Capstone Project - The Battle Of Neighborhoods

Study of the relationship between the proximity of venues, price and number of tourist apartments

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- Which neighborhood offers the best price / number of venues?

- Is there a correlation between price and the venues?

- Is there a correlation between the number of apartments for rent and the venues?

- What neighborhood would be suitable to put a new apartment for rent?

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Data sources

- Spatial information about neighborhoods. These data were obtained through the portal of the Valencia City Council. Files that described the administrative distribution of neighborhoods were searched. link

- Information on the location and price of rental apartments. Data from an already preprocessed collection of Airbnb were used. These data continue the price, the exact location and the neighborhood to which each one belongs, among other data. link

- Information about the places of interest in each neighborhood. Searches were made through the Foursquare API.

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An initial representation shows that apartments are not evenly distributed across neighborhoods.
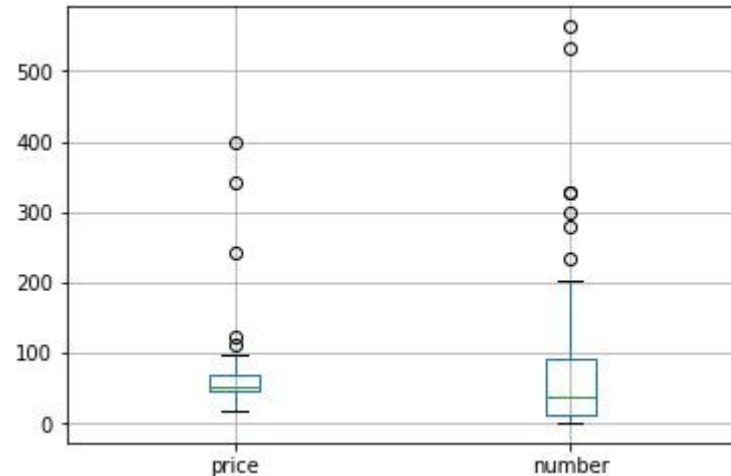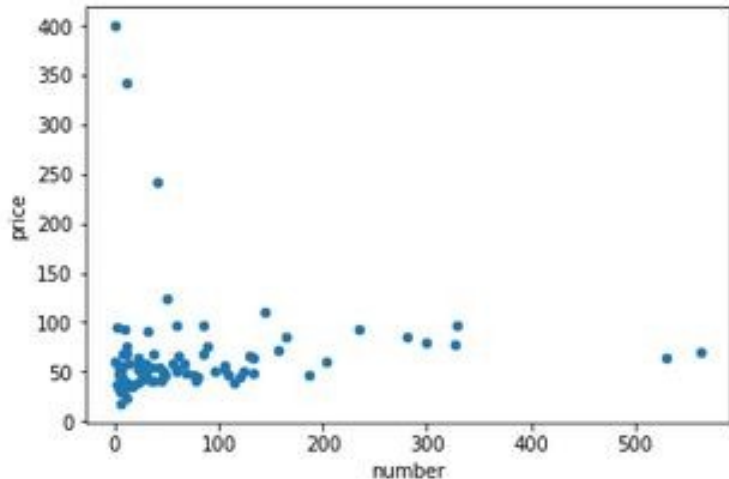
They also don't have the same price.
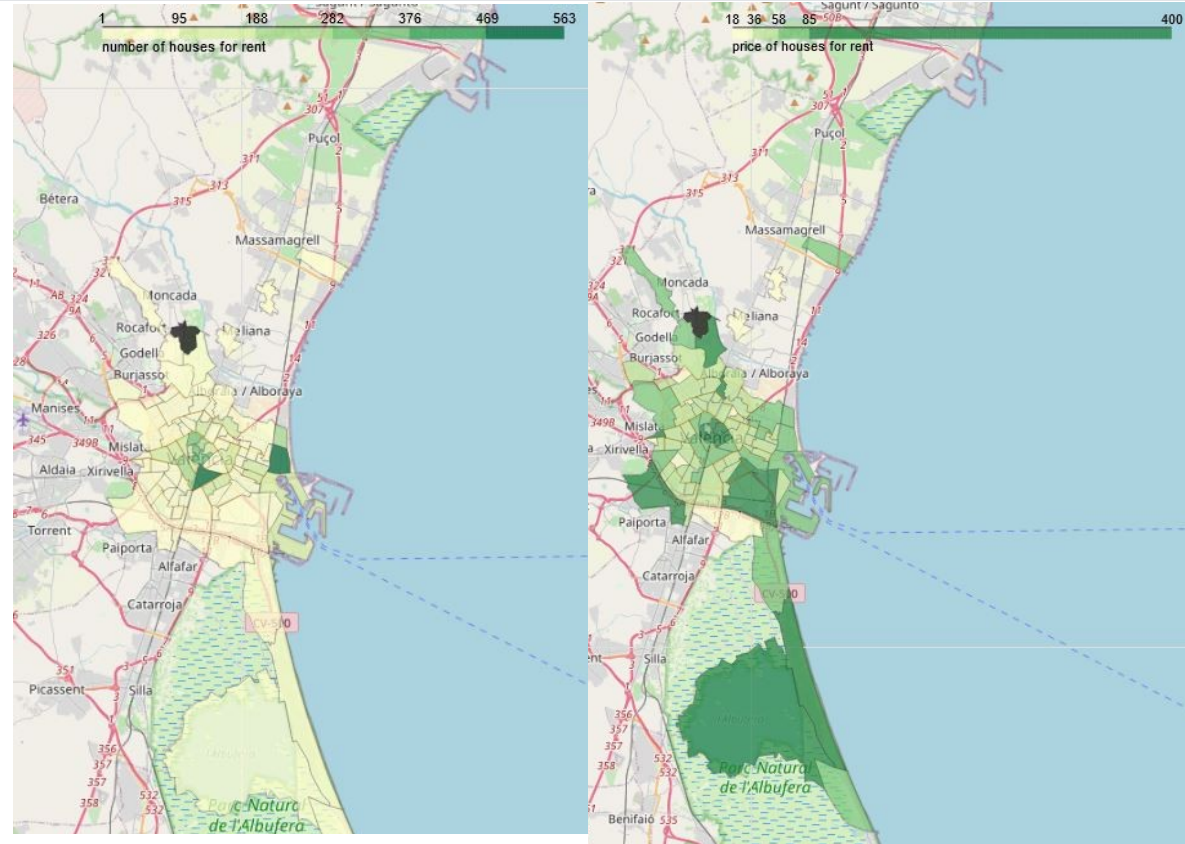
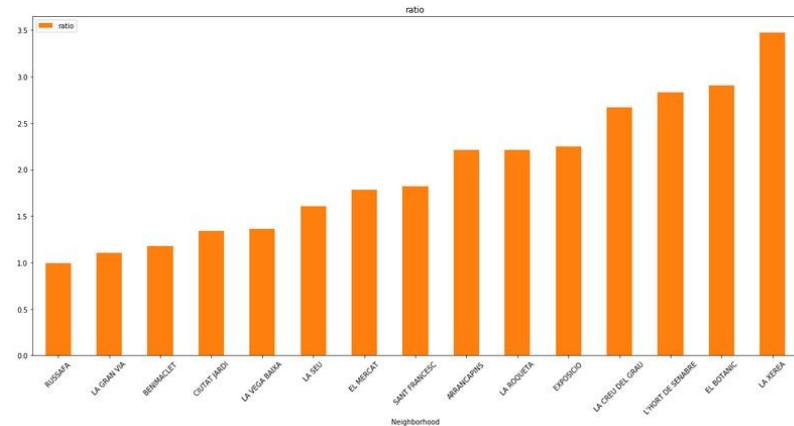# Capstone Project - The Battle Of Neighborhoods

