



Best Places to Live in the U.S.

Fiona Tanikonda, Samantha Lubarsky, Elian Gonzalez, Tony Nguyen

Motivation & Business Context

- The dataset "Best Places to Live in the USA" can be a valuable resource for individuals, businesses, and organizations looking to make informed decisions related to relocation or expansion.
- For individuals, the dataset can provide insights into the best places to live in the United States based on factors such as living wages, population density and land area. This information can be useful for those considering a move to a new city or state and can help them make informed decisions about where to live.
- For businesses, the dataset can provide valuable information for market research and expansion planning. By analyzing factors such as population growth, and cost of living, businesses can identify potential areas for growth and expansion. Additionally, the dataset can provide insights into the characteristics of the most desirable areas to live, which can help businesses tailor their marketing and recruitment efforts.



Data Description

Source:

<https://www.kaggle.com/code/sasakitetsuya/best-places-to-live-in-the-usa/input>

- The dataset provides information on the top 100 places to live in the USA based on factors such as population, land area, density, and the living wage for different family sizes.
- Living wage is the wage needed for an individual to cover their living expenses based on their specific circumstances.
- Each city is also assigned a rank that determines the desirability of living there.



Data Description

- The dataset includes the following columns:
 - **Rank_2020**: The overall ranking of the cities based on a set of criteria.
 - **City**: The name of the city being ranked.
 - **State**: The state where the city is located.
 - **Population_2020**: The estimated population of the city in 2020.
 - **Population_2010**: The population of the city in 2010.
 - **Land_Area_SqMi**: The land area of the city in square miles.
 - **Density**: The population density of the city in people per square mile.
 - **One_Adult_No_Kids_Living_Wage**: The hourly wage needed for a single adult to cover living expenses.
 - **One_Adult_Two_Kids_Living_Wage**: The hourly wage needed for a single adult with two children to cover living expenses.
 - **Two_Adults_No_Kids_Living_Wage**: The hourly wage needed for a two adults to cover living expenses.
 - **Two_Adults_Two_Kids_Living_Wage**: The hourly wage needed for a two adults with two children to cover living expenses.

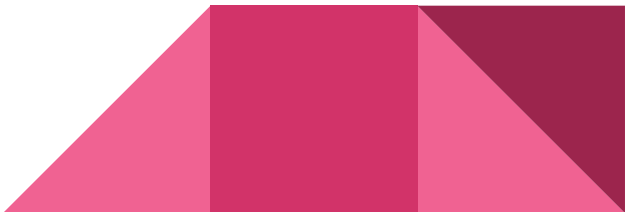


Data Preparation

- Our original Kaggle dataset was in a .csv file, so we opened it in Excel to look through before importing.
- We inserted a table and added headers to make the data more discernible.
- We then imported the dataset into Tableau as an Excel file to create our visualizations.



Research Questions

1. What is the correlation between the population size in 2020 and the living wages in the 20 most populated U.S. cities?
 2. Which cities have experienced the highest growth in population and how does this growth impact the living wage?
 3. How does the living wages differ based on different family sizes across the top 10 places to live?
 4. How does the living wage vary across the 50 states in the U.S. for a typical family of four?
 5. How does rank influence the living wages of families in the bottom 10 ranked cities?
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Methodologies

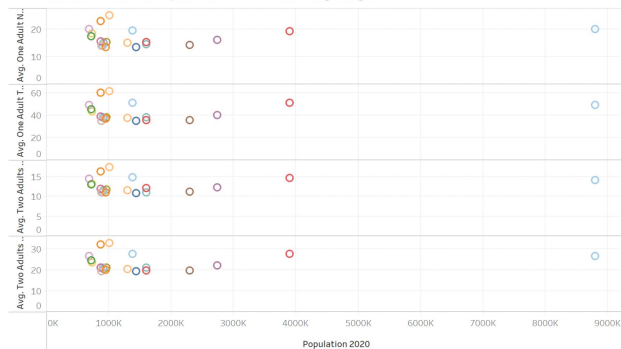
There are the types of charts and graphs we decided to use when answering our research questions:

