



Airbnb Earnings Prediction.

Miriam & Johannes
February, 2024





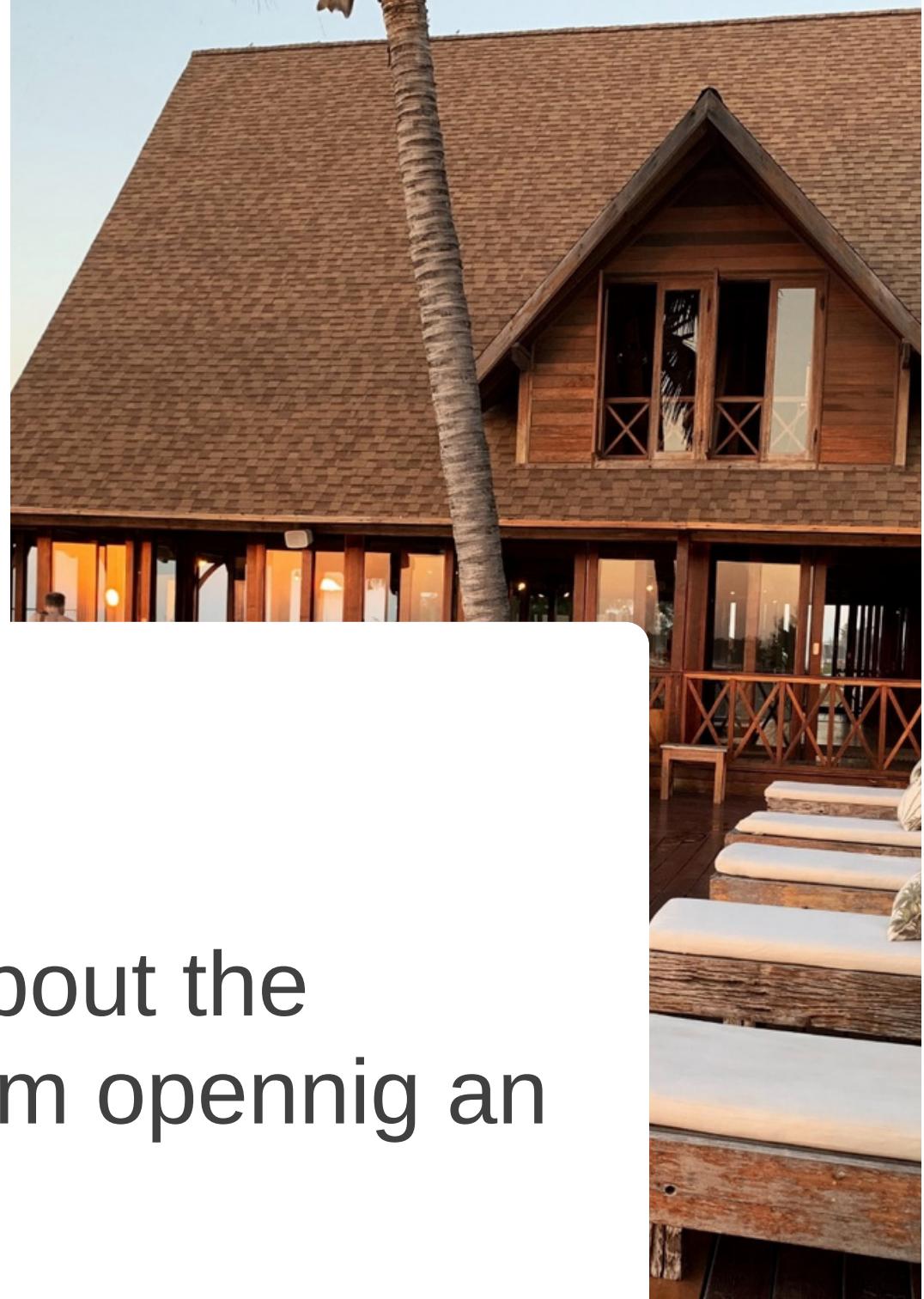
Potential Target Audience

“ A feature for
Airbnb

To attract new clients or offer
them more information for
engagement

“ Potential Airbnb
Hosts

Provide information about the
potential revenues from opening an
Airbnb.



