



# BRAZIL HOUSING (Castro BRAZILA Inc.,)

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# OBJECTIVE

The objective is to help Castro Brazilia Inc., a top real estate management firm, to help people choose an alternate city to relocate.



# DATA PREPARING AND CLEANING

10692 rows 13 columns

NO NULL OR MISSING VALUES OR DUPLICATE VALUES IN THE DATA.

## Categorical Columns

City :

- São Paulo
- Porto Alegre
- Rio de Janeiro
- Campinas
- Belo Horizonte

Rooms: 1 to 13

Bathroom: 1 to 10

Parking spaces: 0 to 12

Animal: acept ,not acept

Furniture: furnished, not furnished

## Numerical Columns:

Area

Floor

HOA (R\$)

Rent amount (R\$)

Property tax (R\$)

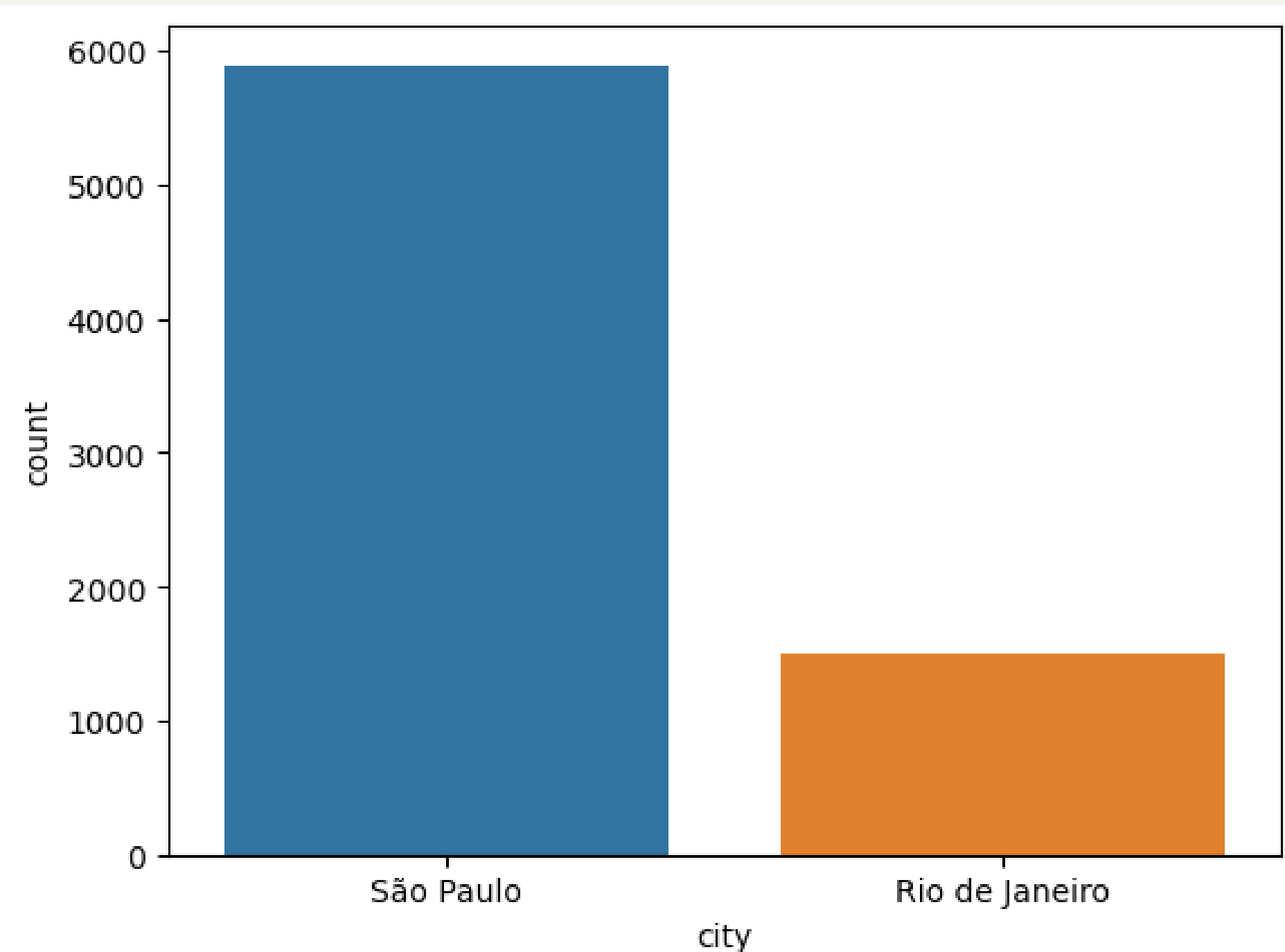
Fire insurance (R\$)

TOTAL (R\$)']