- Scatterplot
- Bar Graph
- Map
- Tree Map

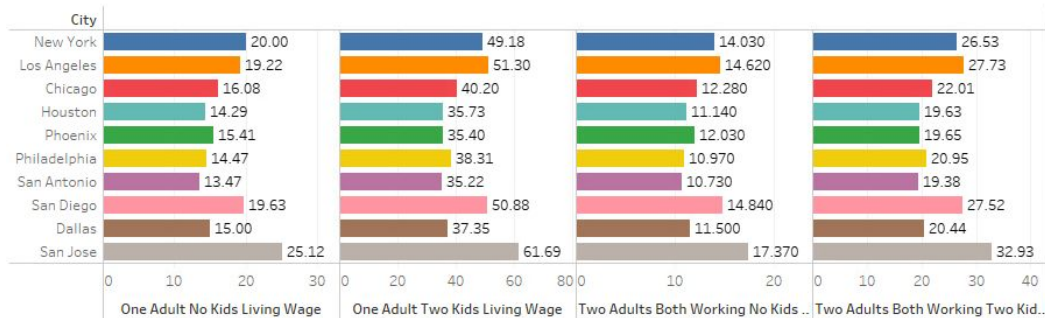


Visualization Dashboard

Correlation Between Population Size and Living Wage



Top 10 Places to Live vs Family Size



One Adult Working with No Kids



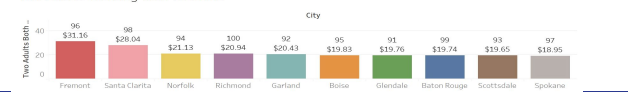
One Adult Working with Two Kids



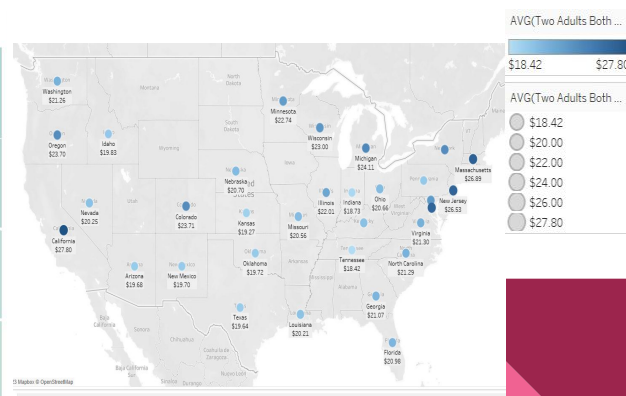
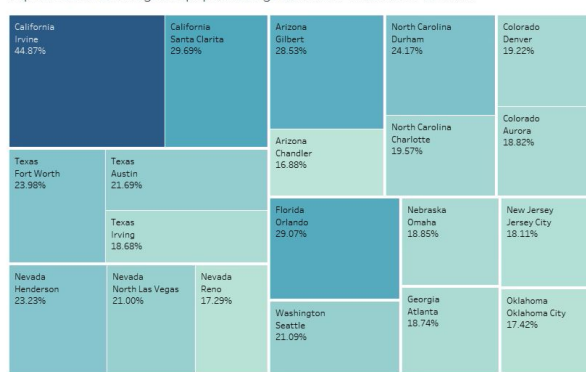
Two Adults Working with No Kids



