

# Improving a City's Overall Health

# Business Problem

- ▶ Americans want to be healthy and fit
- ▶ Latest trends on social media do suggest that Americans are more conscious about their health and fitness
- ▶ Despite the trend, Americans struggle to stay healthy and fit
- ▶ Finding the factor that plays a major role in the overall health of Americans is important

# Data Sources and Cleaning

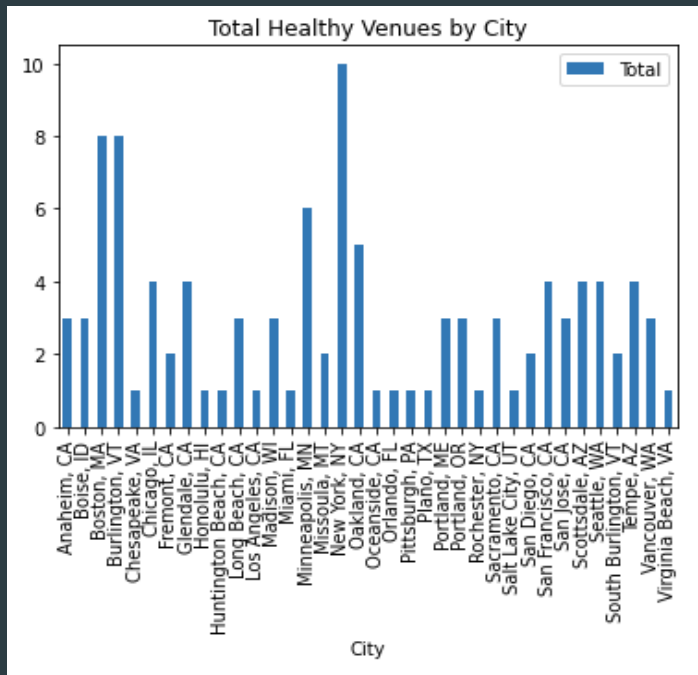
- ▶ City data that were ranked from the most healthiest to the most unhealthiest in [WalletHub's Healthiest and Unhealthiest Cities in America](#) report
- ▶ Health and fitness related venue data from Foursquare API
- ▶ Total of 182 cities scraped from the site; labeled top 50 as the healthiest cities and last 50 as the unhealthiest cities using a total of 100 scraped data
- ▶ Total of 2506 venues found for all 100 cities which includes venues that are not related to health and fitness
- ▶ Removed venues that were not related to health and fitness
- ▶ Total of 108 venues remained for the top 50 healthiest cities dataset
- ▶ Total of 59 venues remained for the top 50 unhealthiest cities dataset