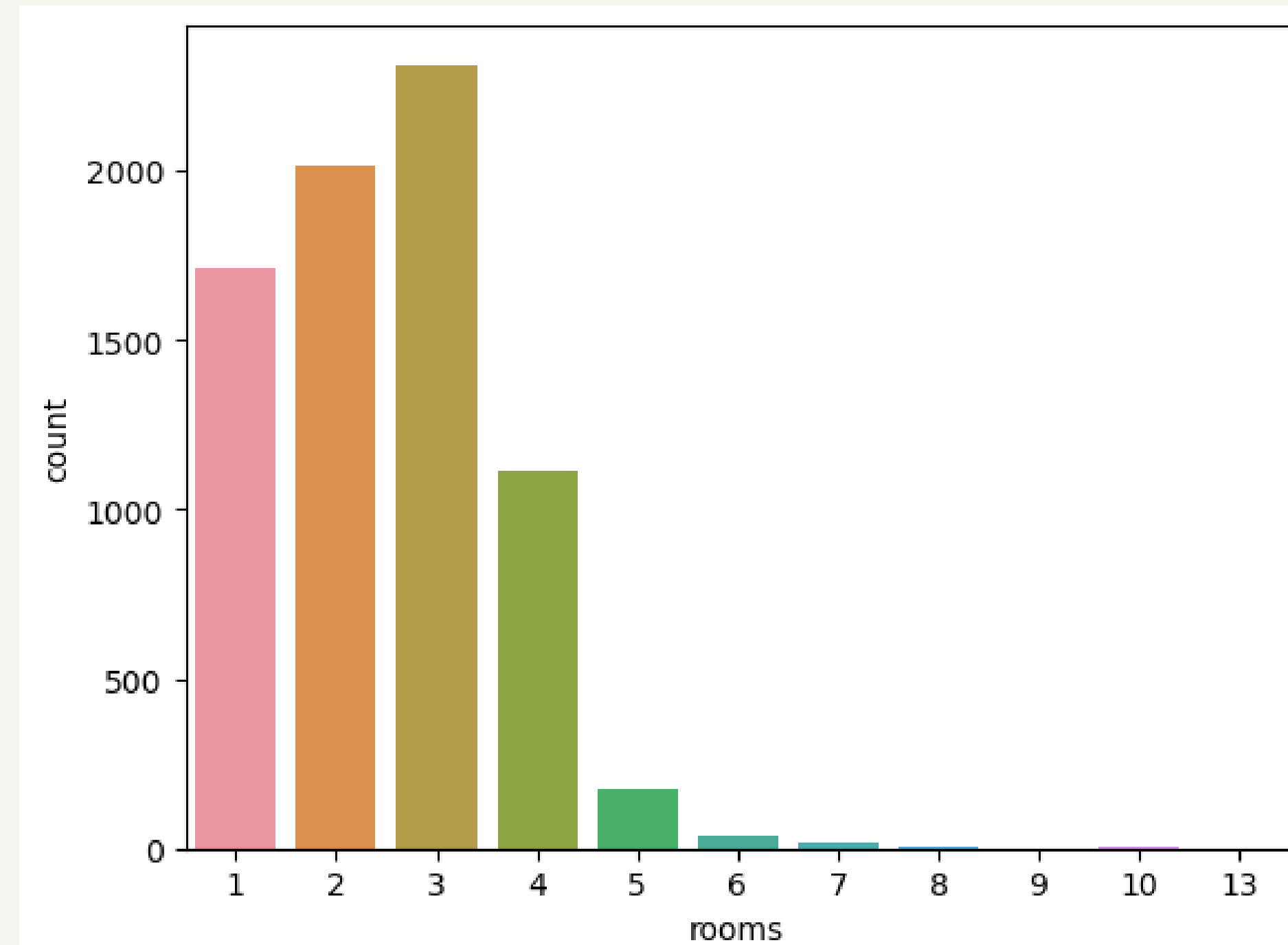
# DATA ANALYSIS

# Preferred Houses: (Houses in Sao Paulo and Rio de Janeiro)

## UNIVARIATE ANALYSIS

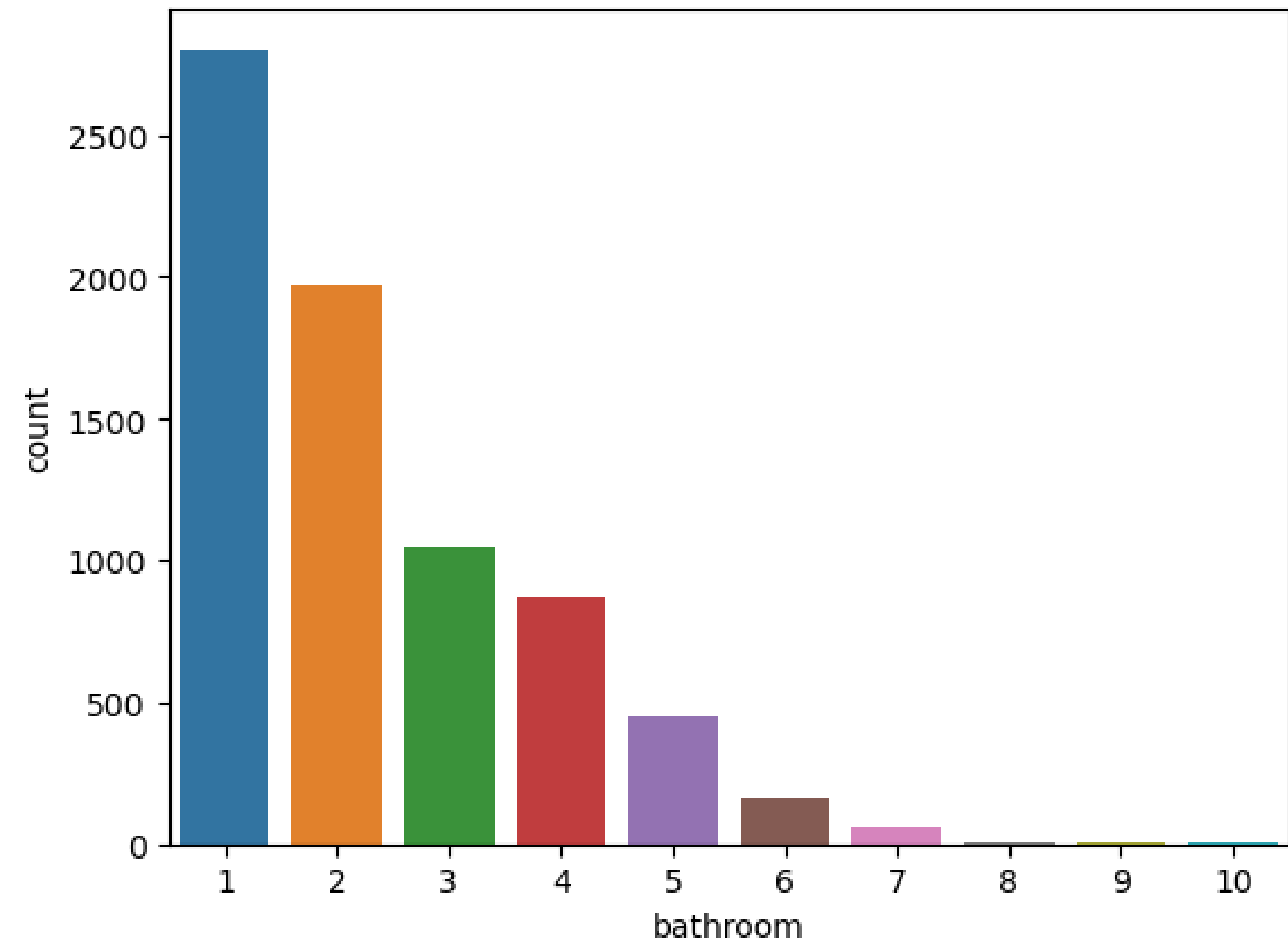


Sao Paulo

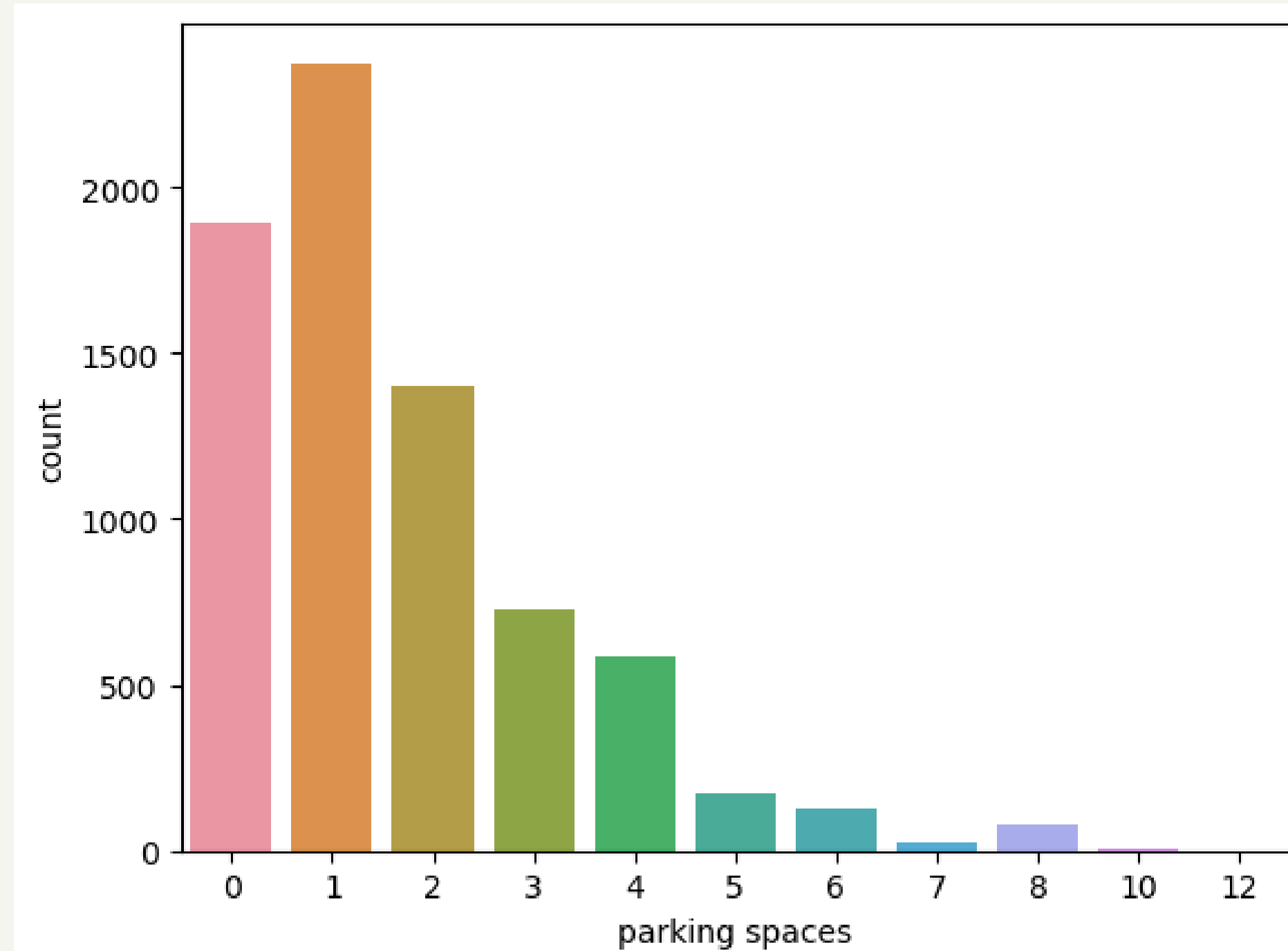


3BHK

# Preferred Houses

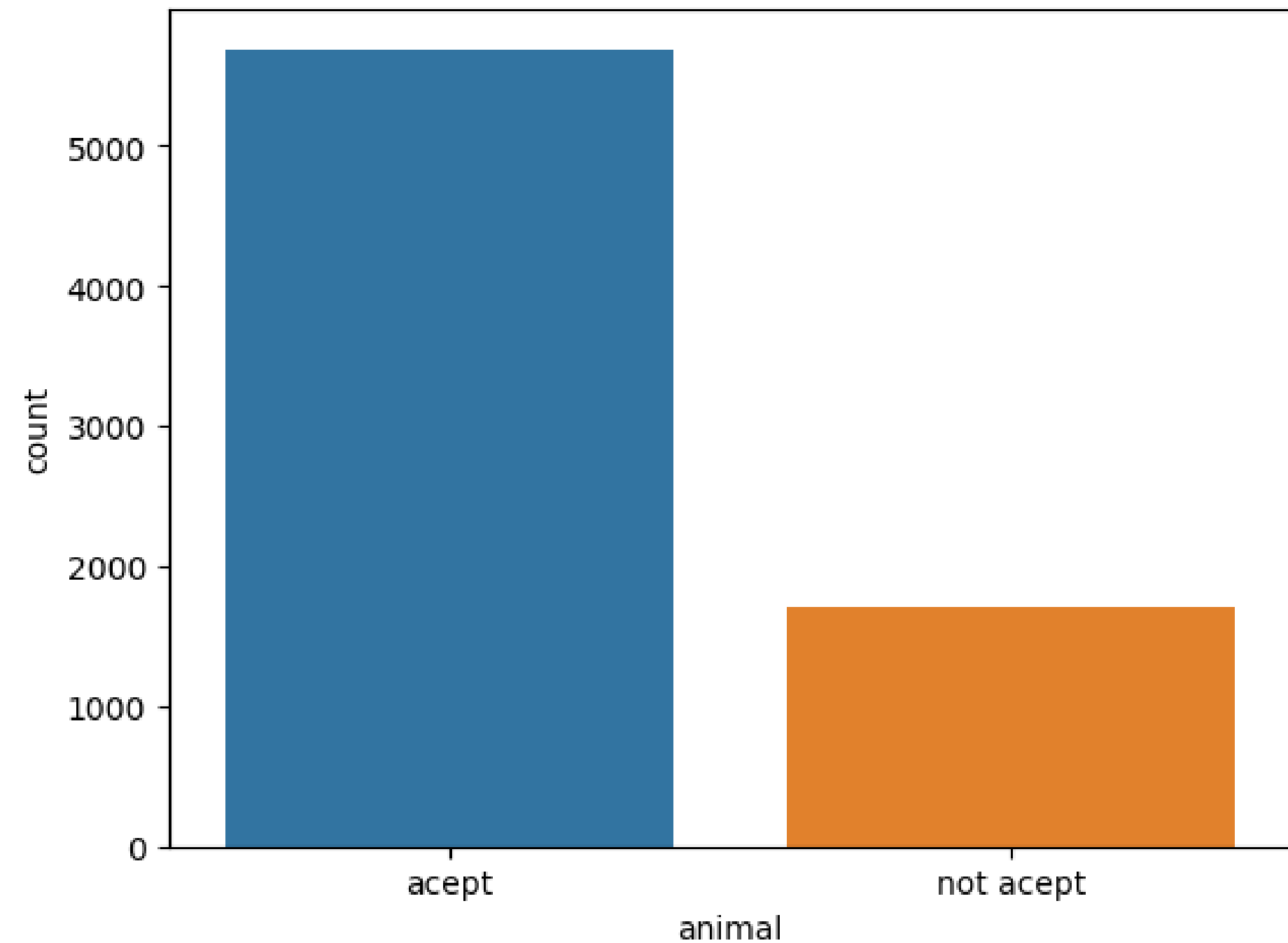


1 Bathroom

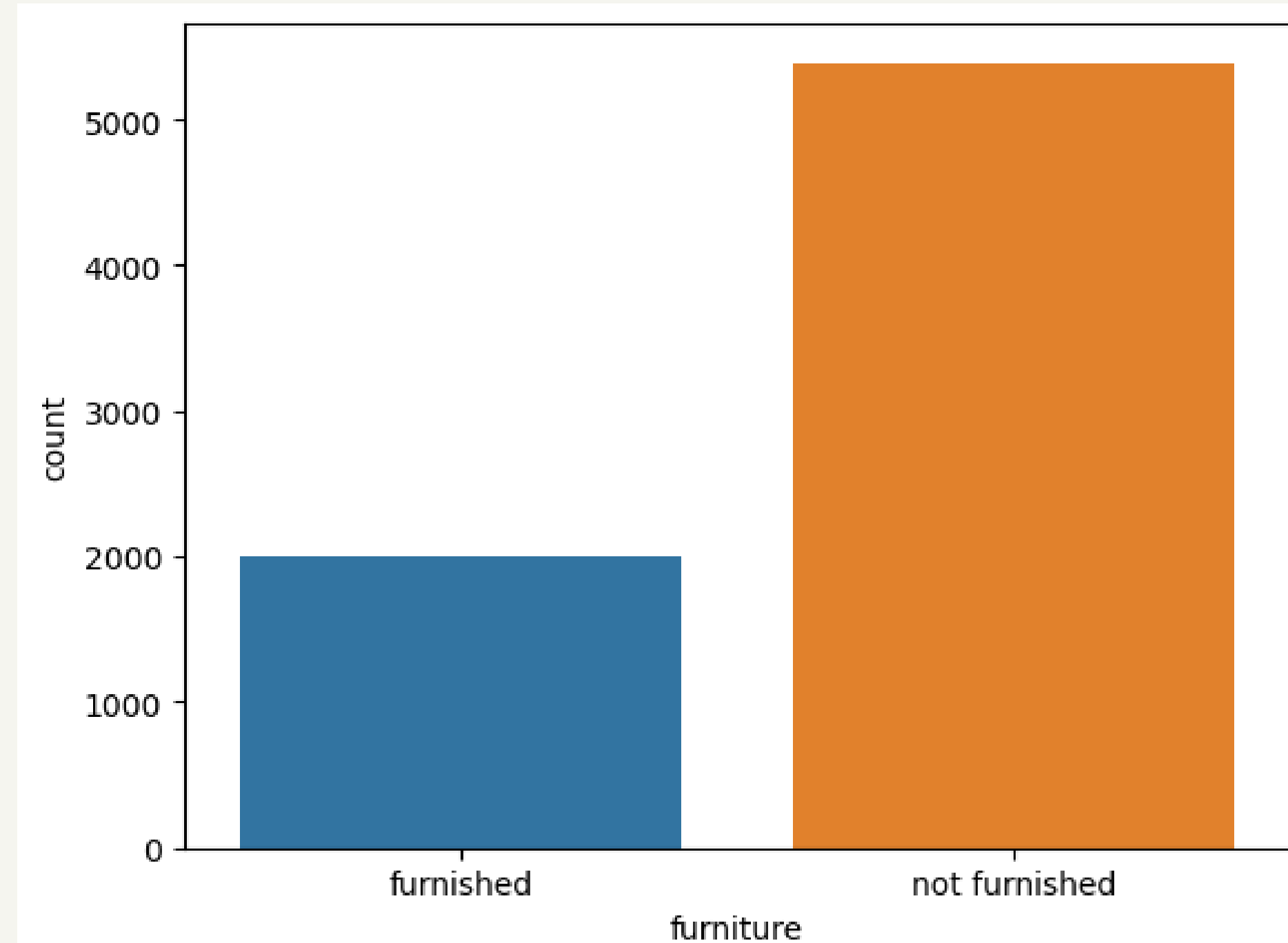


1 Parking space

# Preferred Houses

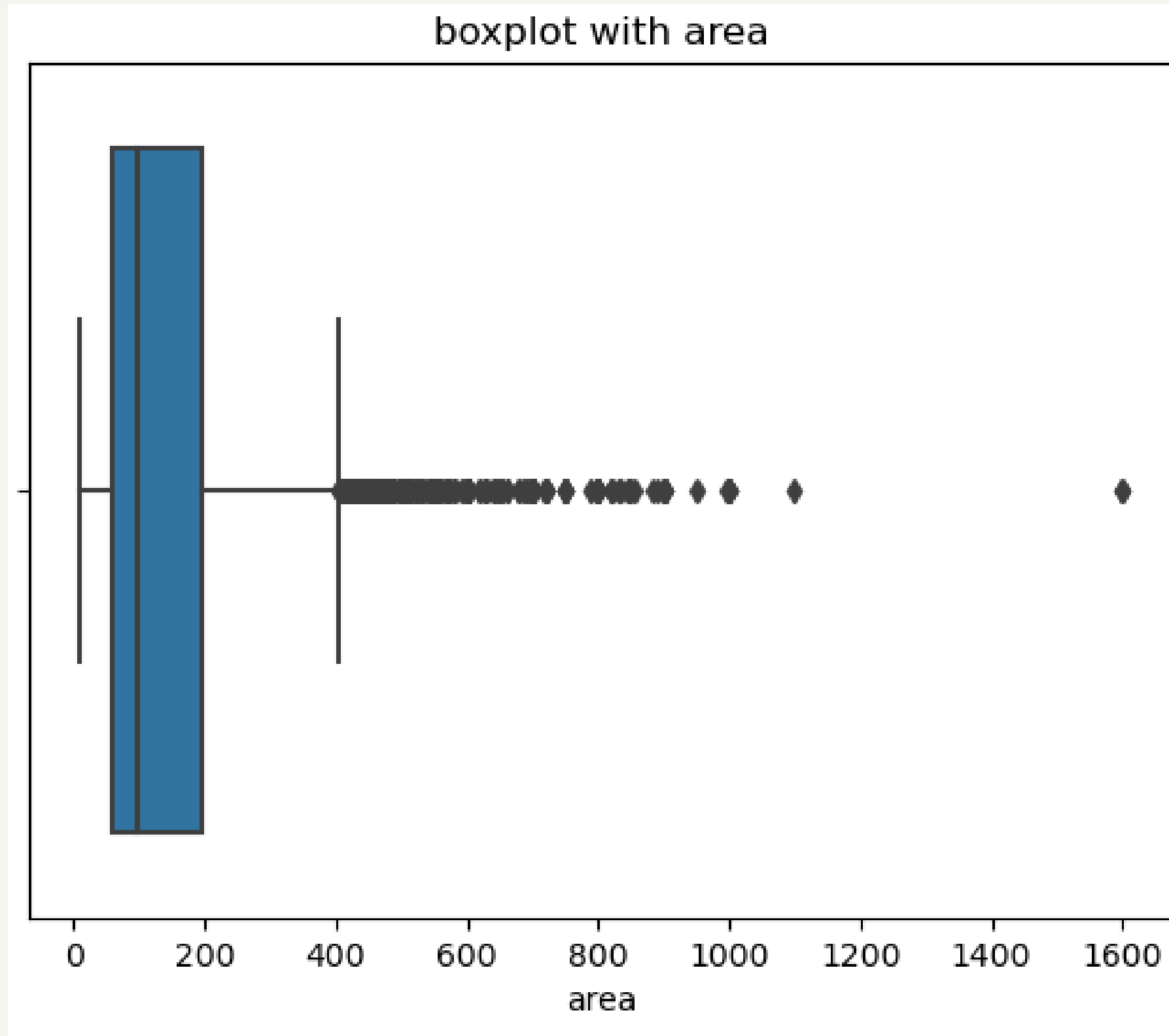


Animal Friendly



Un-Furnished

# Preferred Houses



50% of the people live in houses with a median area of around 100 sqft.

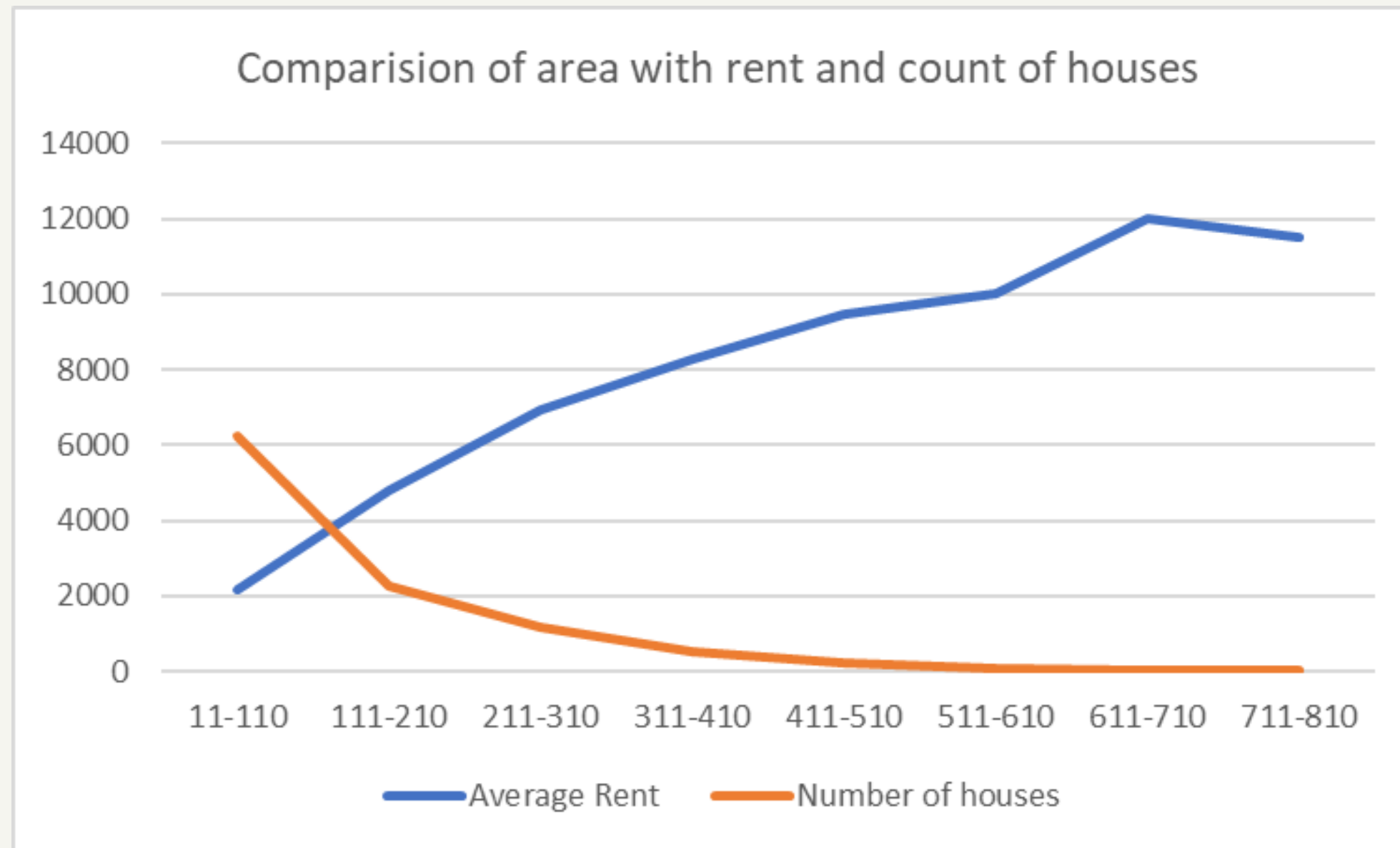
The maximum area is 400 sqft.