Analysis

Through a visual analysis the dependent variables do not seem to be related to each other. Then it would be confirmed with the correlation.
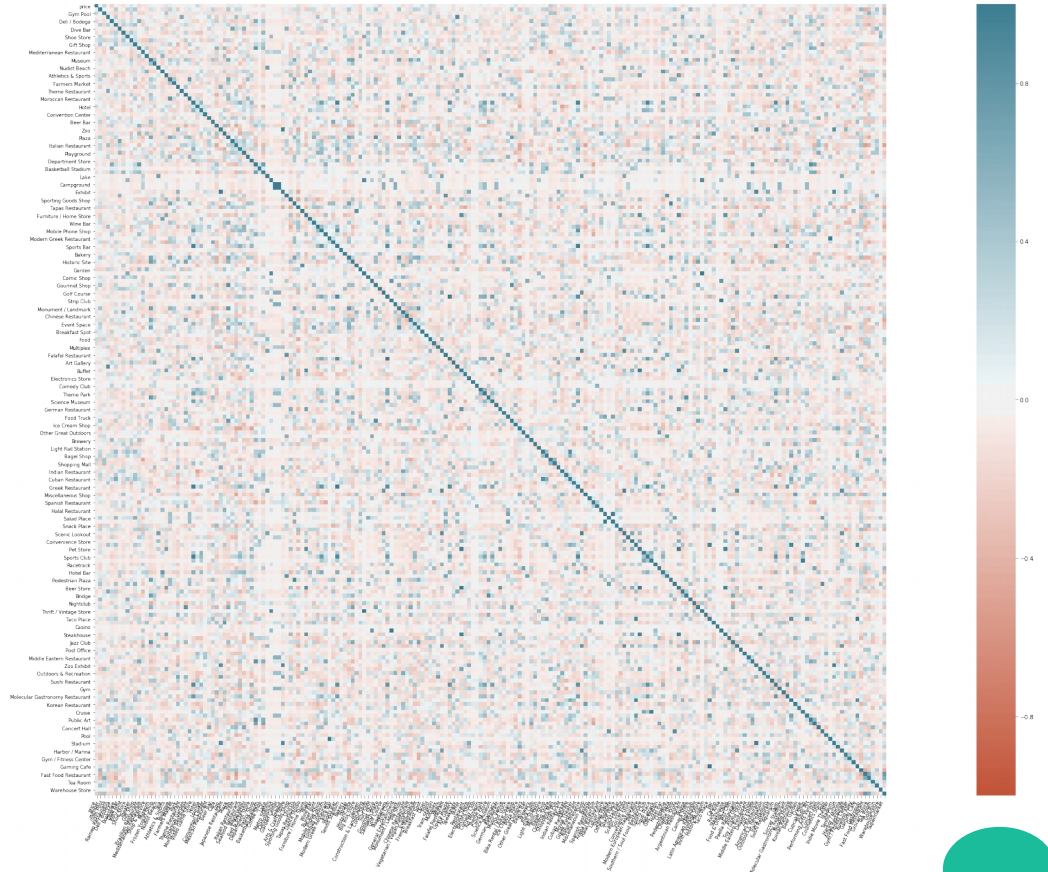
Dependent variables contain outliers.

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Although Russafa is not the cheapest neighborhood, the high number of venues makes it the best positioned.

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Neither feature shows a high correlation with the dependent variables.
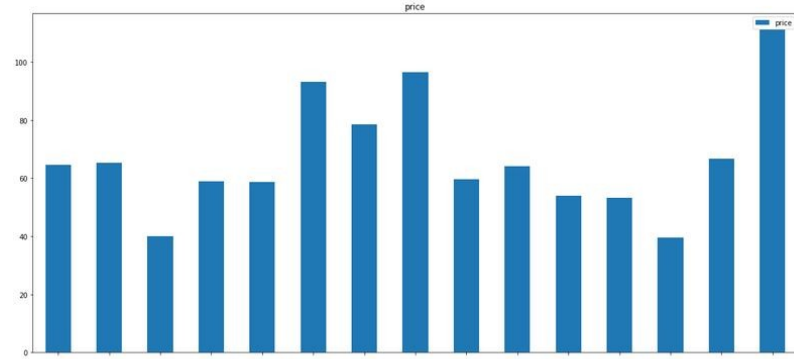
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The dominant features are:

