

# Analysis of Park Acres in Logan UT

Data Science Capstone - IBM Data Science Professional  
Certificate on Coursera



# Does Logan Utah need more parks

- The City of Logan, Utah has seen significant growth in the last decade.
- They have a budget surplus and the mayor would like to know how to best use it, and one strategy would be to increase the city's parks budget.
- In order to align her city's park land with that of similar sized cities in the state, she has asked for the current park acreage in her city to be assessed to determine if Logan needs a new park.

# Introduction

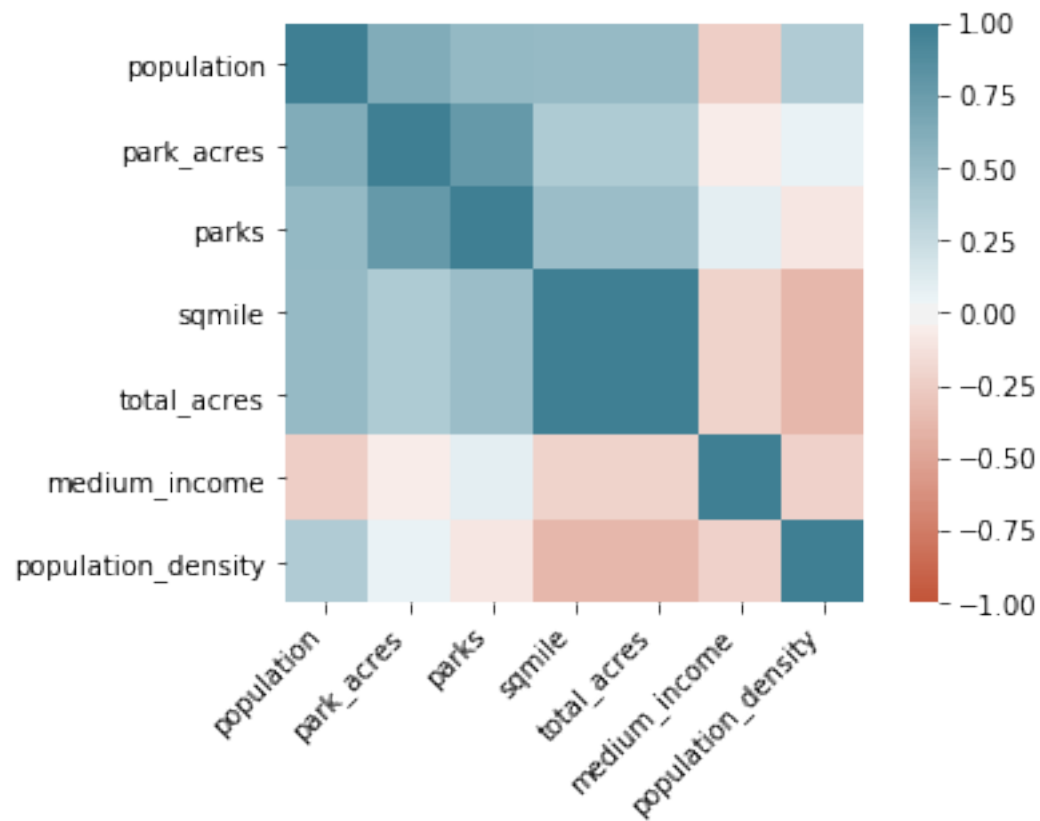
- Parks are an essential public service.
- Access to parks and recreation facilities leads to healthy lifestyles.
- Parks provide needed green space in urban areas.
- Parks are a reflection of the quality of life in a community.
- Parks can help the city's economy by increasing property values and attracting tourists.
- Although parks bring many benefits to the community they are often overlooked and are not readily available to some of the population.