There are quite a lot outliers.



# Preferred Houses

Lets analyze why people are living in such a small area

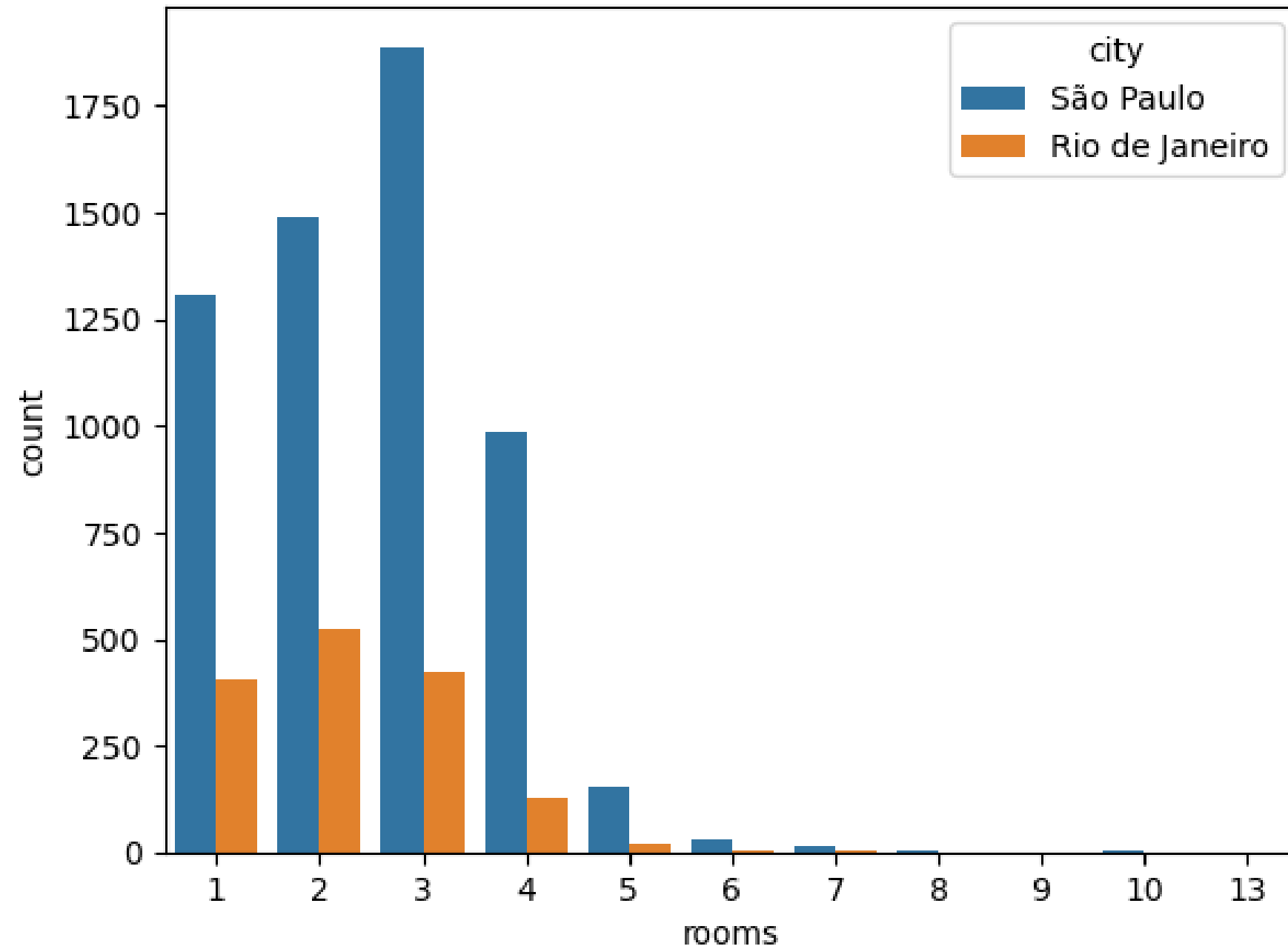


- As the area of houses increases, the average rent increases and the number of houses decreases.
- So people live in houses in small areas due to fewer houses in large areas and high rents.

# Preferred Houses: (Houses in Sao Paulo and Rio de Janeiro)

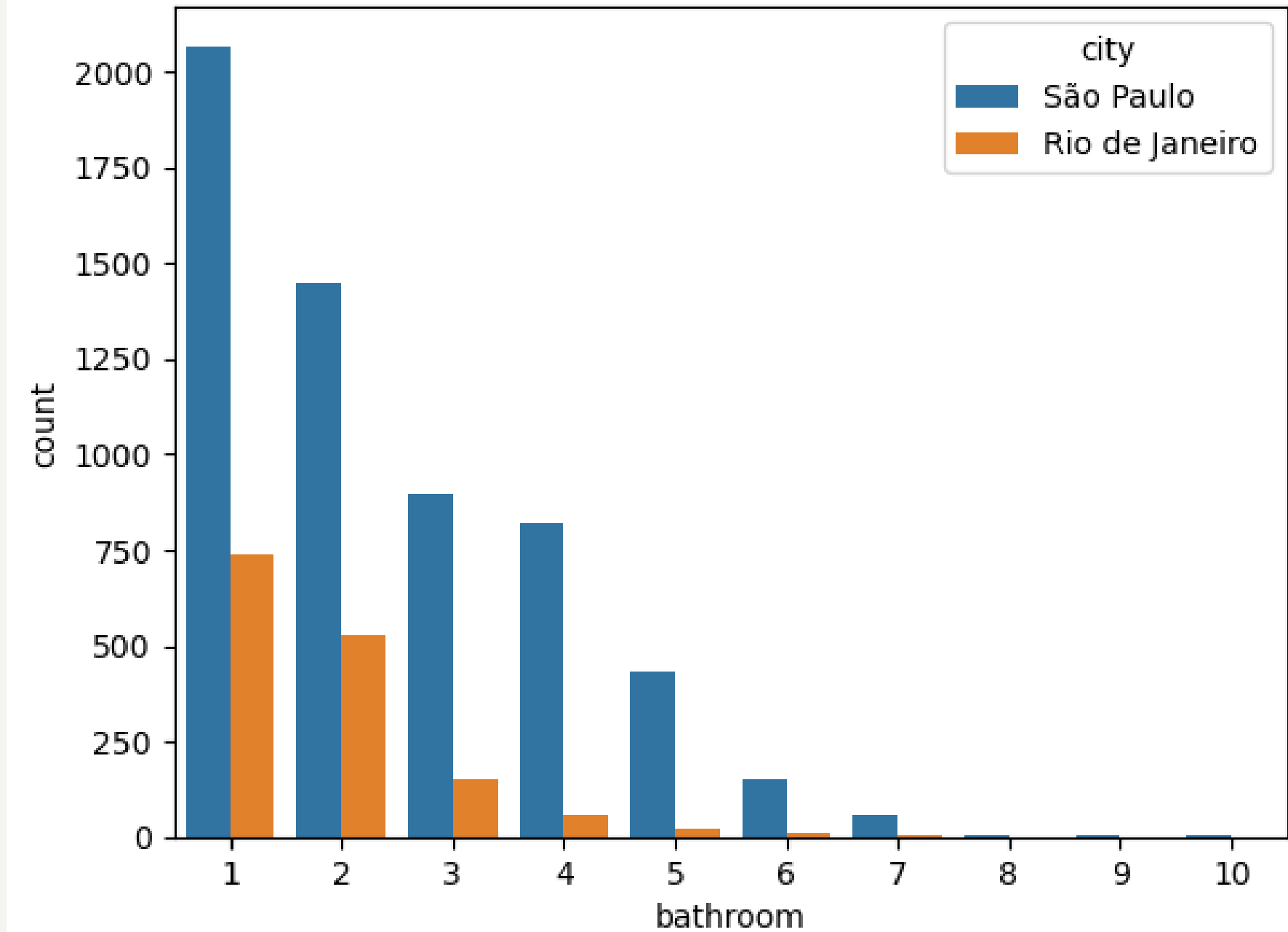
## BIVARIATE ANALYSIS

Count of houses with rooms



Sao Paulo: 3bhk  
Rio de Janeiro: 2bhk

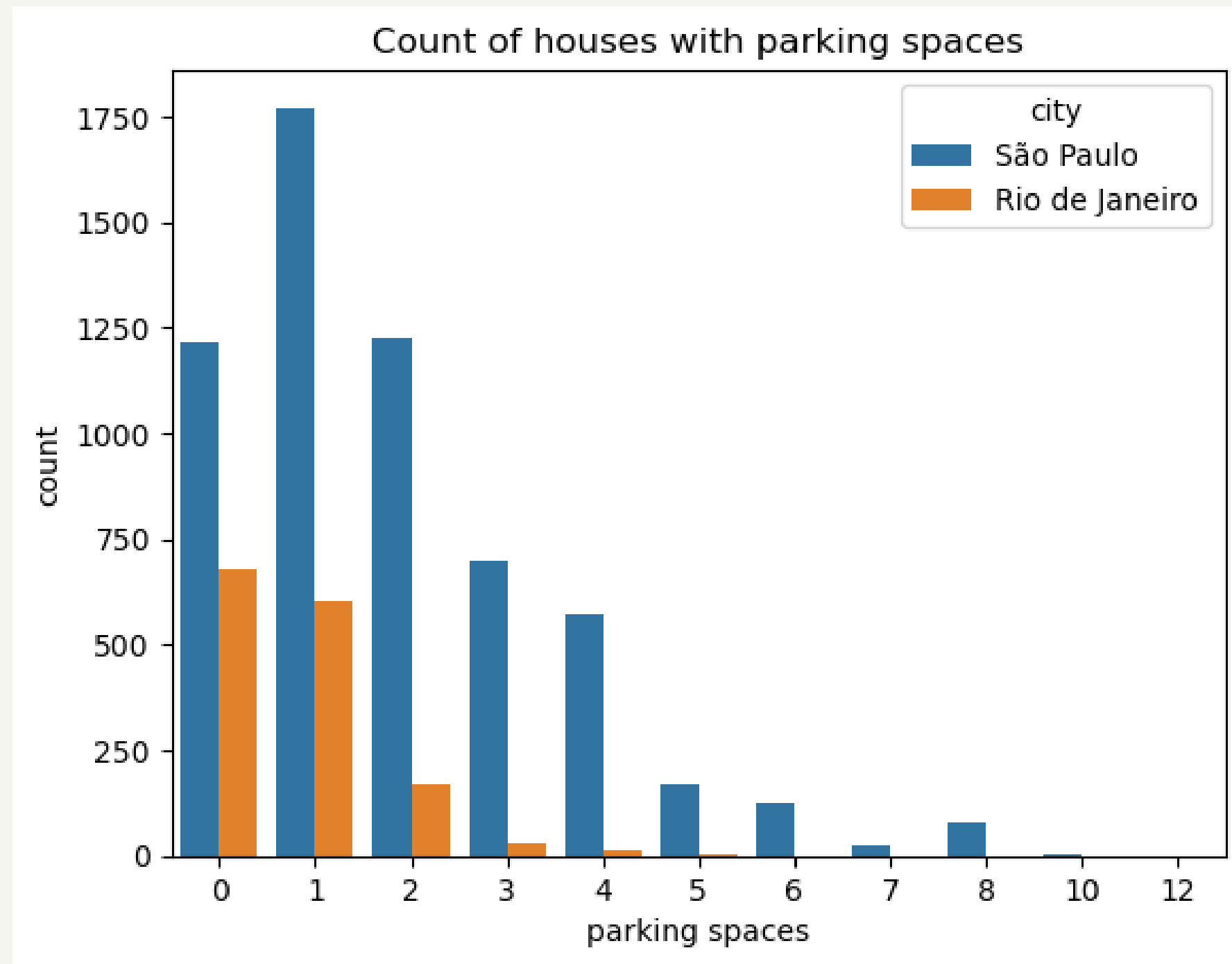
Count of houses with bathroom



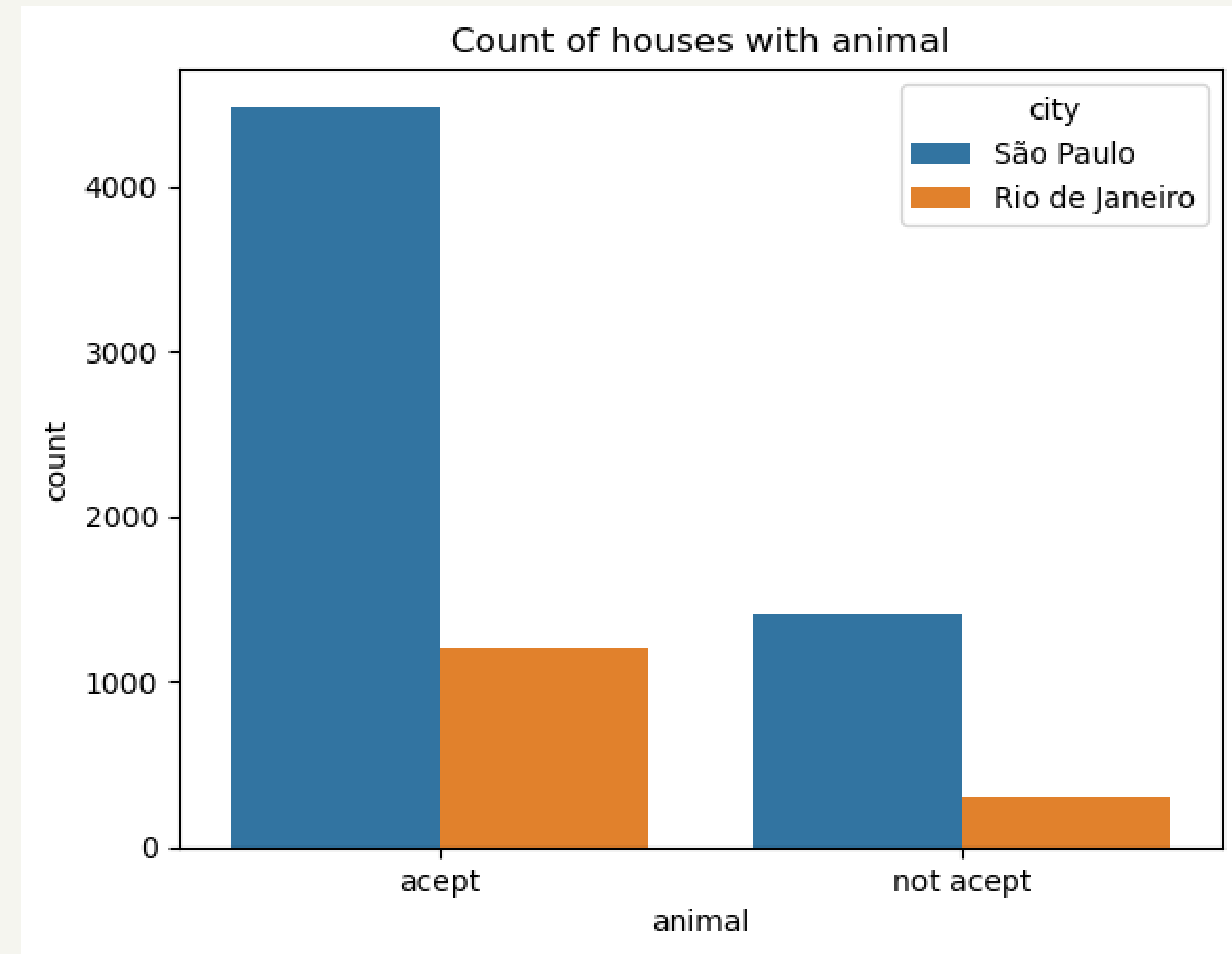
Sao Paulo: 1 bathroom  
Rio de Janeiro: 1 bathroom