Two Adults Working with Two Kids

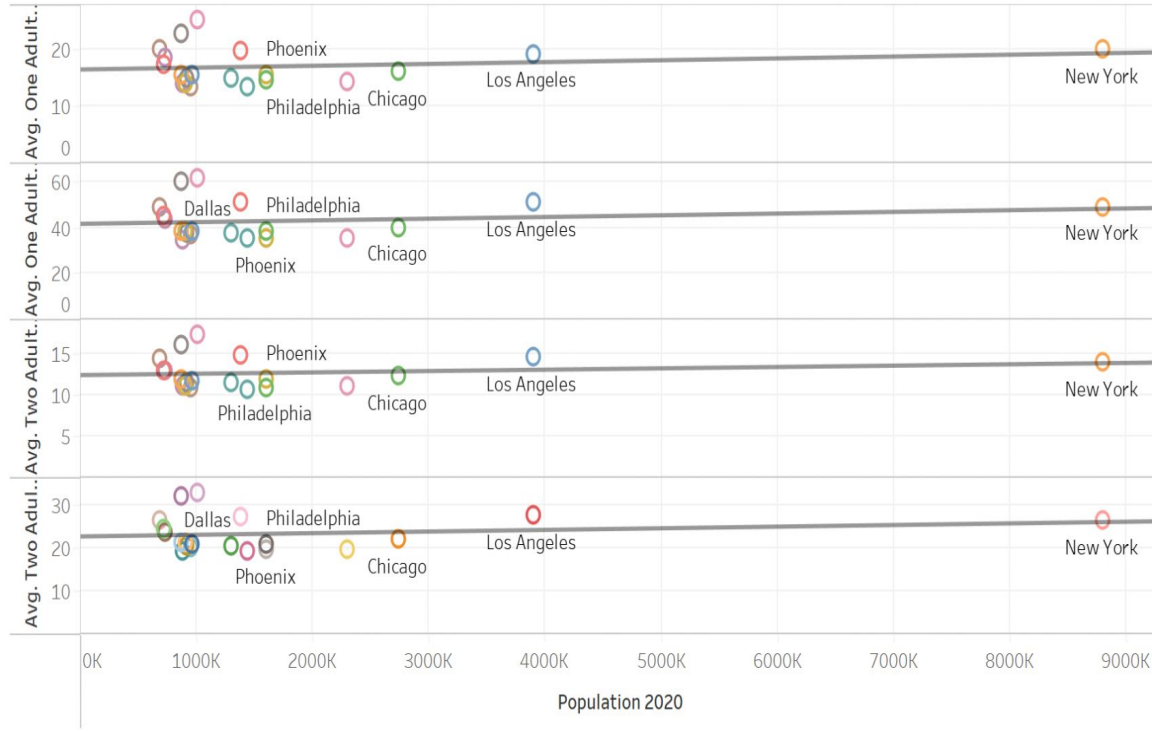


Top 20 cities with highest population growth rate from 2010 to 2020



What is the correlation between the population size in 2020 and the living wage in the 20 most populated U.S. cities?

Correlation Between Population and Living Wage



City. State	
Austin, Texas	
Charlotte, North Car..	
Chicago, Illinois	
Columbus, Ohio	
Dallas, Texas	
Denver, Colorado	
Fort Worth, Texas	
Houston, Texas	
Indianapolis, Indiana	
Jacksonville, Florida	
Los Angeles, Californ..	
New York, New York	
Philadelphia, Pennsy..	
Phoenix, Arizona	
San Antonio, Texas	
San Diego, California	
San Francisco, Califo..	
San Jose, California	
Seattle, Washington	
Washington, District..	

R-Squared:	0.0334149
Standard error:	3.3283
p-value (significance):	0.440475

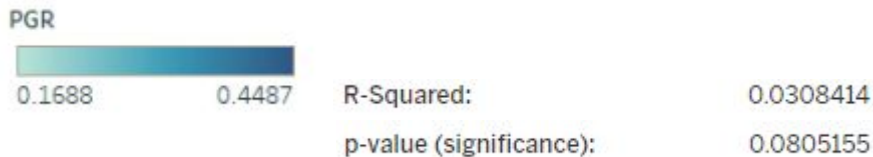
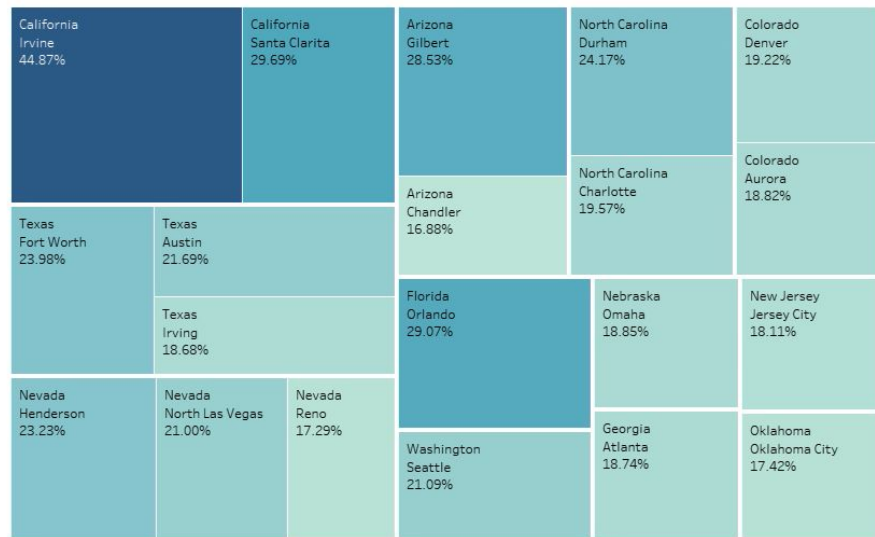
R-Squared:	0.0278093
Standard error:	8.37247
p-value (significance):	0.482241