# Data

- Location of Logan's parks from Foursqaure API
- Population Data
  - [https://www.utah-demographics.com/cities\\_by\\_population](https://www.utah-demographics.com/cities_by_population)
- Number of parks and park acres
  - <https://opendata.gis.utah.gov/>
- City square mile converted to acres
  - [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2018\\_Gazetteer/2018\\_gaz\\_place\\_49.txt](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2018_Gazetteer/2018_gaz_place_49.txt)
- Median Household Income
  - [https://en.wikipedia.org/wiki/List\\_of\\_municipalities\\_in\\_Utah](https://en.wikipedia.org/wiki/List_of_municipalities_in_Utah)

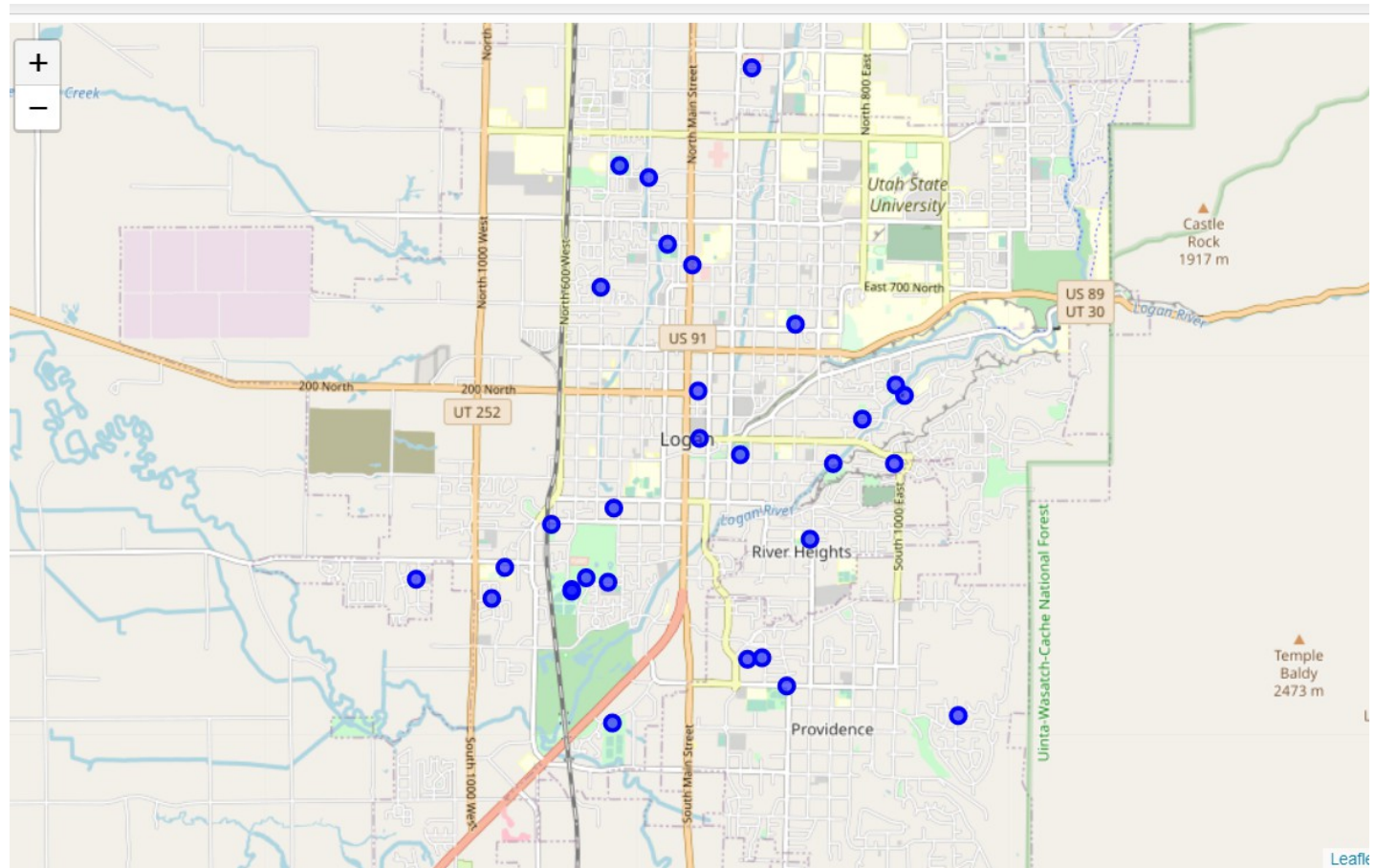
