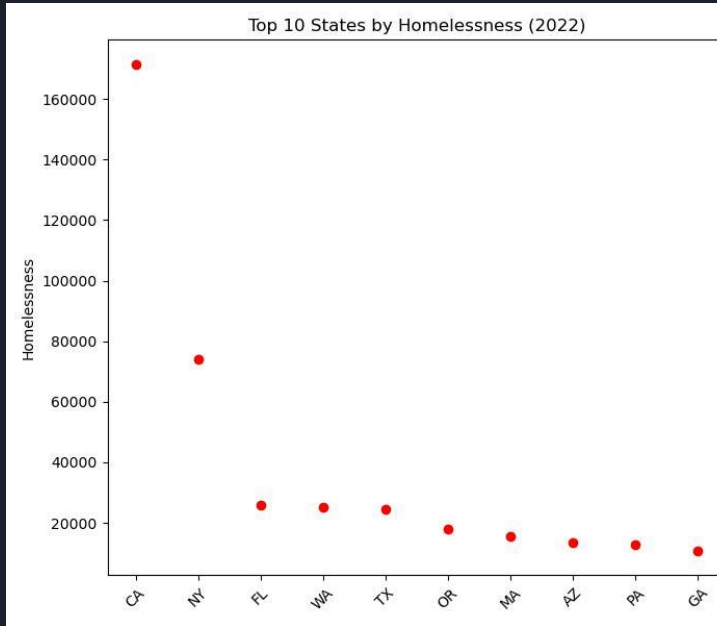
Total population in 2022: 326,512,614

Total population in 2012: 307,274,979

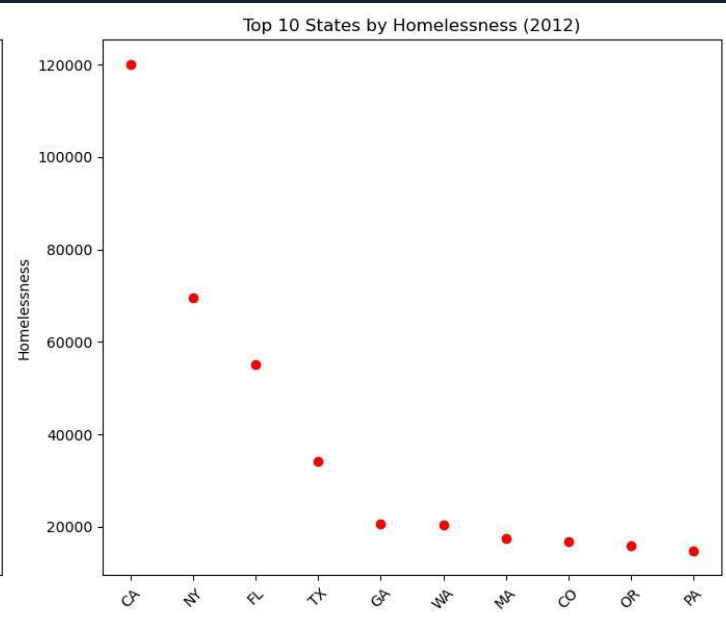


Top 10 states in USA by highest number of homeless in 2020 and 2012.