R-Squared:	0.0249278
Standard error:	1.95287
p-value (significance):	0.506172

R-Squared:	0.0276914
Standard error:	4.28493
p-value (significance):	0.483184

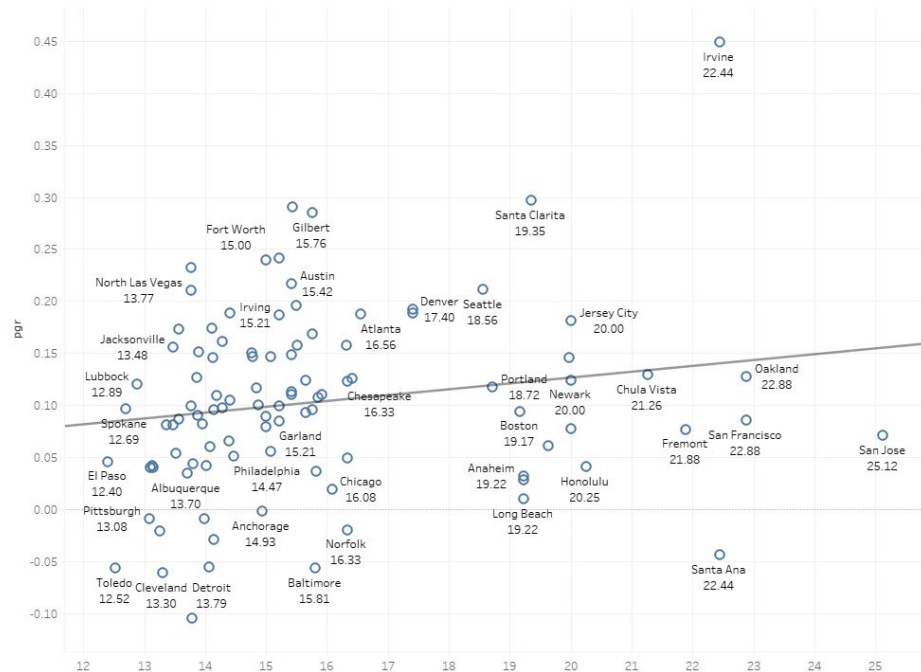
Which cities have experienced the highest growth in population and how does this growth impact the living wage?

Top 20 cities with highest population growth rate from 2010 to 2020



Hypothesis: As the population growth rate increases, the living wages also increase