# Methodology

## Correlation Coefficient Heat Map



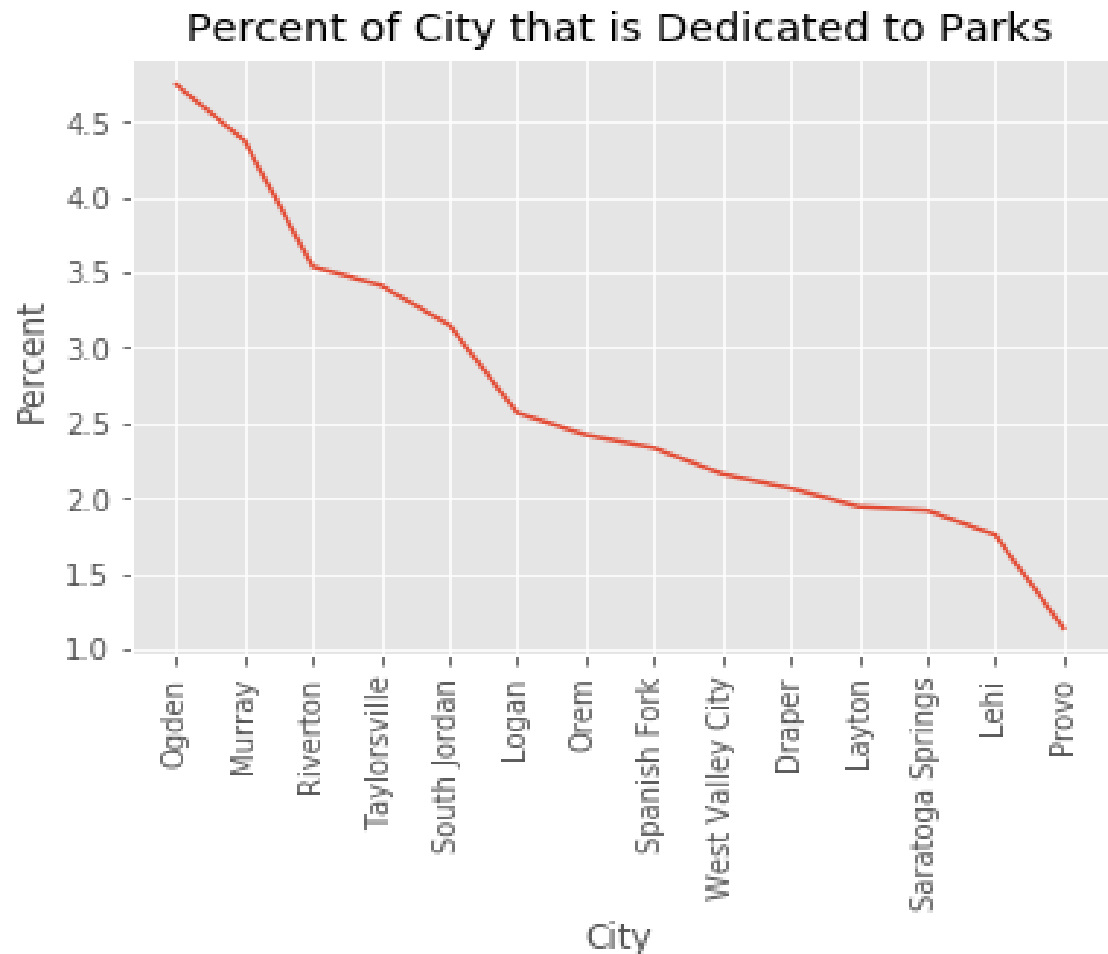
# Results

## Foursquare API - Parks found in Logan UT



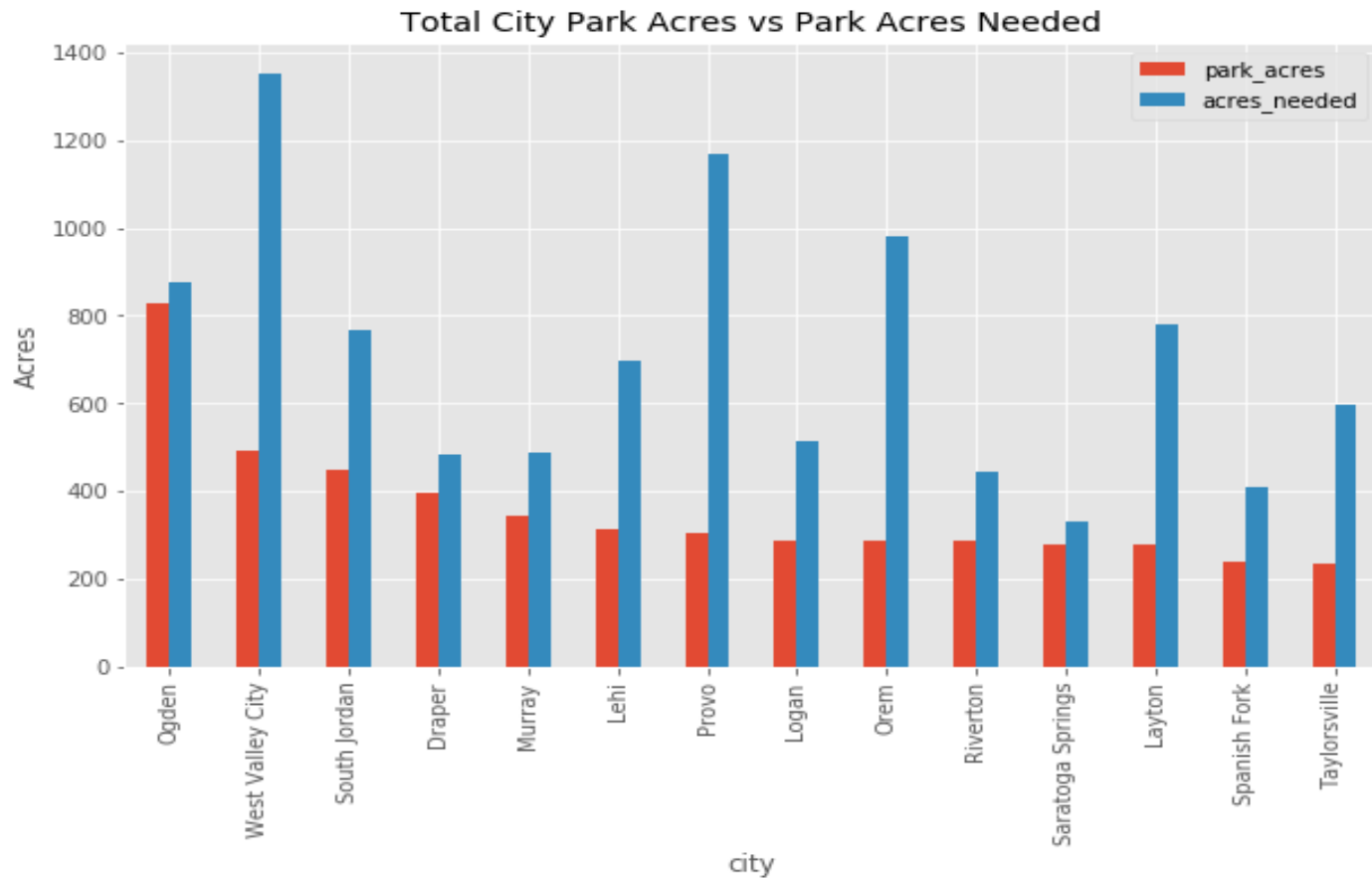
# Results

Logan has 11,300.48 acres of land in it's city with 290.19 acres of parks giving 2.56% of the city devoted to parks.