Project Overview

MVP



- Database from 2023

Inside Airbnb
Adding data to the debate

- ML- Linear Regression

- Focus on Mexico City

Cleaning and Decision-Making

- Cleaning

- Strength of Correlation

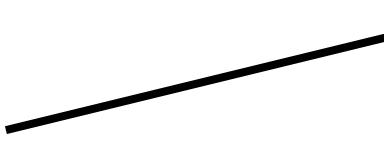
- Strength of Correlation

- Use tests like Pearson to confirm correlations aren't random.

- Multicollinearity

- Practical Thresholds

Highly correlated pairs: [('room_type_Private room', 'room_type_Entire home/apt'), ('beds', 'accommodates')]



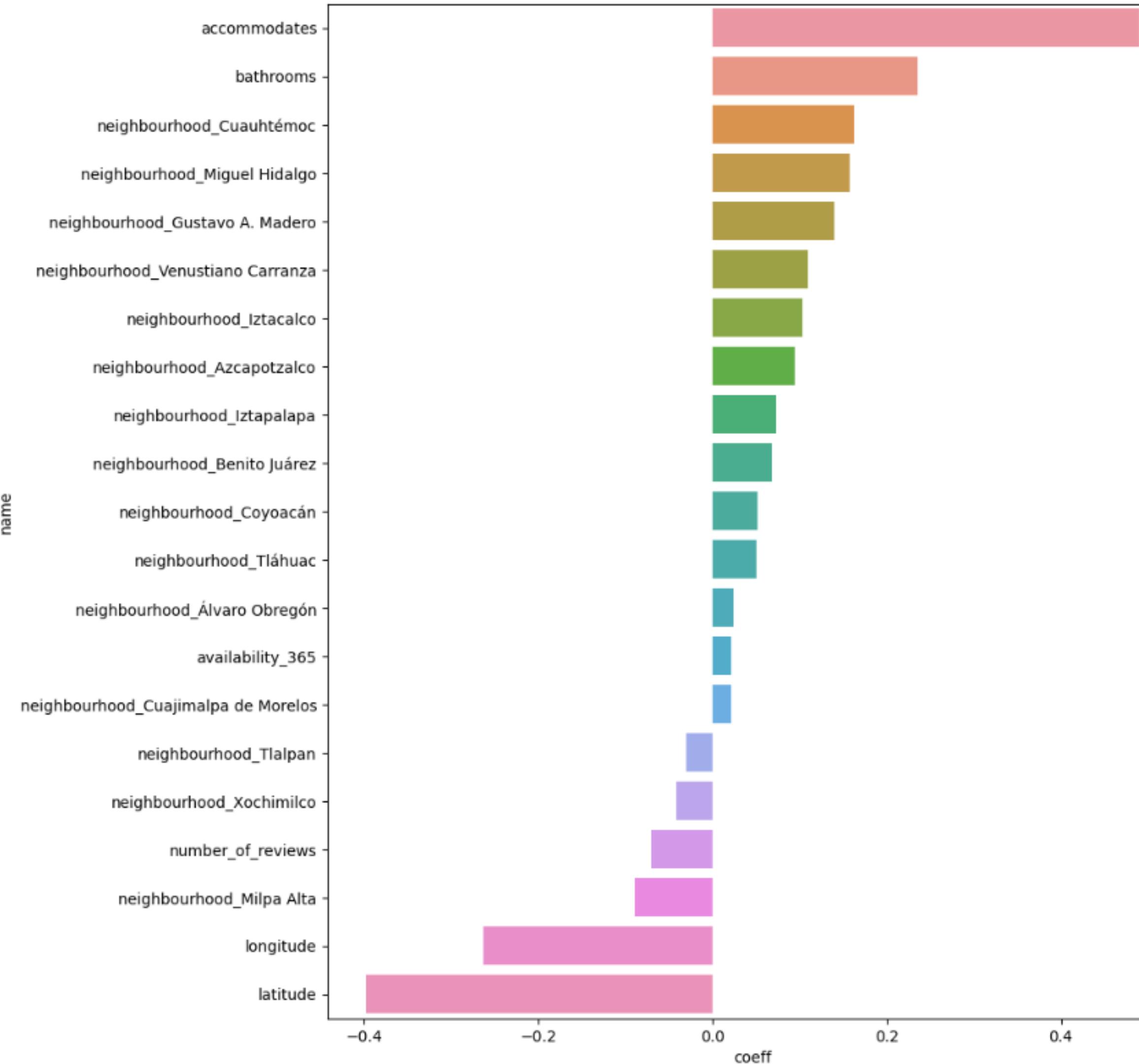
price	1.000000
accommodates	0.556181
bathrooms	0.482504
beds	0.473967
neighbourhood_Cuauhtémoc	0.129912
neighbourhood_Miguel Hidalgo	0.126302
latitude	0.112987
superhost_t	0.100817
availability_365	0.048581
neighbourhood_Cuajimalpa de Morelos	0.012645
neighbourhood_La Magdalena Contreras	-0.004596
neighbourhood_Milpa Alta	-0.016407