Scatterplot of population growth rate vs living wage of one adult



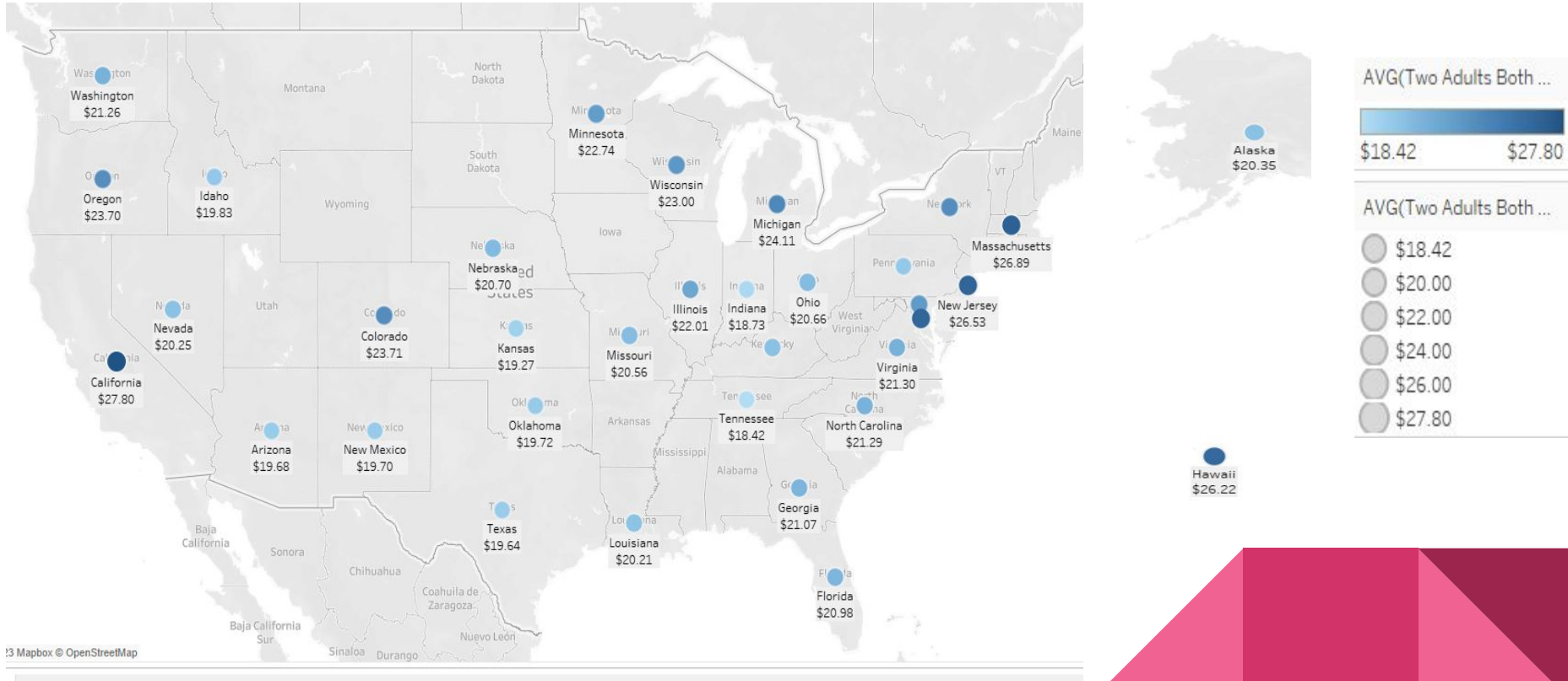
How does the living wages differ based on different family sizes across the top 10 places to live?

Top 10 Places to Live vs Family Size



*Cities are in order from best 1 (New York) to 10 (San Jose)

How does the living wage vary across the 50 states in the U.S. for a typical family of four?

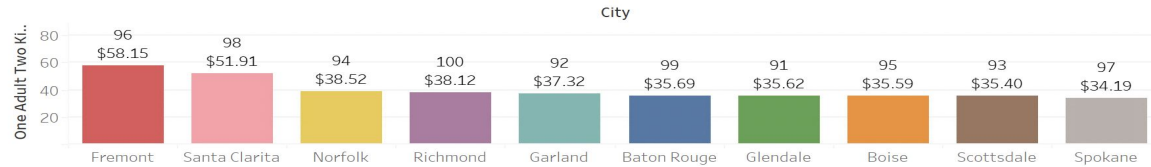


How does rank influence the living wages of families in the bottom 10 ranked cities?

One Adult Working with No Kids



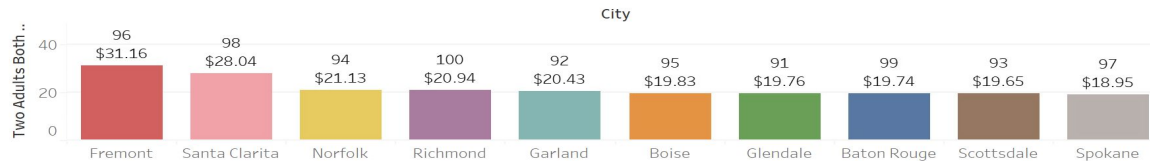
One Adult Working with Two Kids



Two Adults Working with No Kids



Two Adults Working with Two Kids



- Prediction: Lower ranked cities have lower living wages for each family type.
 - This is not necessarily the case.
- The trend in living wages for each city is not consistent for each family type.

Lessons Learned

- Because we had an overwhelmingly large dataset, it was important to pick the most relevant variables for our analyses.
 - We picked the four family structures that we thought would be the most common.
- Single parents supporting multiple children generally need much higher hourly wages to cover expenses compared to households with multiple working adults.
- Overall, many of the variables that we chose had weak or no correlation with increase in living wages for each city.
- Other factors (that weren't in this dataset) that may be more significant, such as costs of living and state minimum wage, should be considered for stronger results.



Top 20 cities with highest population growth rate from 2010 to 2020