# Results

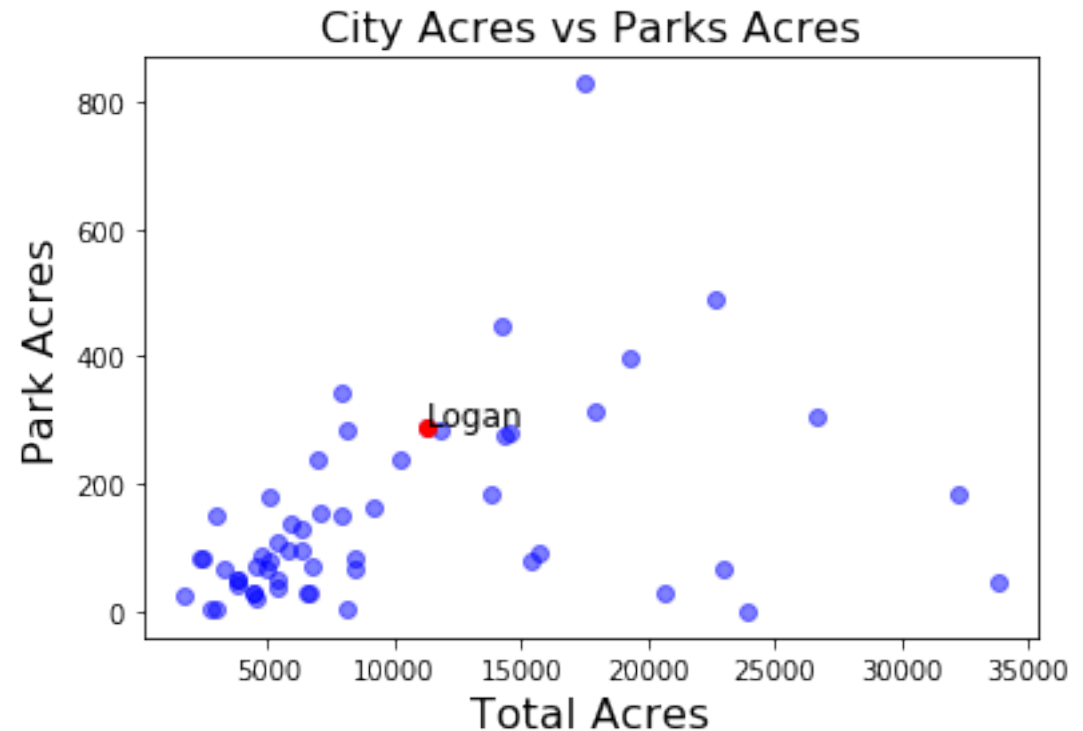
Bar graph showing the standard of 1 acre per 100 people





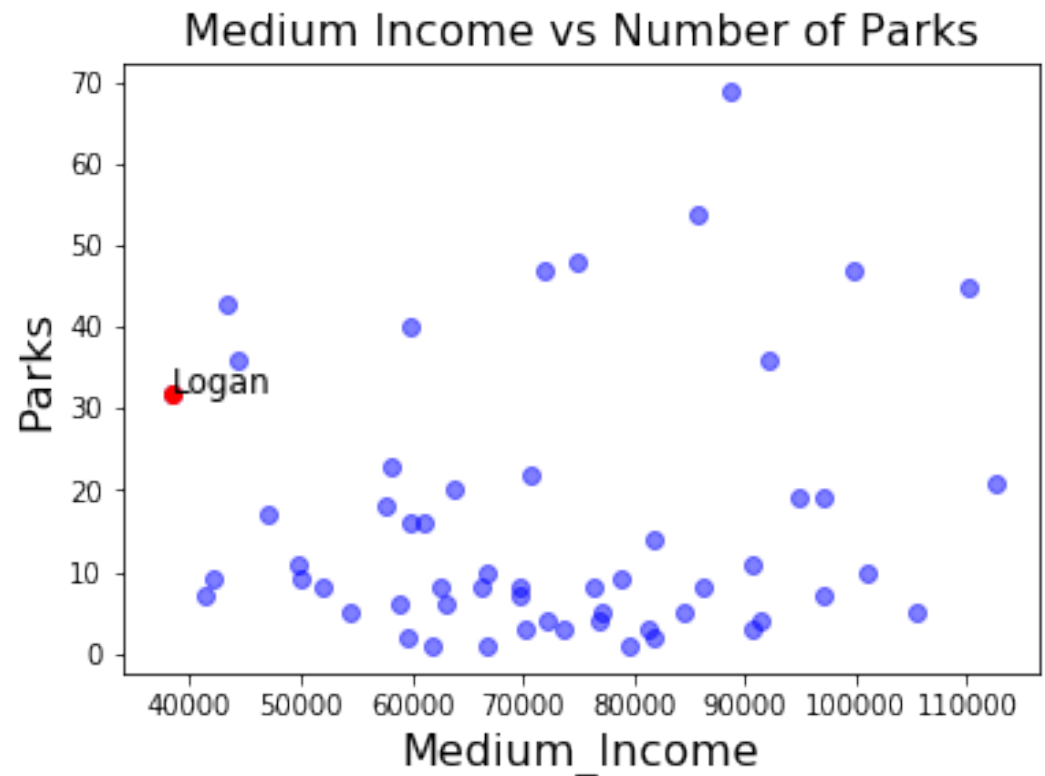
# Results

- Scatter plot showing acres dedicated to Parks.
- Logan maybe slightly better other similar sized cities.