Total of homeless in 2022: 571,138



Total of homeless in 2012: 604,506



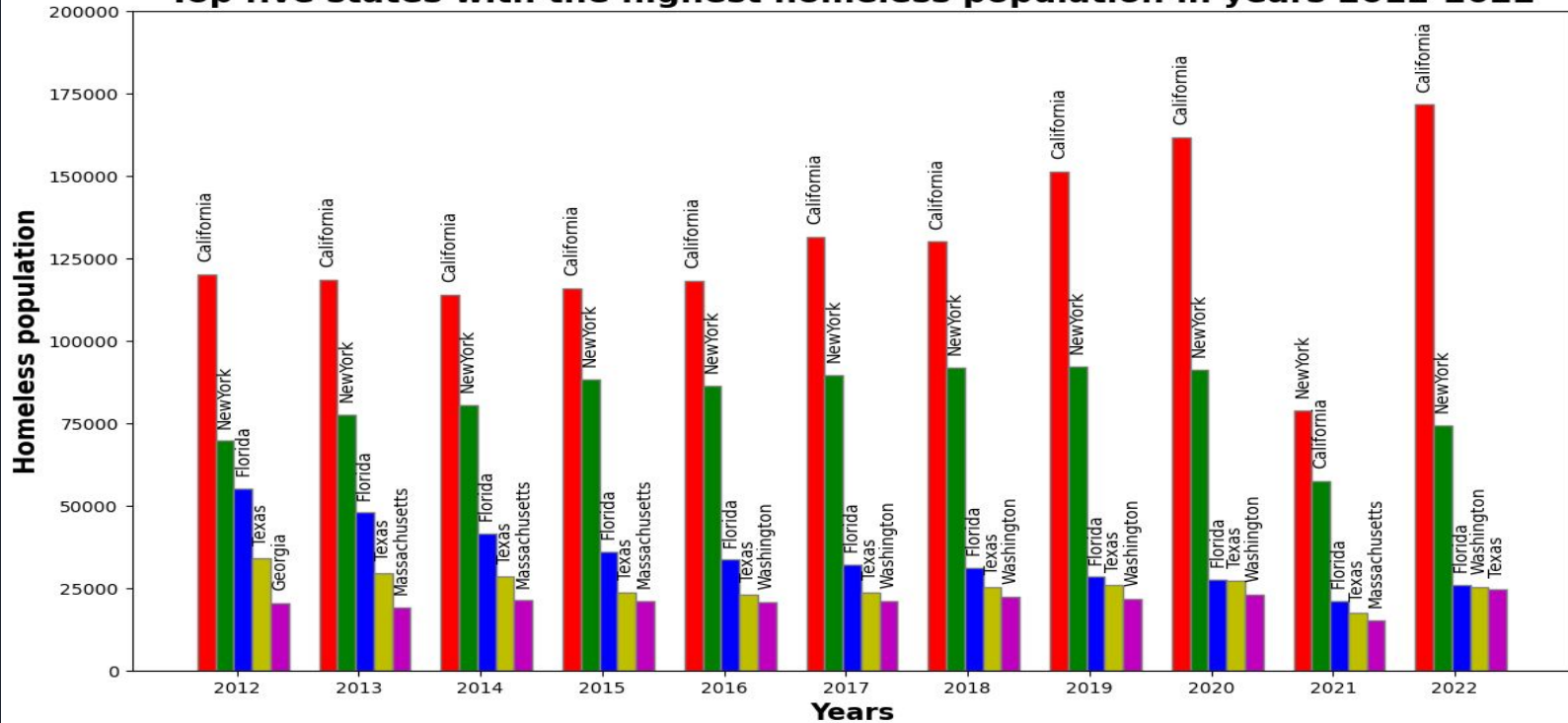
Correlation between
Population and Homelessness

0.7752122146731447

0.8554764530855836

Which states have the highest counts of homelessness?