# Preferred Houses: (Houses in Sao Paulo and Rio de Janeiro)

## BIVARIATE ANALYSIS



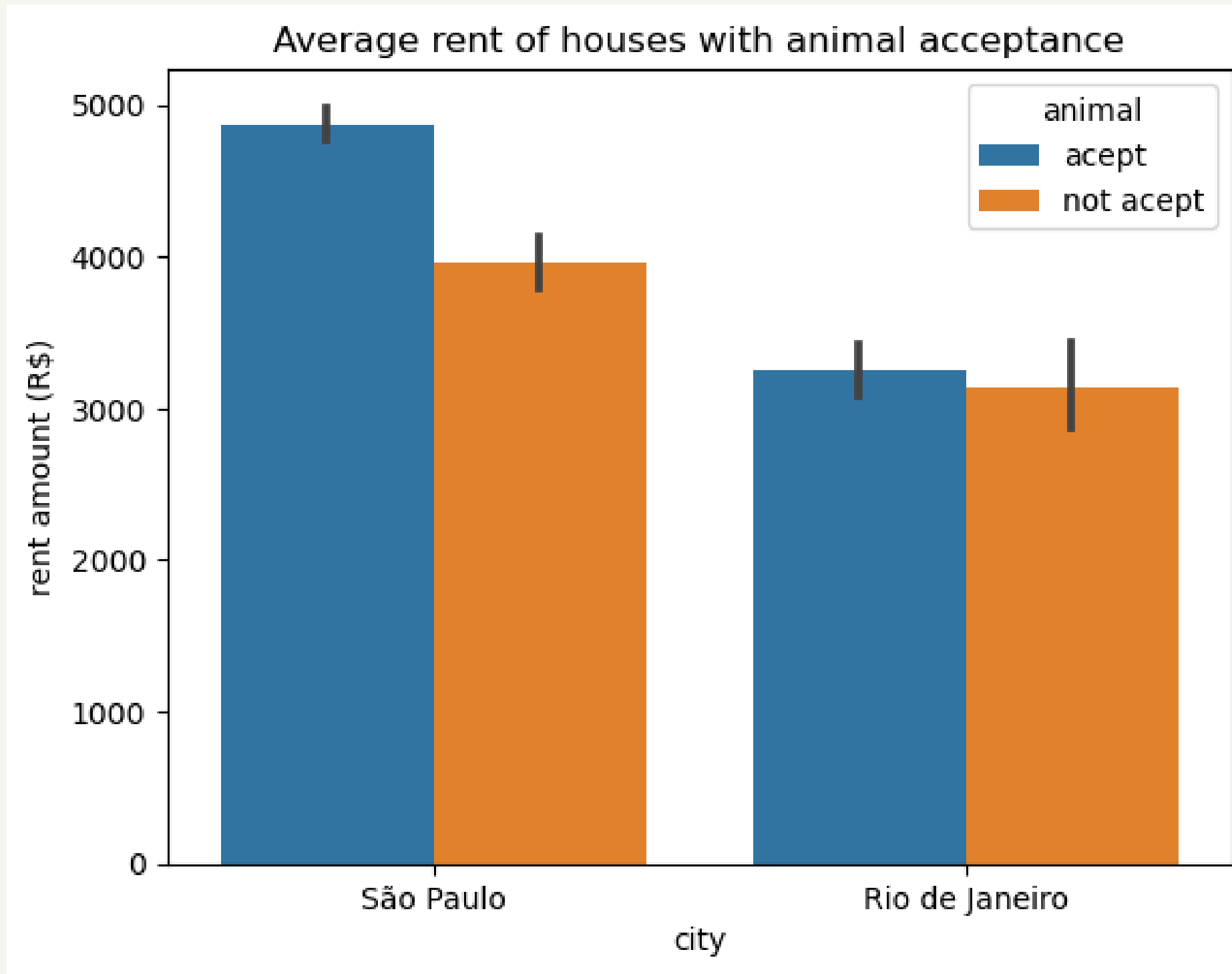
Sao Paulo: 1 Parking  
Rio de Janeiro: 0 or 1 Parking



Sao Paulo: Animal friendly  
Rio de Janeiro: Animal friendly

# Preferred Houses

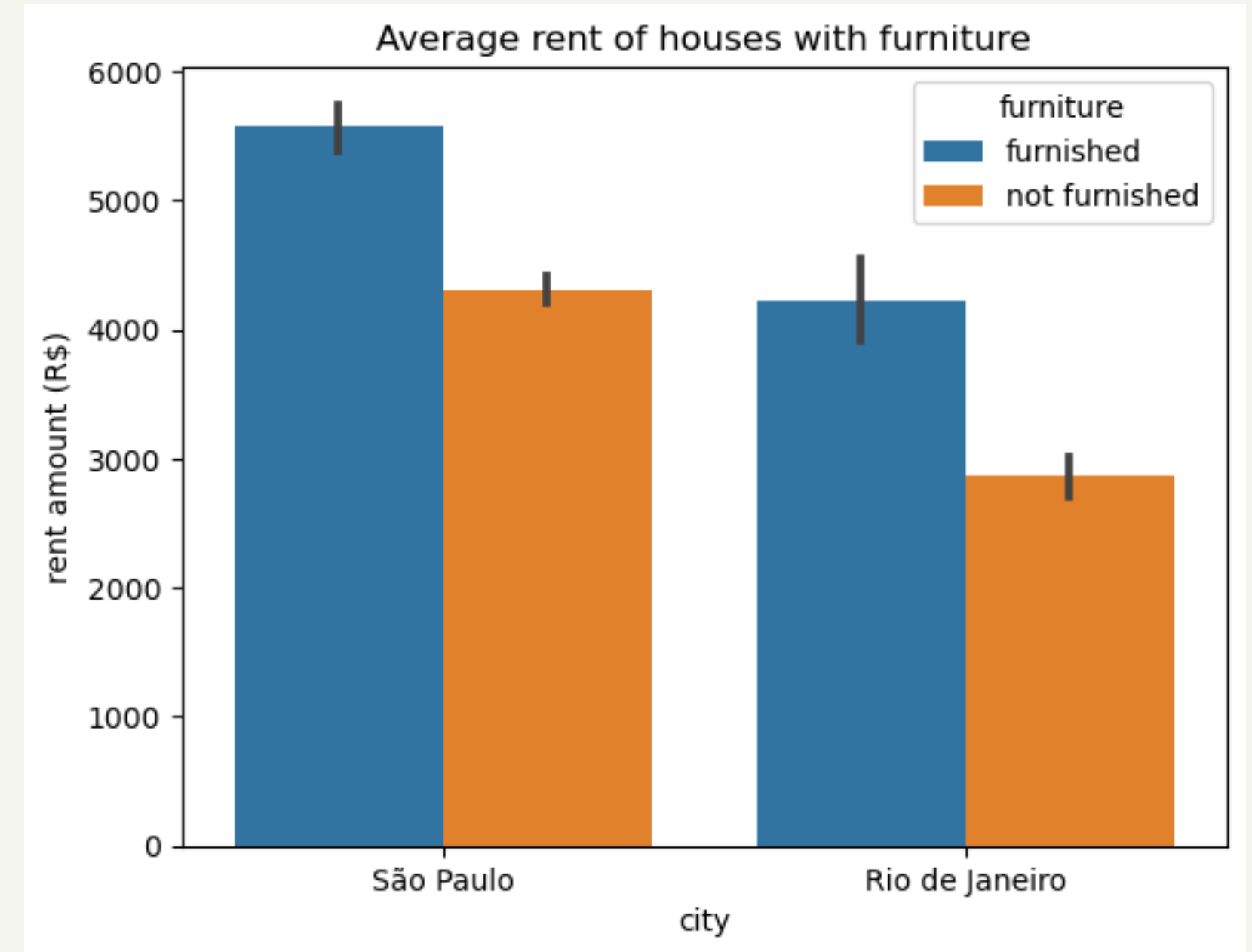
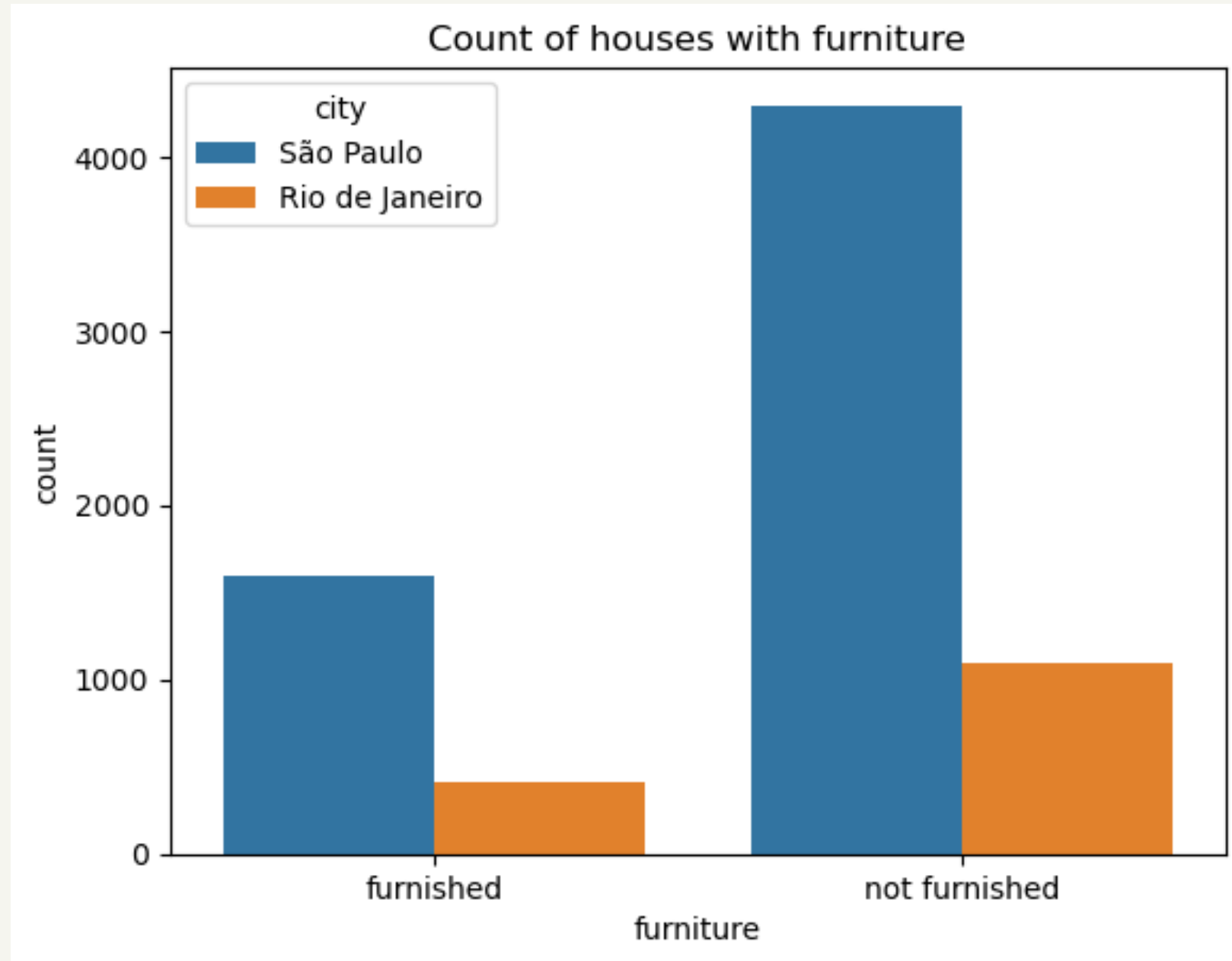
Lets analyze why people are preferring animal friendly places



- As the rent of houses that are animal-friendly and unfriendly are similar, people are renting animal-friendly houses
- So from this, we cannot infer that there are more pet-loving people.