# Methodology – Mapping and Locating the Cities

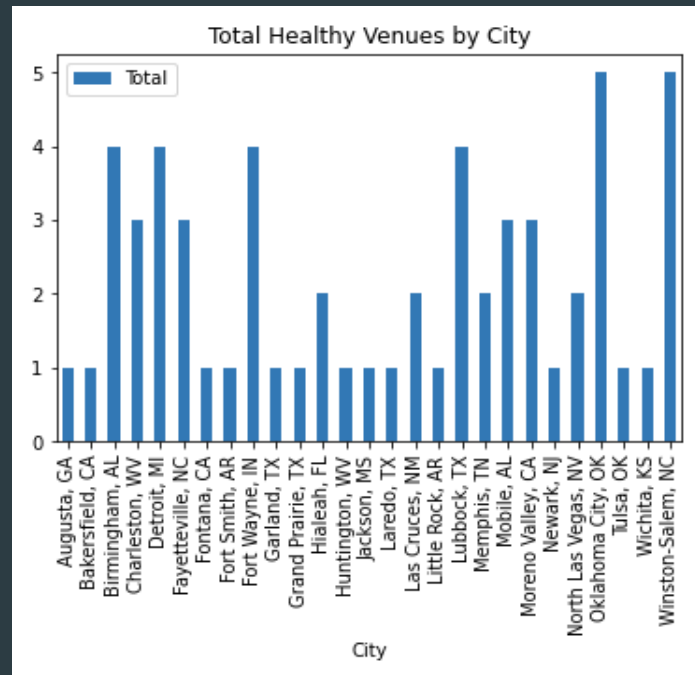


# Methodology - Bar Graph

## Healthy Cities

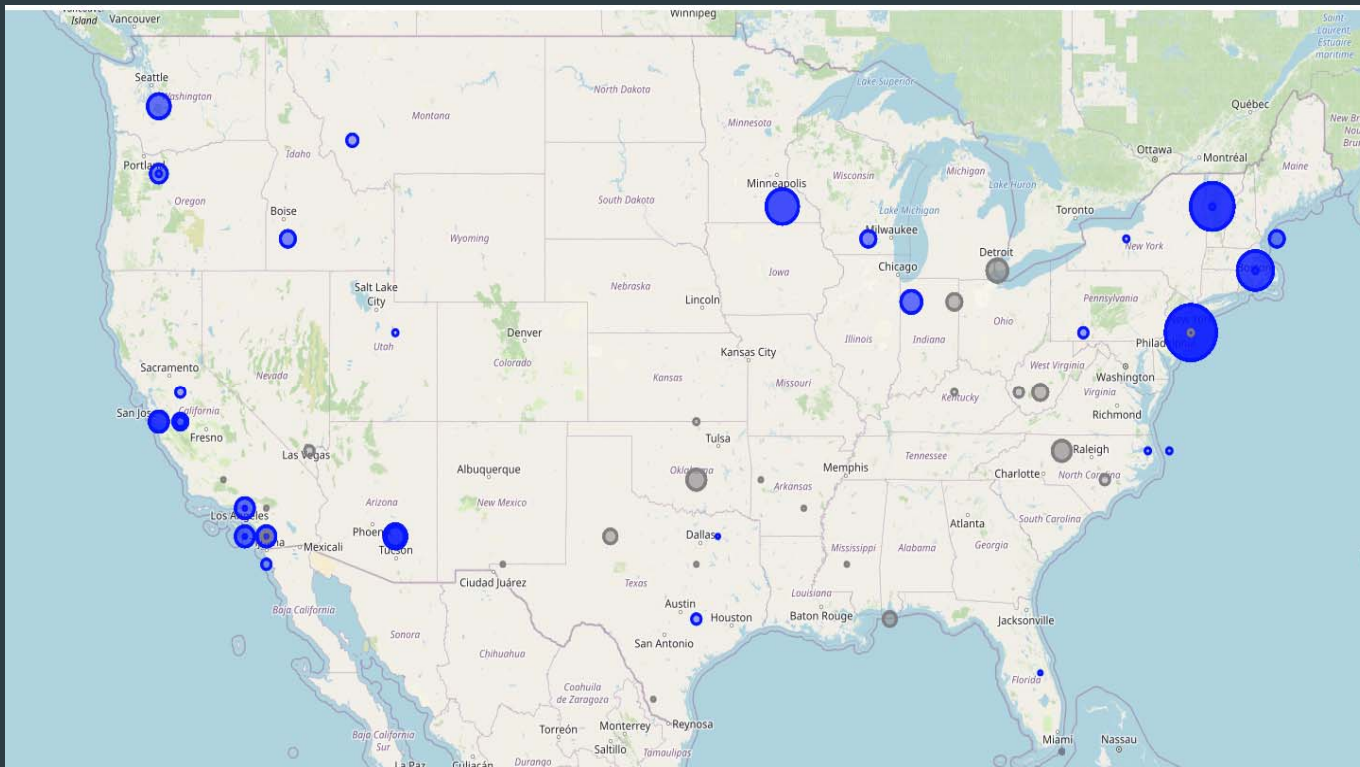


## Unhealthy Cities



- ▶ Bar graphs based on the total number of health and fitness venues for each city
- ▶ Total maximum venues for healthy cities is 10
- ▶ Total maximum venues for unhealthy cities is 5

# Methodology - Clustering



- ▶ Optimal number of clusters determined using the elbow method of k-means clustering technique
- ▶ Blue cluster - healthy cities dataset
- ▶ Gray cluster - unhealthy cities dataset

# Conclusion and Improvements for Future Analysis

- ▶ From the analysis, we can conclude that the overall health of a city depends on the number of health and fitness venues
- ▶ We can suggest and improve a city's overall health by providing these insights to the city officials
- ▶ This analysis looks only at one factor that affects the health and well-being of Americans so may be improved by looking at other factors such as:
  - ▶ Income