Top five states with the highest homeless population in years 2012-2022



Top 5 states with highest number of homeless in USA in 2022



California:
- 171,521

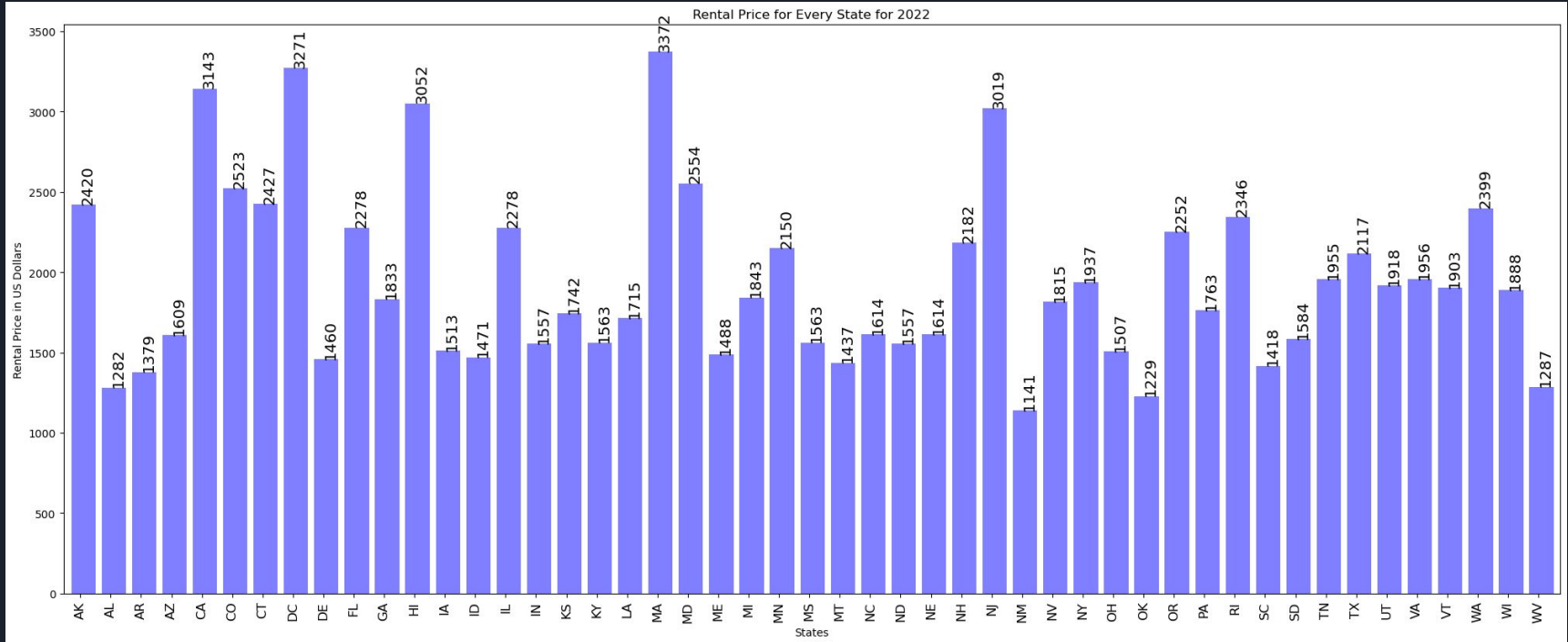
New York:
- 74,178

Florida:
- 25,959

Washington:
- 25,211

Texas:
- 24,432

Rental Prices for Every State for Year 2022



Median Rental Distribution for Year 2022

The lower quartile of rental is: 1557.0

The upper quartile of rental is: 2278.0

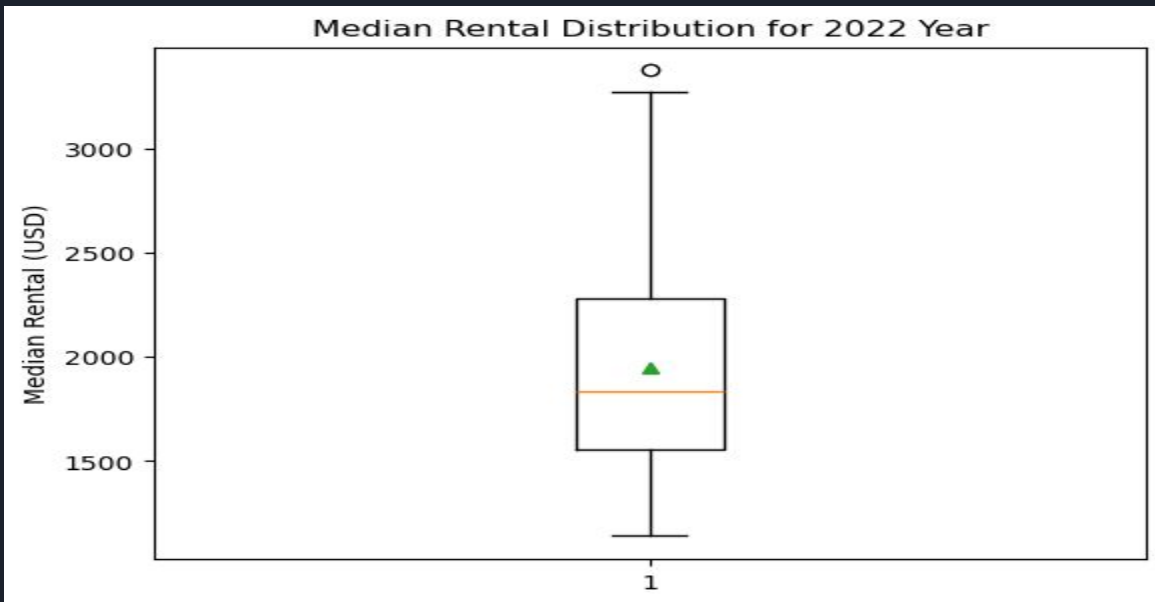
The interquartile range of rental is: 721.0