Price Model MX

r^2 Test set = 0.41
 r^2 Train set = 0.40
Adjusted r^2 = 0.40

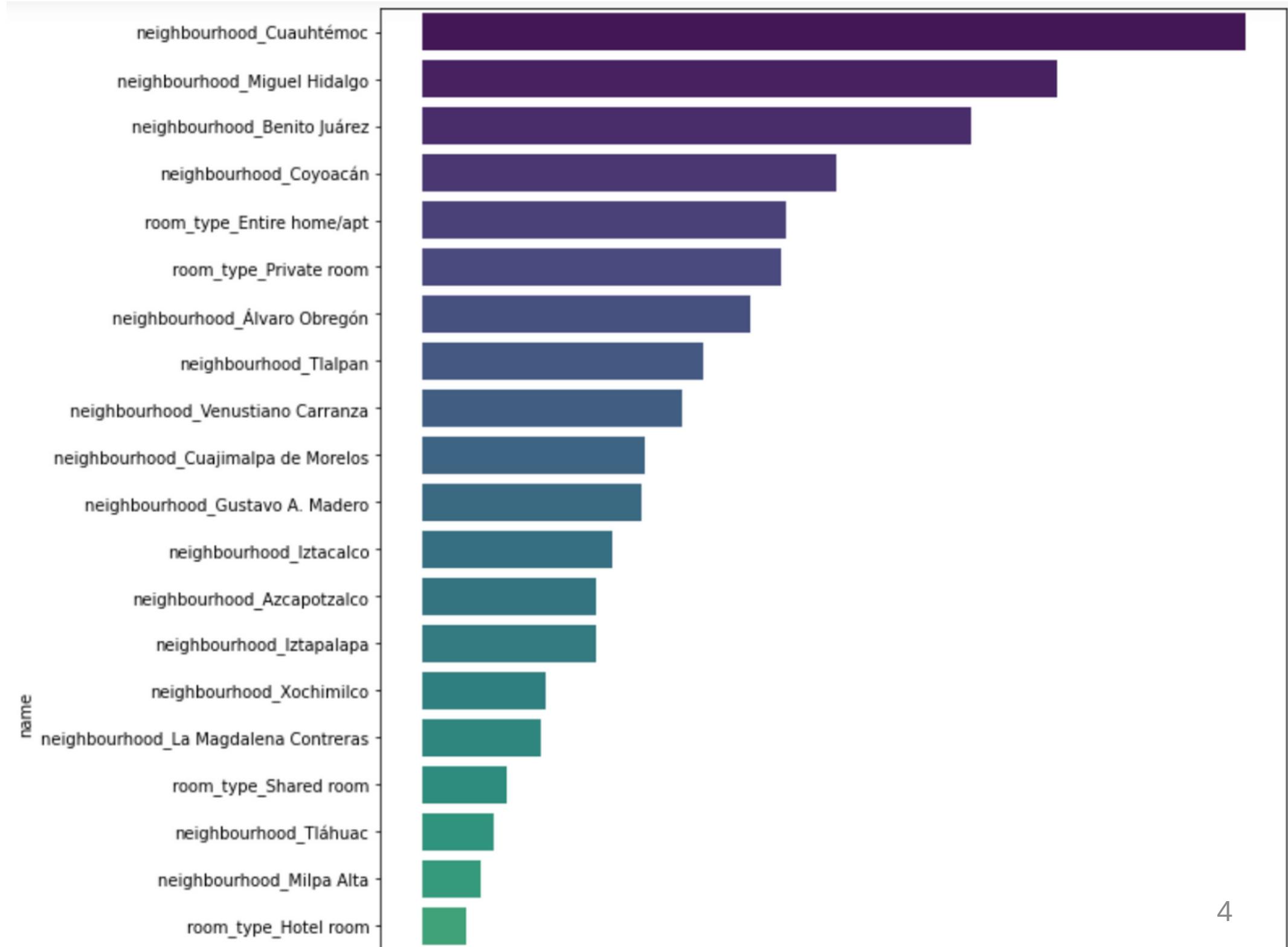
MAE = 615.21 Pesos





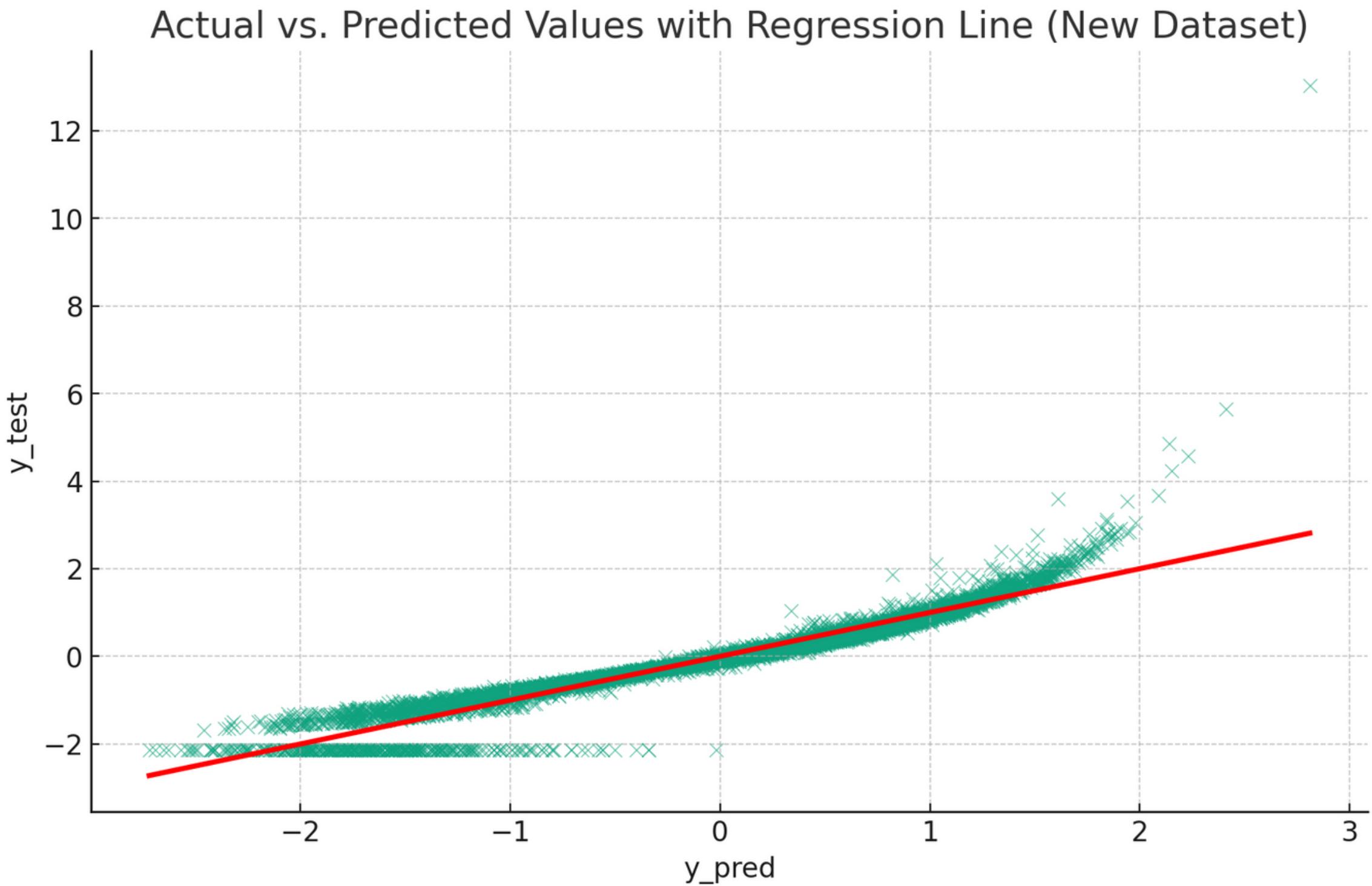