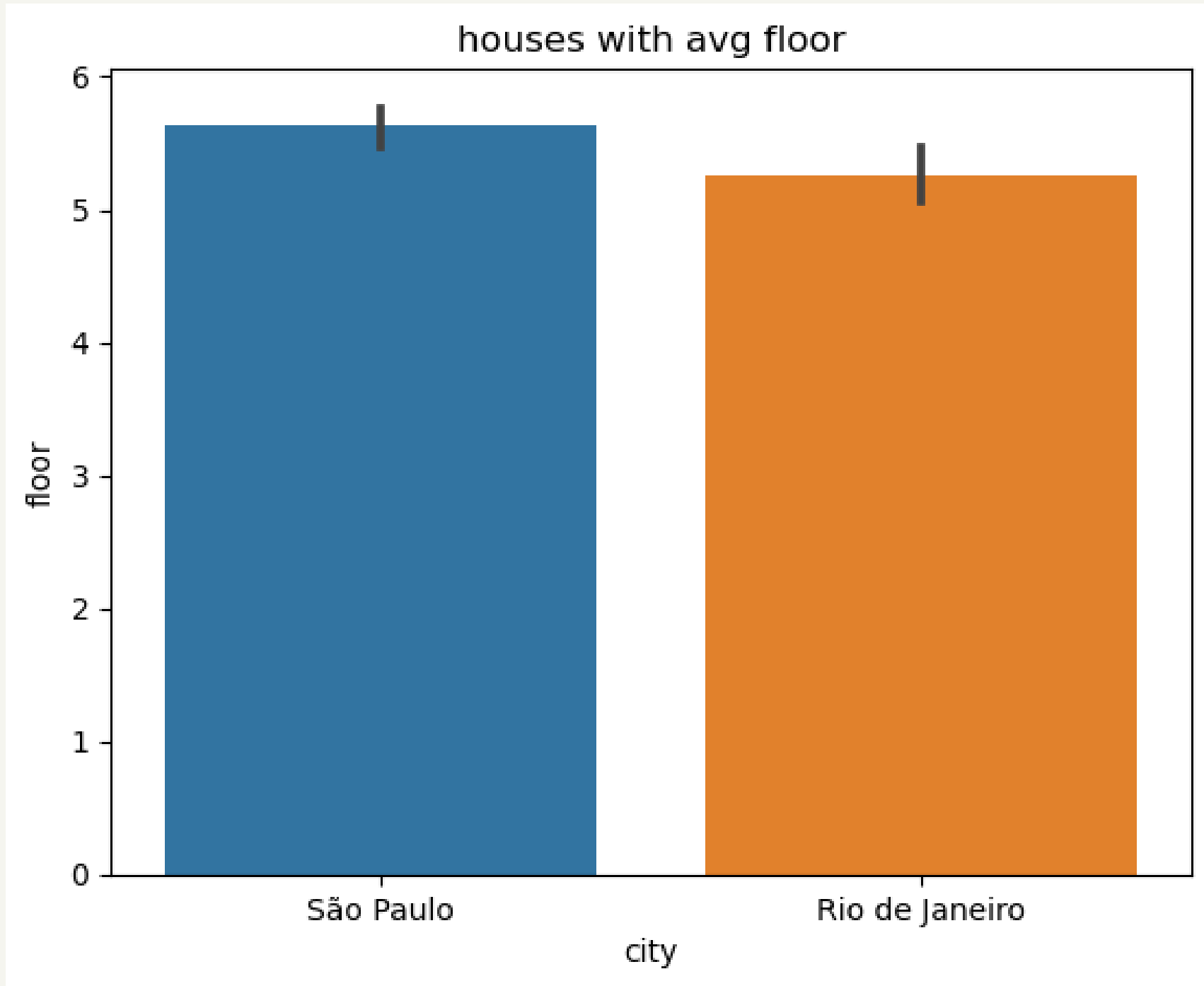
# Preferred Houses

Lets analyze why people are preferring unfurnished places

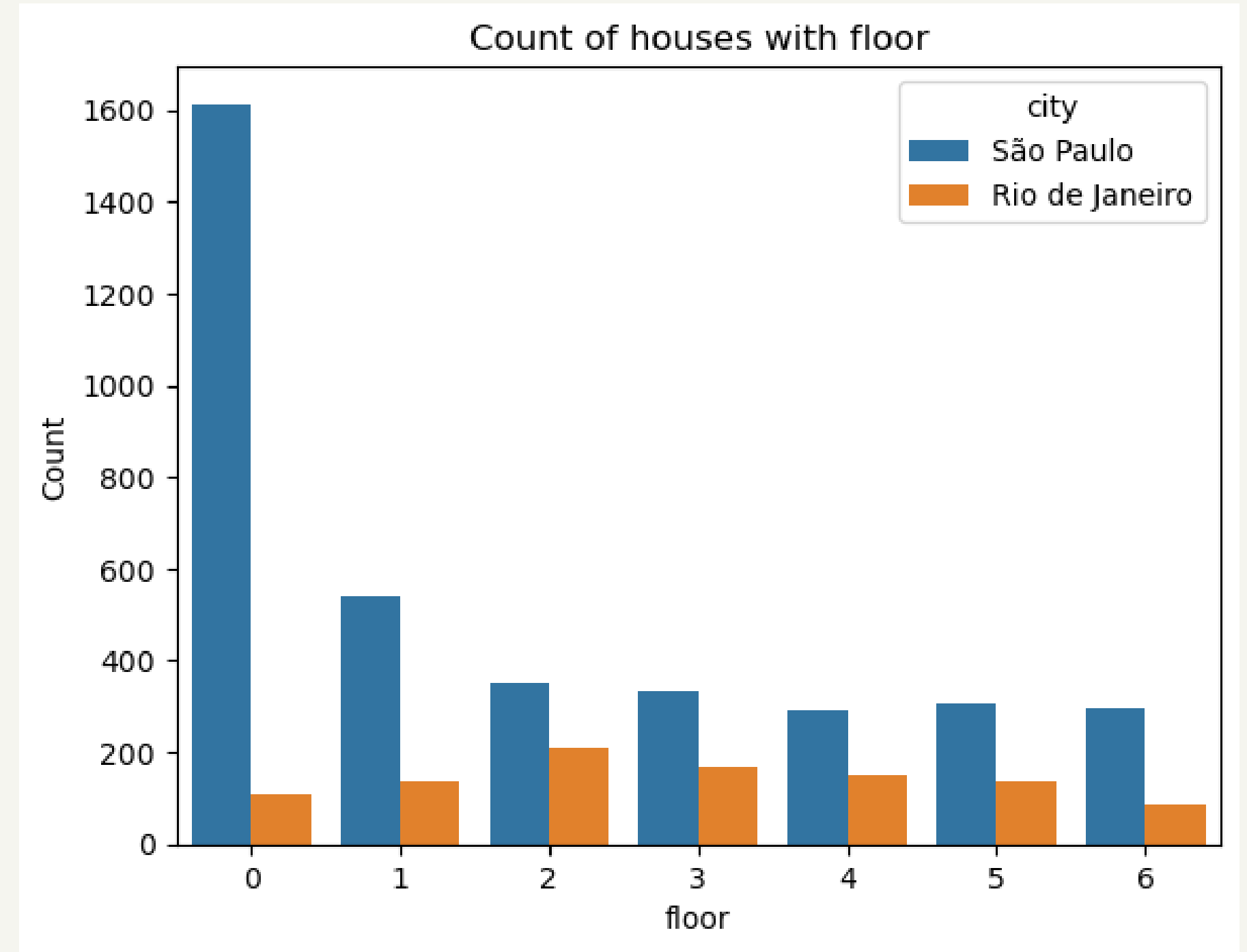


- As the rent of houses that are furnished is so high compared to unfurnished ones, people are renting unfurnished houses.
- So, from this, we cannot infer that people are preferring unfurnished houses.

# Preferred Houses



On average, most people are living on 0 to 6 floors



Sao Paulo: Ground floor  
Rio de Janeiro: No floor preference

# Preferred Houses

Sao Paulo people prefer houses with:

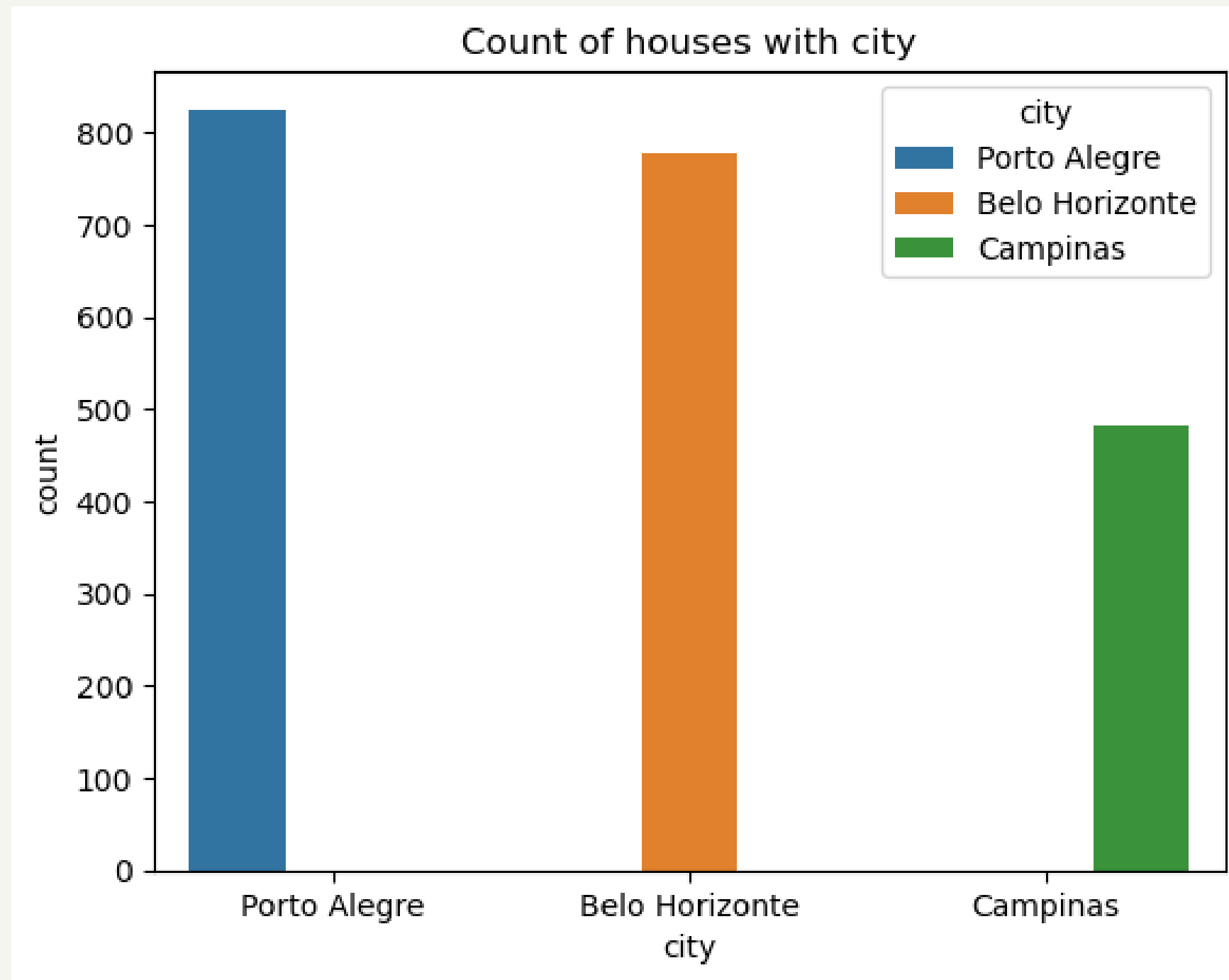
- Three bedrooms
- One bathroom
- One parking space
- Ground floor

Rio de Janeiro people prefer houses with:

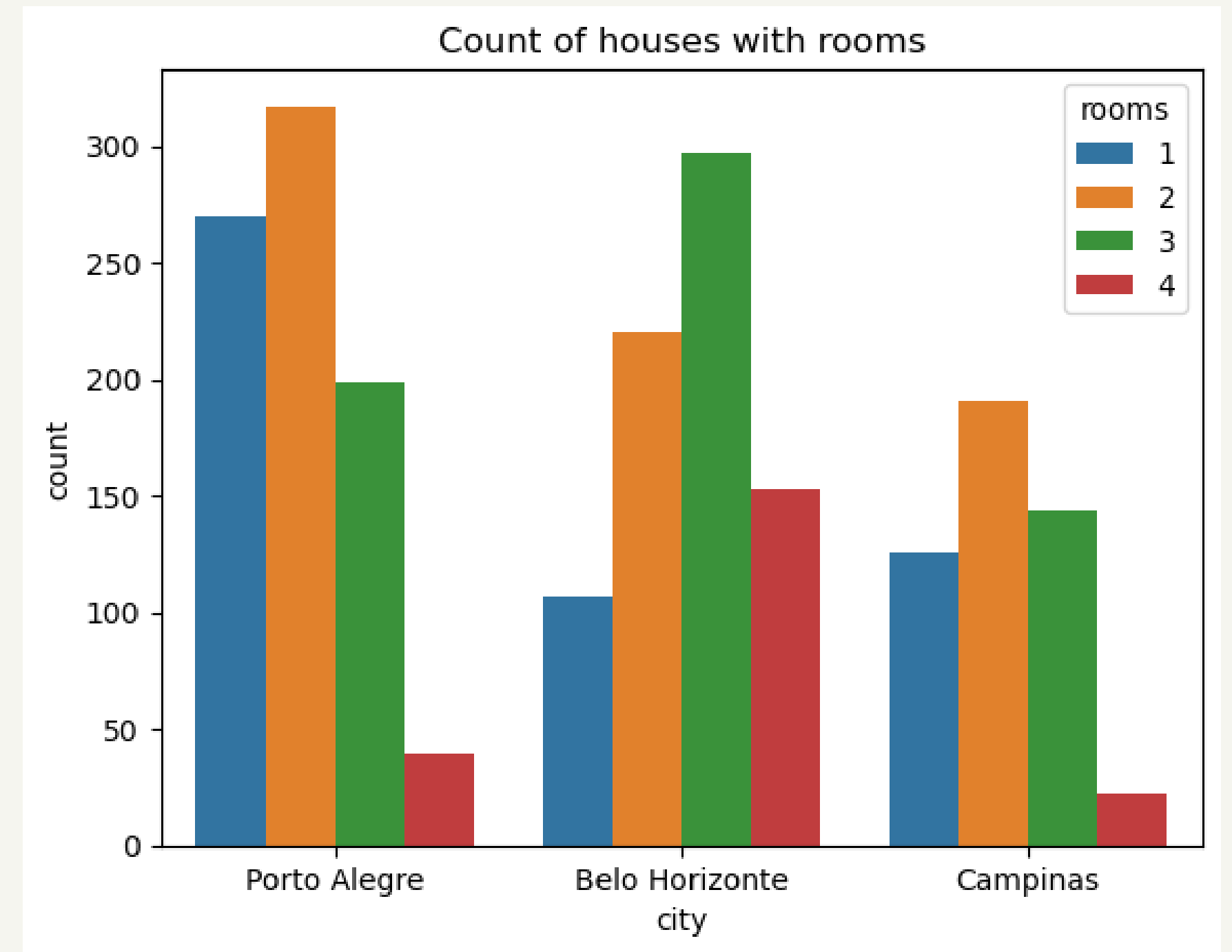
- Two bedrooms
- One bathroom
- No or one parking space
- No floor preference

# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## BIVARIATE ANALYSIS



Porto Alegre and Belo Horizonte have more number of houses than Campinas

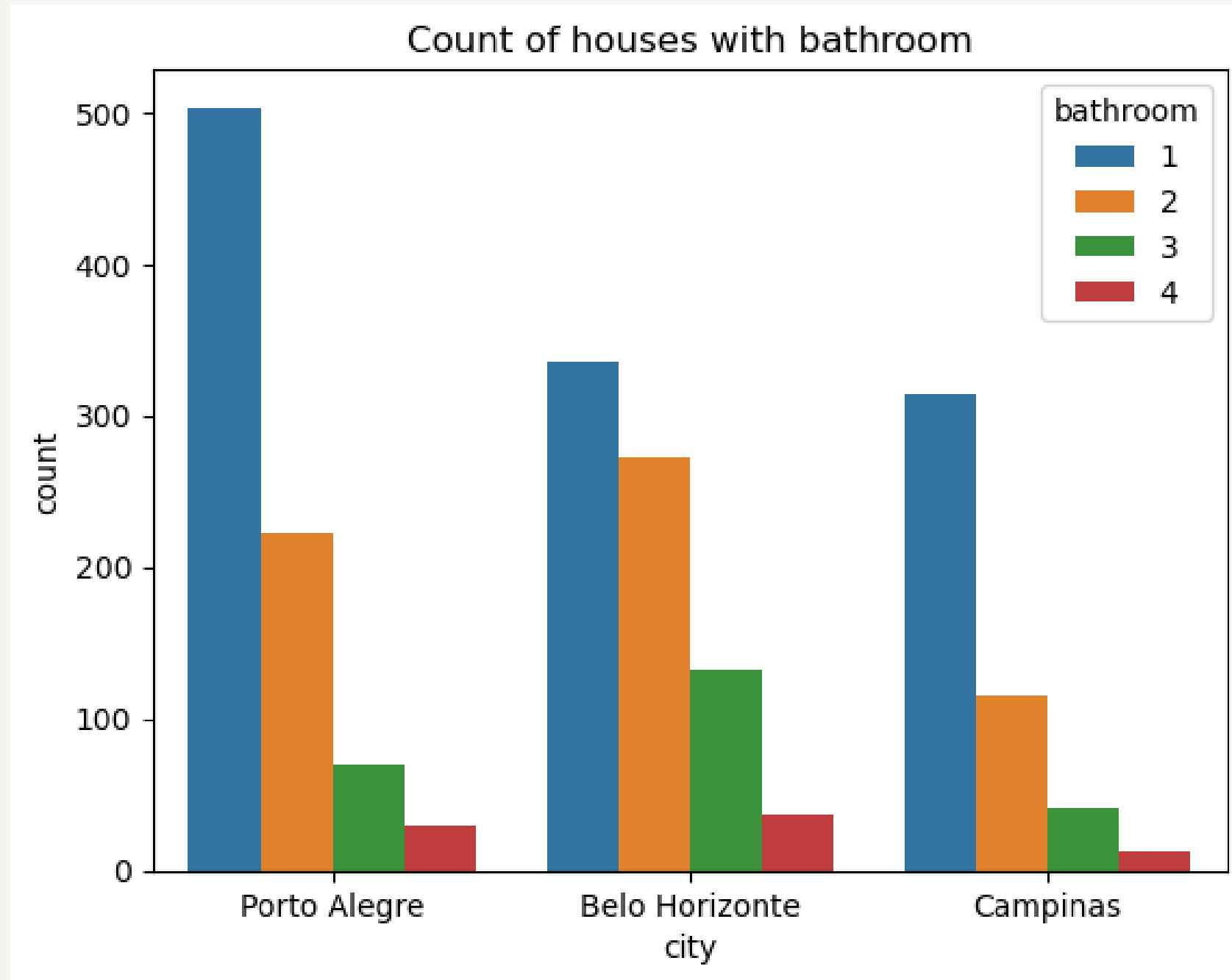


Porto Alegre: 2bhk  
Belo Horizonte: 3bhk  
Campinas: 2bhk

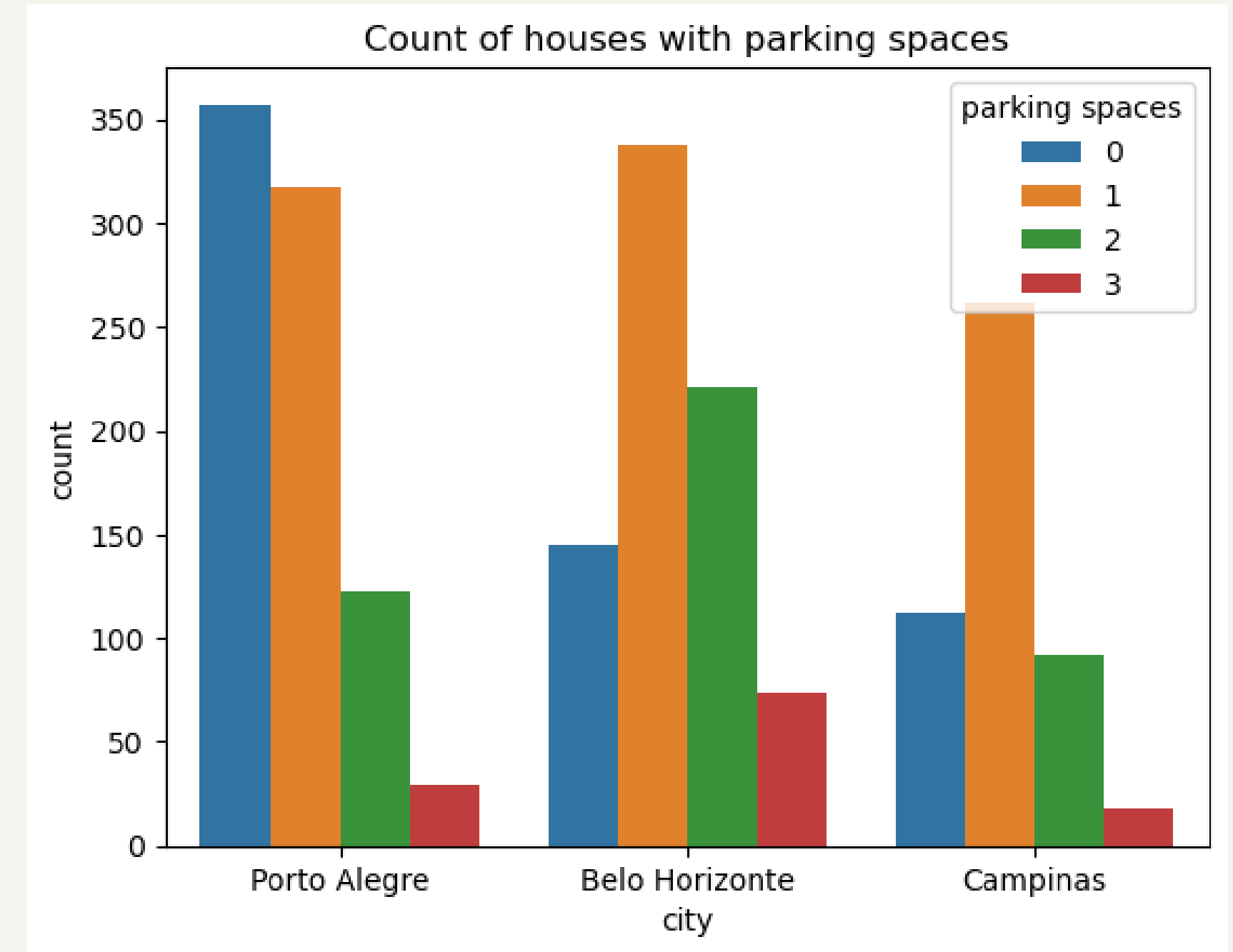


# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## BIVARIATE ANALYSIS



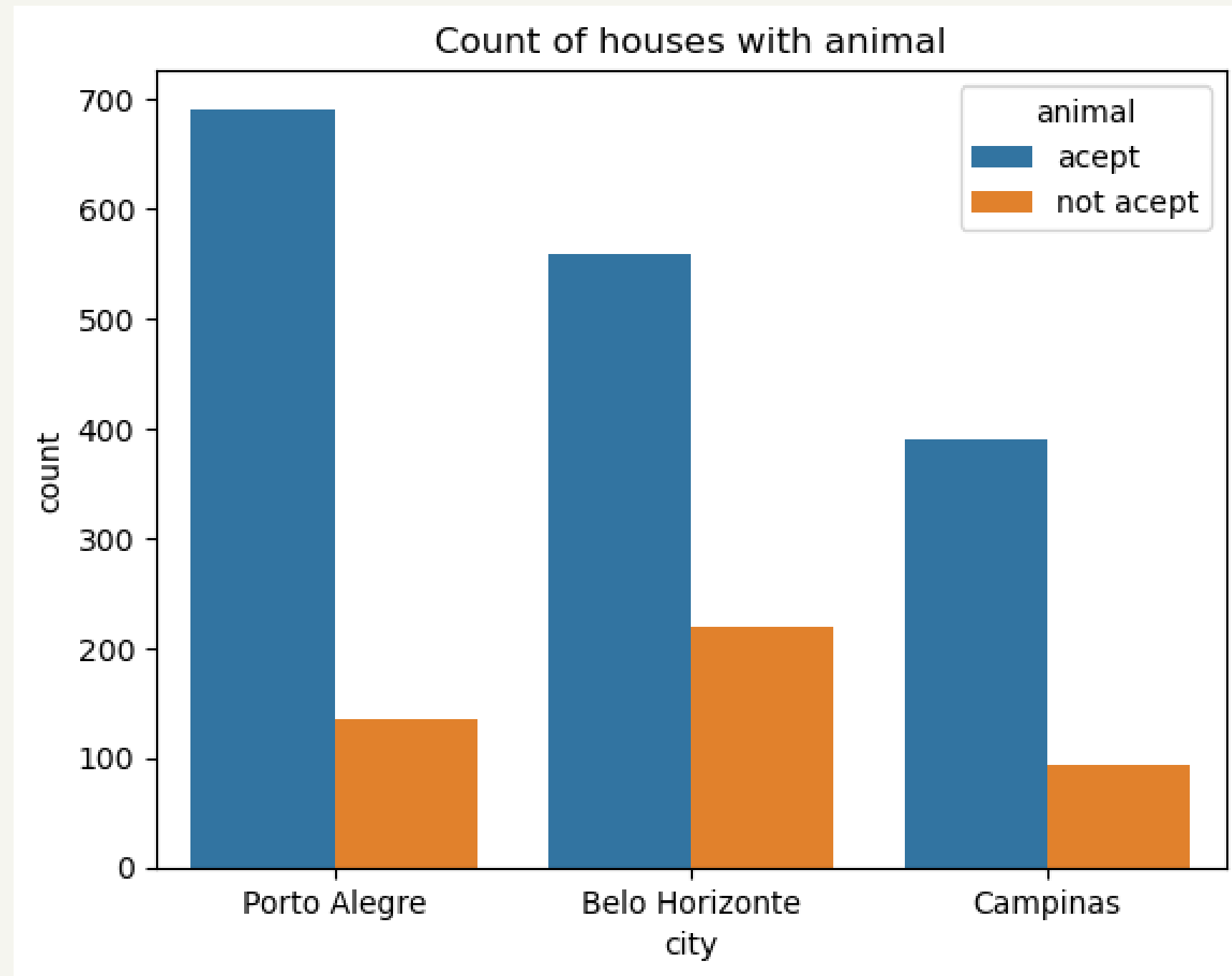
Porto Alegre: 1 bath  
Belo Horizonte: 1 bath  
Campinas: 1 bath



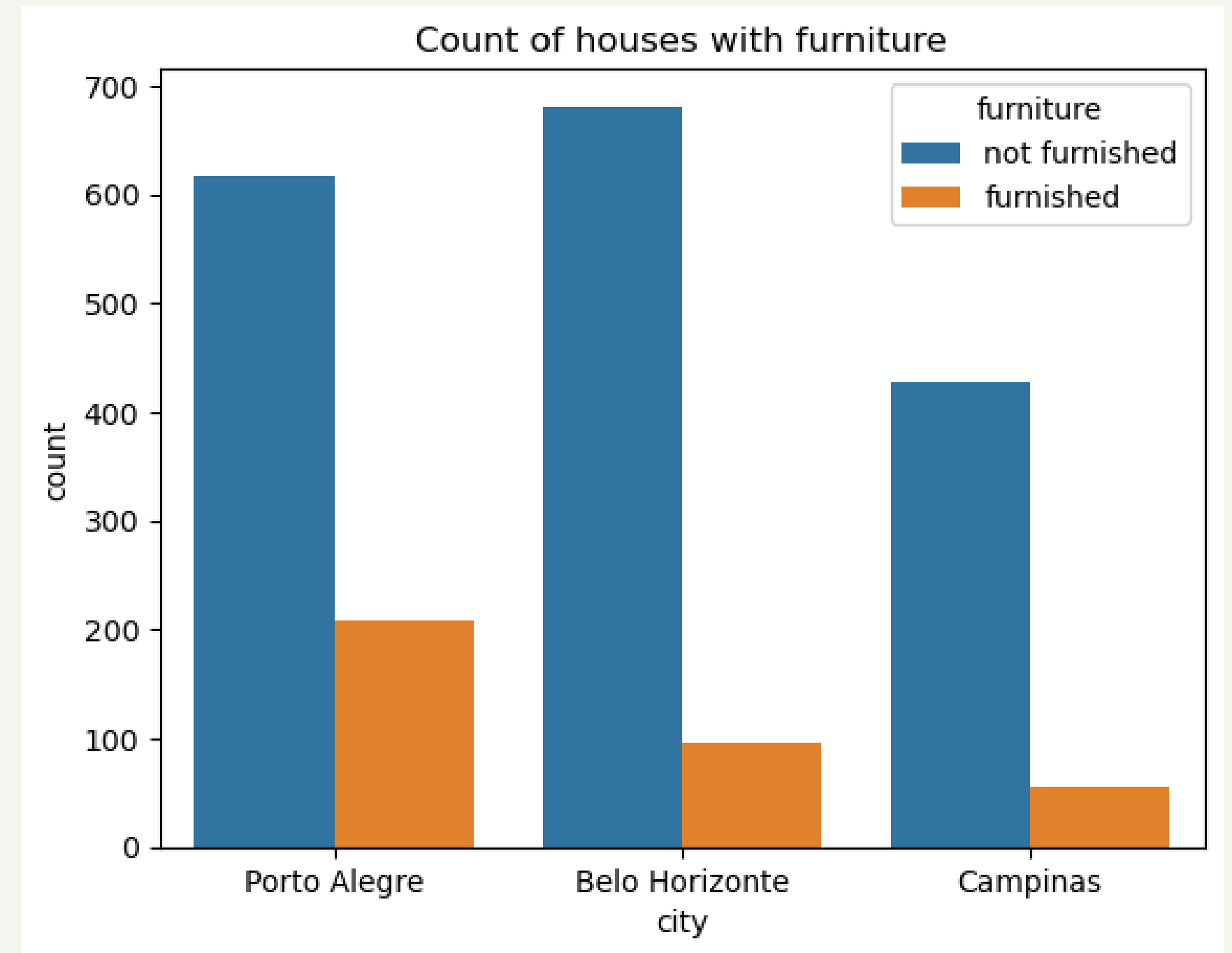
Porto Alegre: 0 or 1 parking  
Belo Horizonte: 1 parking  
Campinas: 1 parking

# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## BIVARIATE ANALYSIS



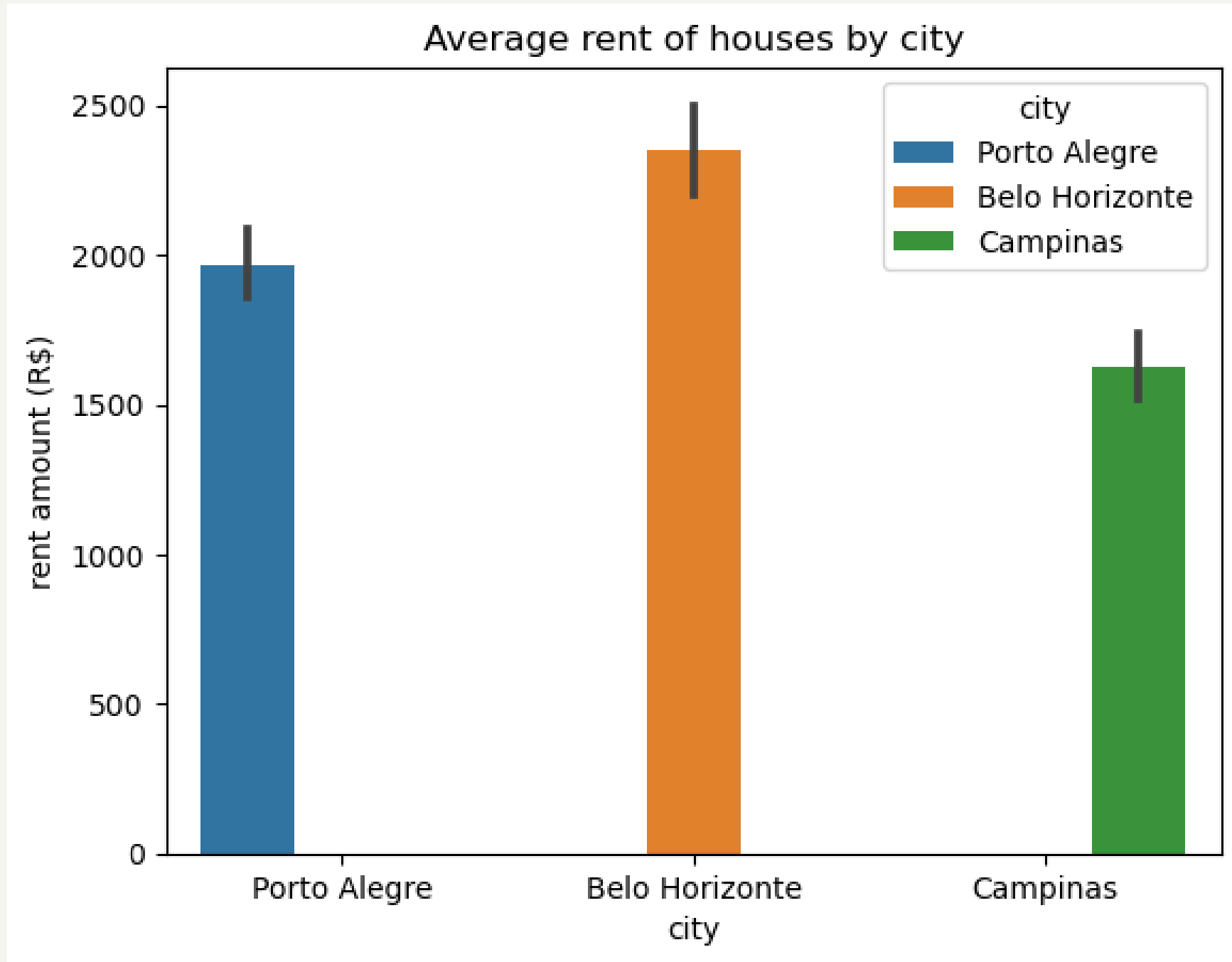
Most houses in all cities are animal-friendly. Belo Horizonte has more animal-unfriendly houses compared to other cities.



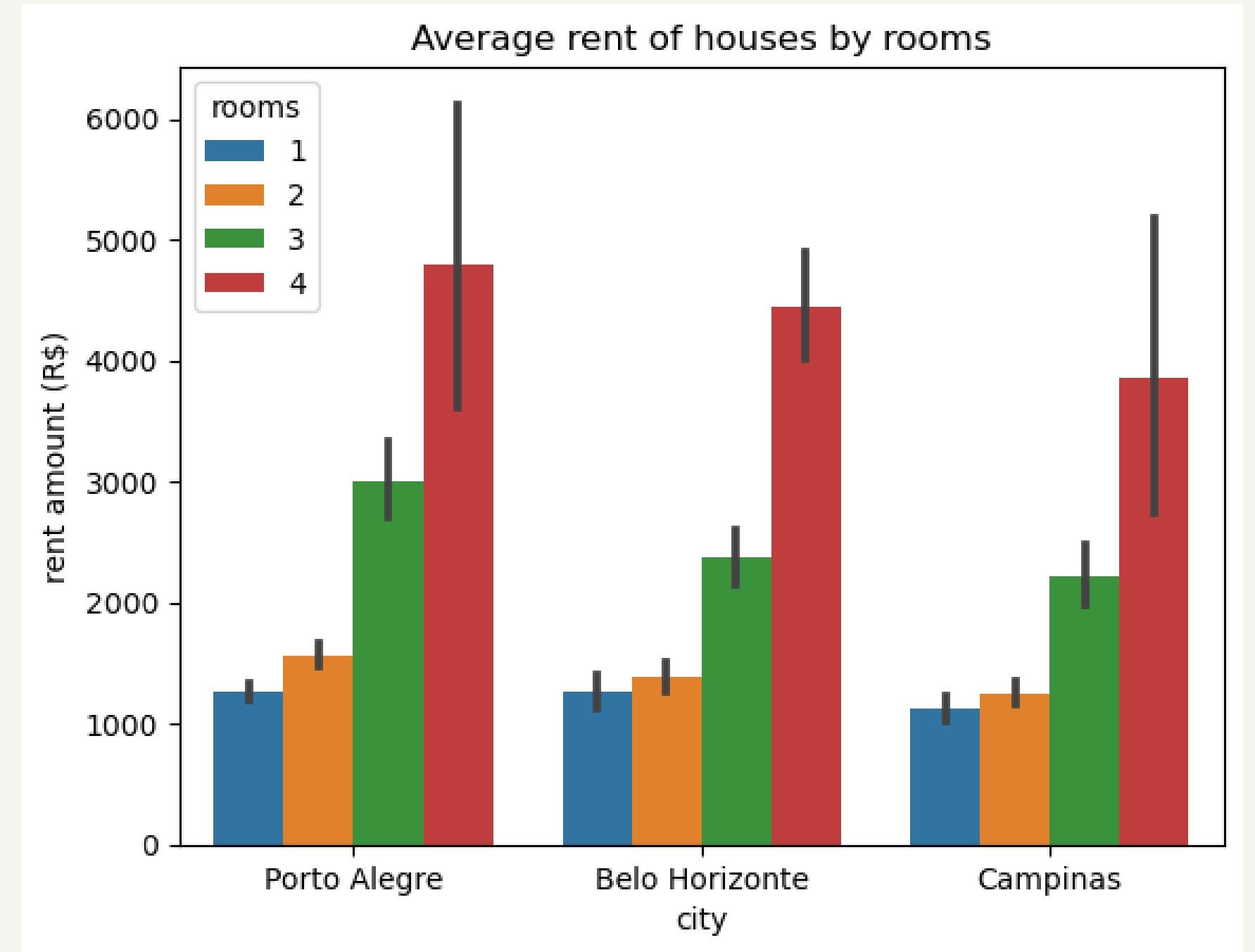
Most houses in all cities are unfurnished. Porto Alegre has more furnished houses compared to other cities.

# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## MULTIVARIATE ANALYSIS



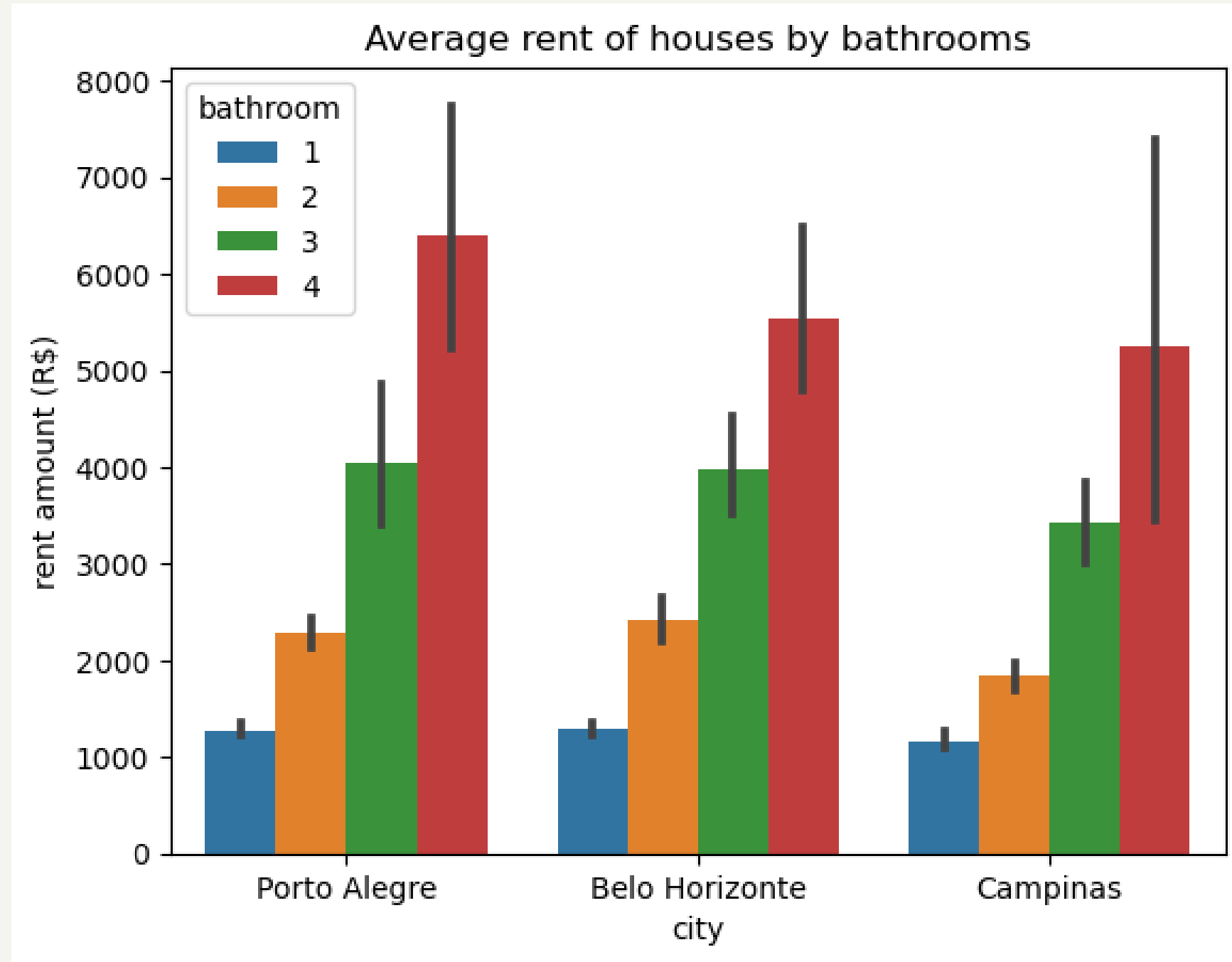
The average rent - higher - Belo Horizonte  
The average rent - lower - Campinas



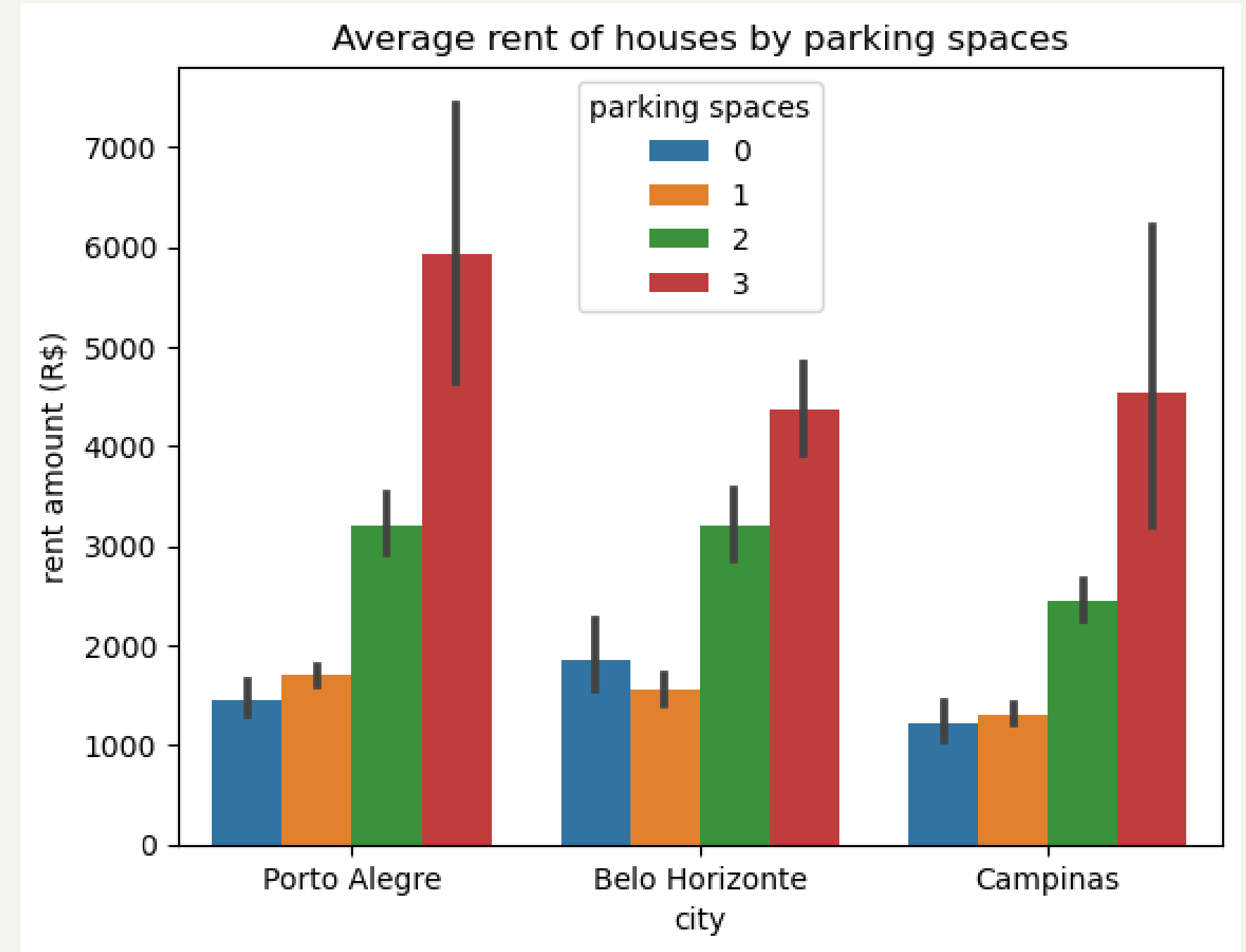
Cheaper house - 1,2 bhk - Campinas  
Cheaper house - 3,4 bhk - Belo Horizonte  
1 and 2 similar rent. So 2bhk better

# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## MULTIVARIATE ANALYSIS



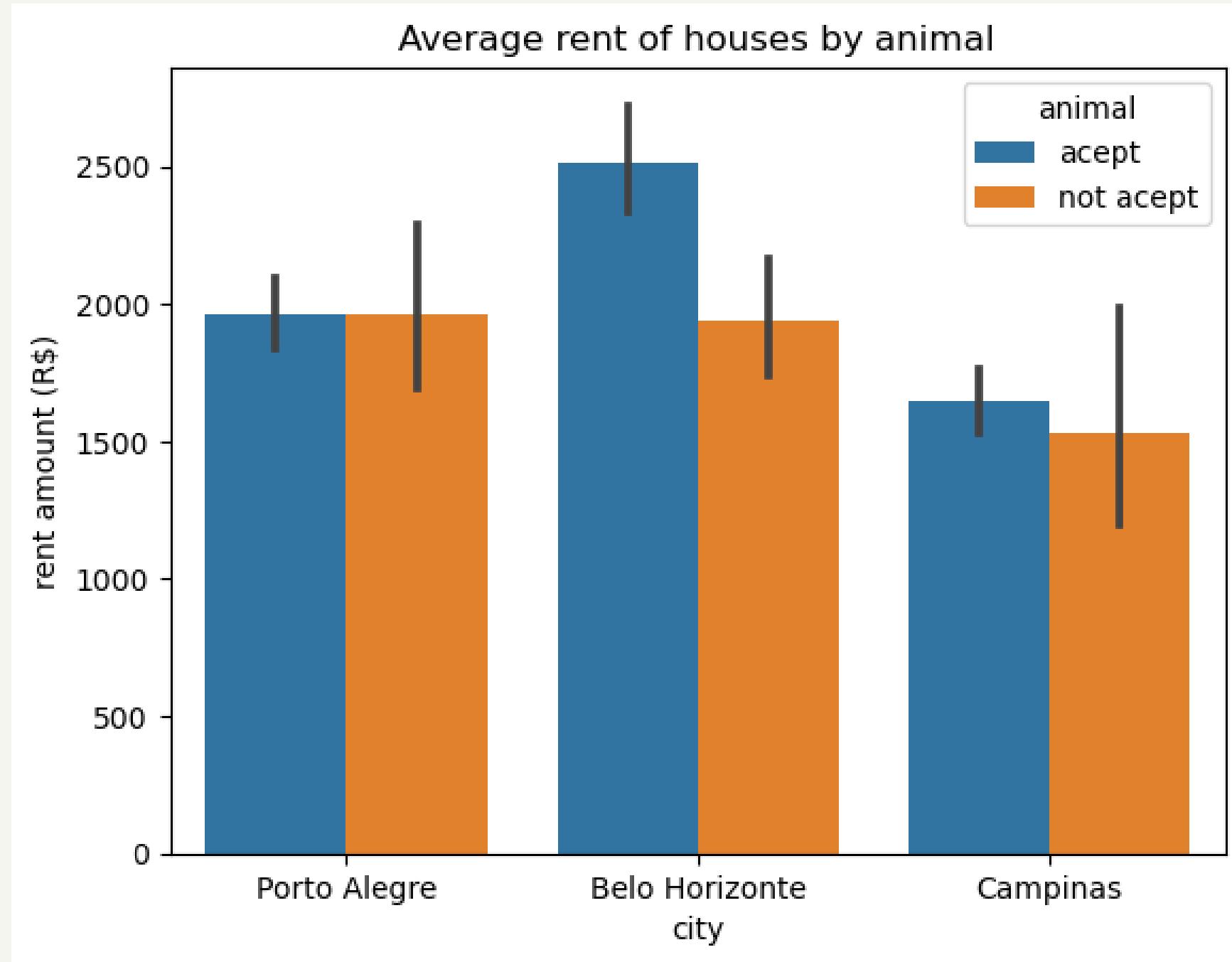
Cheaper house - 1,2 bath - Campinas  
Cheaper house - 3,4 bath - Belo Horizonte  
1bath more affordable than 2 bath



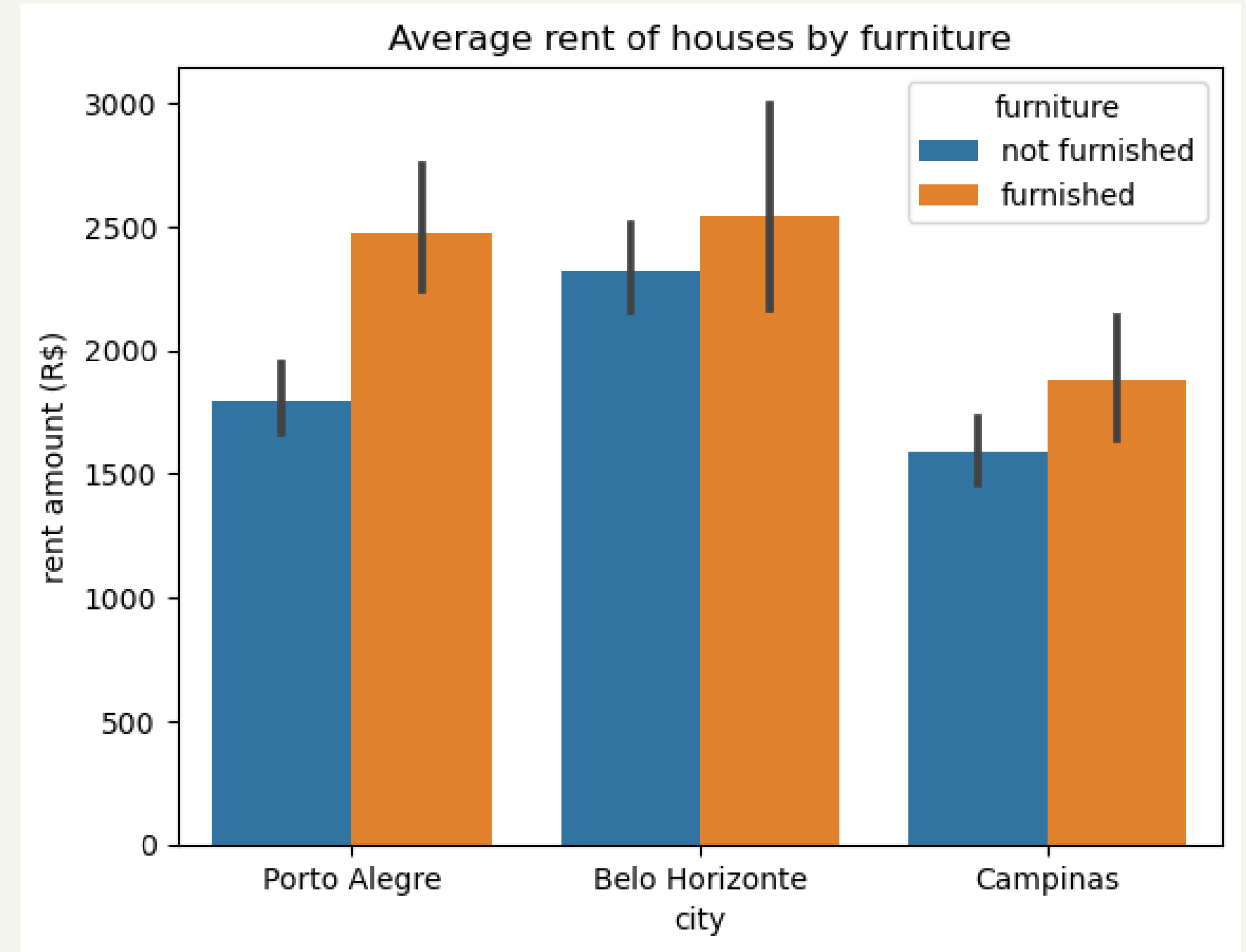
Cheaper house - 0,1 parking - Campinas  
Cheaper house - 2,3 parking - Belo Horizonte  
0 and 1 parking similar rent. So 1 parking better

# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## MULTIVARIATE ANALYSIS



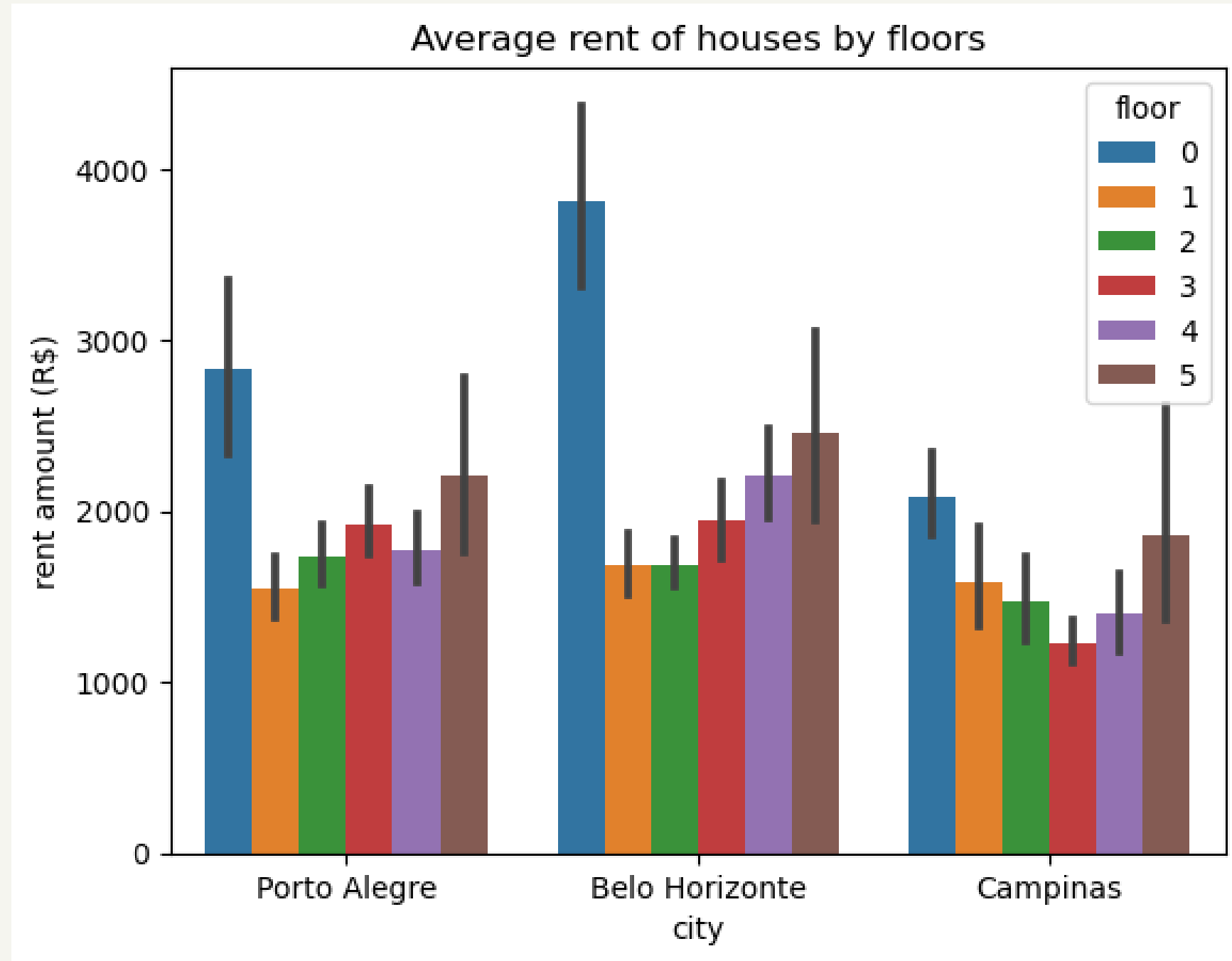
Belo Horizonte - high rent - animal friendly  
Campinas, Porto Alegre - similar rent - friendly/unfriendly



Belo Horizonte - similar rent - furnished/unfurnished - but high rent  
Porto Alegre - high rent - furnished than unfurnished  
Campinas - low rent - furnished/unfurnished

# Houses to Rent: (Houses in Porto Alegre, Belo Horizonte and Campinas)

## MULTIVARIATE ANALYSIS



Cheaper house - irrespective of floor -  
Campinas

Higher rent - ground floor - Belo Horizonte  
Affordable rent - all other floors

# Conclusion

# Recommendatios

## Univariate and Bivariate Analysis Insights:

### 1. Sao Paulo:

- Preferences: 3 bedrooms, 1 bathroom, 1 parking space, ground floor.

### 2. Rio de Janeiro:

- Preferences: 2 bedrooms, 1 bathroom, 0 or 1 parking space, any floor.

### 3. Porto Alegre:

- Houses for rent: 2 bedrooms, 1 bathroom, 0 or 1 parking space, animal-friendly, unfurnished, 2nd or 3rd floor.

### 4. Belo Horizonte:

- Houses for rent: 3 bedrooms, 1 or 2 bathrooms, 1 parking space, animal-friendly, unfurnished, ground floor.

### 5. Campinas:

- Houses for rent: 2 bedrooms, 1 bathroom, 1 parking space, animal-friendly, unfurnished, ground floor.



# Reccomendatios

## Multivariate Analysis Insights:

1. Average rent is highest in Belo Horizonte and lowest in Campinas.
2. Affordable 1-2 bedroom houses are found in Campinas, while 3-4 bedroom houses are more budget-friendly in Belo Horizonte.
3. Given similar rent for 1-bedroom- and 2-bedroom houses, opting for a 2-bedroom house is advisable.
4. Cost-effective 1-2 bathroom houses are available in Campinas, while 3-4 bathroom houses are economical in Belo Horizonte.
5. Houses with one bathroom are more affordable than those with two bathrooms, making them a better choice.
6. Houses with 0-1 parking space are cheaper in Campinas, whereas 2-3 parking space houses are more affordable in Belo Horizonte.
7. Considering similar rent for houses with 1 parking space and no parking space, it's advisable to rent a house with 1 parking space.
8. In Belo Horizonte, animal-friendly houses command higher rent, whereas Campinas and Porto Alegre offer similar rent for both animal-friendly and unfriendly houses.
9. In Belo Horizonte, furnished and unfurnished houses have similar rent but higher overall costs. Porto Alegre has higher rent for furnished houses than unfurnished ones, while Campinas offers lower rent for both furnished and unfurnished ones.

# Reccomendatios

Sao Paulo people prefer houses with:

- Three bedrooms
  - One bathroom
  - One parking space
  - Ground floor
- 
- Sao Paulo people can find cheaper houses in Campinas.
  - There are only a few houses in Campinas, so their next option could be Belo Horizonte.
  - But in Belo Horizonte, the rent is higher for ground-floor, animal-friendly, and furnished houses.
  - Porto Alegre is not an option because rent for 3bhk is very high in this place.

# Reccomendatios

Rio de Janeiro people prefer houses with:

- Two bedrooms
  - One bathroom
  - No or one parking space
  - No floor preference
- 
- Rio de Janeiro people can find cheaper houses in Campinas.
  - There are only a few houses in Campinas, so their next option is Porto Alegre.
  - The rent for 2bhks is a bit lower in Bello Horizonte but Porto Alegre has the edge in all other factors.

# Reccomendatios

## BACHELORS:

Cheaper house

1 bhk

1 bath

1 parking space

Furnished/unfurnished

Animal Friendly/unfriendly

Option 1:  
Campinas

Option 2:  
Porto Alegre

## MID-SIZED FAMILY

Cheaper house

2 bhk

1 bath

2 parking space

Furnished/unfurnished

Animal Friendly/unfriendly

Option 1:  
Campinas

Option 2:  
Porto Alegre

## LARGE-SIZED FAMILY

Cheaper house

3/4 bhk

2 bath

2/3 parking space

Furnished/unfurnished

Animal Friendly/unfriendly

Option 1:  
Campinas

Option 2:  
Belo Horizonte

It is better to opt for 1 parking space as the rent of houses with 0 or 1 parking is similar  
It is better to opt for 1 bath as they are more affordable compared to 2 bath houses



Thank You!