The the median of rental is: 1833.0

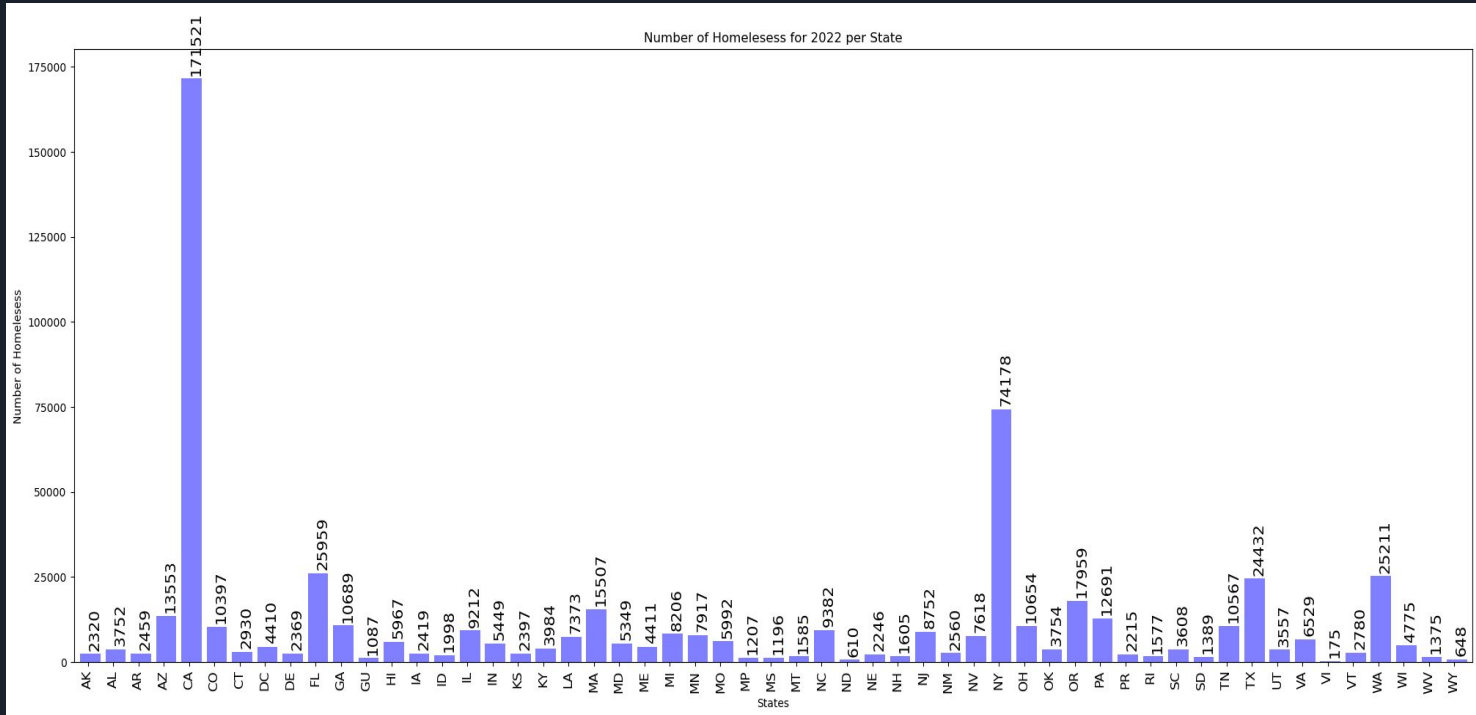
Values below 475.5 could be outliers.

Values above 3359.5 could be outliers.