Number of tourist apartments

Gastropub	0.49969
Camera Store	0.47490
Cheese Shop	0.41811
Monument / Landmark	0.41089
Gourmet Shop	0.40389
Dog Run	0.40192
Bike Rental / Bike Share	0.38243
Plaza	0.37725
Gift Shop	0.37633

Price of tourist apartments

Clothing Store	0.31273
Gym Pool	0.28880
Supermarket	0.25571
Toy / Game Store	0.24057
Hotel	0.22697
Shopping Mall	0.22180
Food	0.22096
Breakfast Spot	0.19167
Train Station	0.18918

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At first glance, the relationship seems clear by applying PCA and linear regression.

Representation of the second component versus the dependent variables.
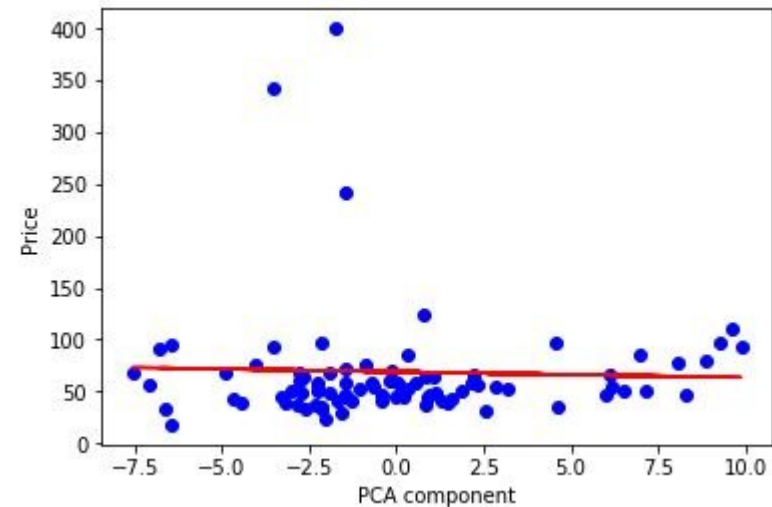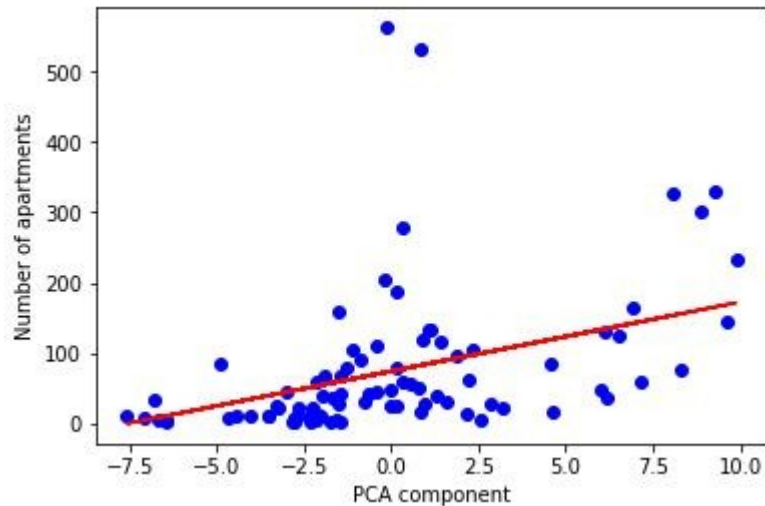
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Results and discussion

- Which neighborhood offers the best price / number of venues?

  Russafa

- Is there a correlation between price and the venues?

  No

- Is there a correlation between the number of apartments for rent and the venues?

  Yes, R2 score 0.78

- What neighborhood would be suitable to put a new apartment for rent?

  L'illa Perduda

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Conclussion

As the main conclusion we can say that the number of supply (and therefore demand) is linked to the proximity to areas of interest. On the other hand, the price is linked more to factors not measured in this project (example size of house).