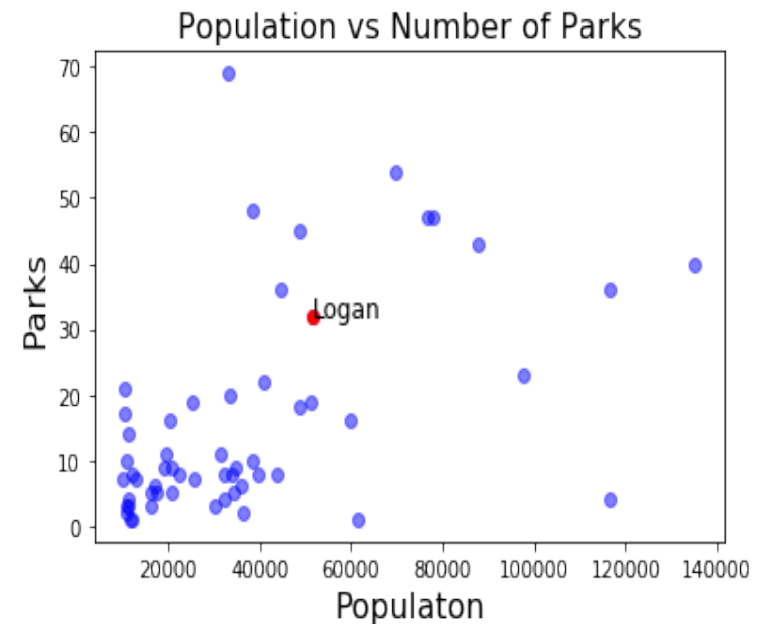
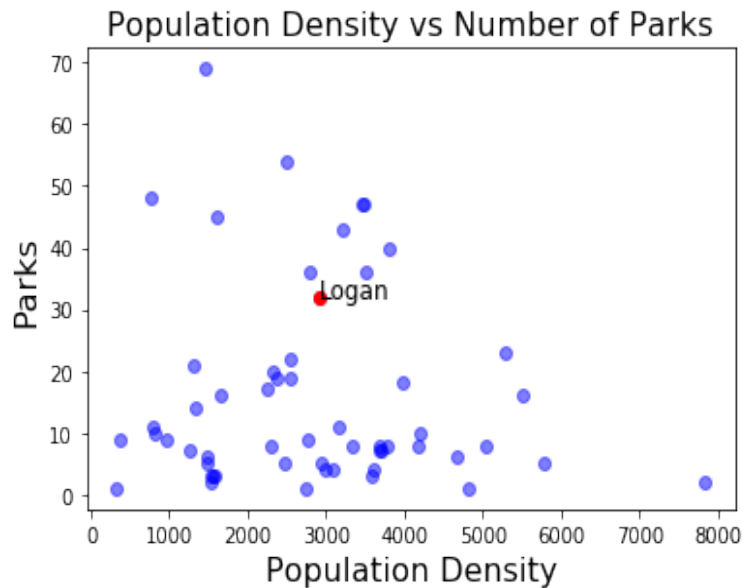
# Results

- Number of parks based on medium income
- Rich cities do not have more parks than low income cities.



# Results

Two similar scatter plots based on population and population density



# Discussion

- The discussion of how many parks is complex.
- There are no regulations on city park acreage and there is not much consistency between cities.
- For future analysis look for more variables such as cultural background, age, and socioeconomic status of the population.

# Conclusion

- Compared to the cities in Utah Logan has a large park acreage for it's city size.
- Falls short of the 1 acre per 100 population standard.
- Recommend that Logan increase it's park acreage and make more green space in it's city.