Outlier for 2022 Year is : MA 3372



Number of Homeless for Year 2022 per State



Median Homelessness Distribution for Year 2022

The lower quartile of homelessness is: 2283

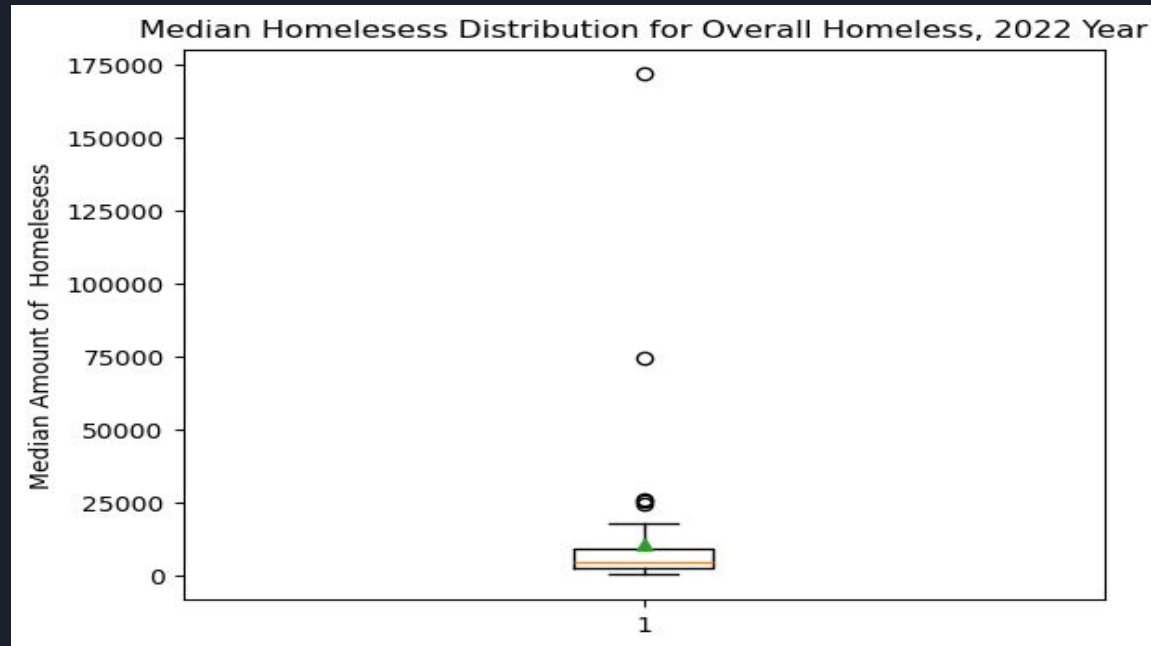
The upper quartile of homelessness is: 9297

The interquartile range of homelessness is: 7014

The the median of homelessness is: 4410

Values above 19818 could be outliers.

Outliers for 2022 Year : CA 171521, FL 25959 ,NY 74178, TX 24432 , WA 25211





Conclusions

- What is the story behind this data?
- 1.- The correlation analysis reveals two primary trends among USA states: either no correlation or a negative correlation between homelessness and rental prices over 10 years.
 - 2.- We have a strong correlation over 10 years in terms of population vs. homeless.
 - 3.- The rental prices per state is not directly correlated, but it is a contributing factor to the homeless count.



Resources:

- <https://www.huduser.gov/hudapi/p>
- https://api.geoapify.com/v1/geocode/search?text={target_country}&format=json&apiKey={geoapify_key}
- <https://www.statista.com/topics/1618/residential-housing-in-the-us/#topicOverview>
- <https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/>
- <https://www.census.gov/data/developers/data-sets.html>
- https://api.census.gov/data/key_signup.html
- <https://developers.rentcast.io/reference/market-data>
- <https://www.census.gov/data/developers/data-sets/Poverty-Statistics.html>
- <https://www.pewtrusts.org/en/research-and-analysis/articles/2023/08/22/how-housing-costs-drive-levels-of-homelessness>
- <https://www.nar.realtor/blogs/economists-outlook/median-prices-rose-to-highest-level-but-inflation-adjusted-prices-still-below-bubble-peak>
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