Revenue Predictive Model MX

- The neighborhoods and type of room have the biggest influence on revenue



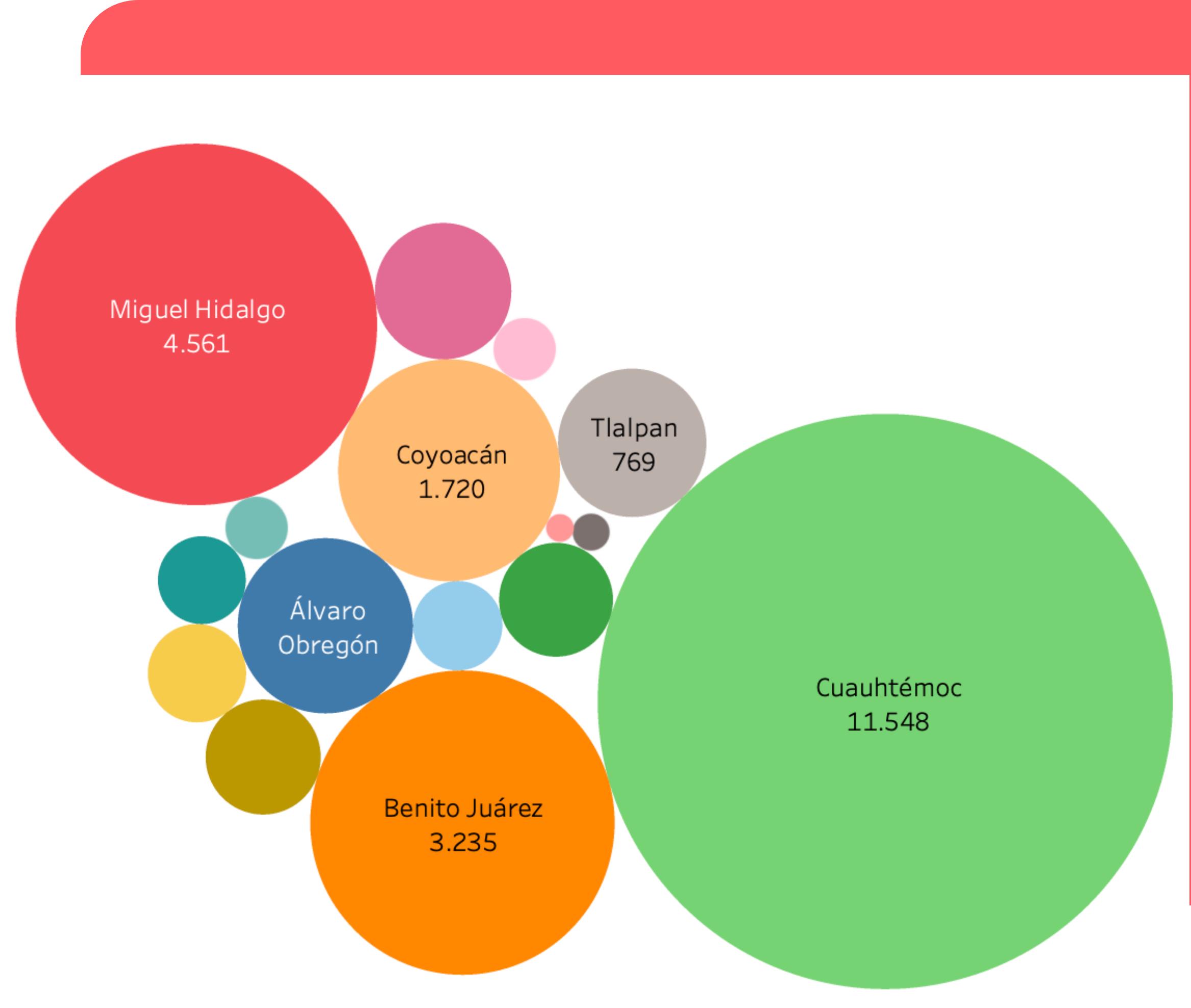
r^2 Test set = **0.92**
 r^2 Train set = **0.93**
Adjusted r^2 = **0.93**

Mean Error: **7.42e-05**
Root Mean Squared Error:
0.27
Mean Absolute Error: **0.156**



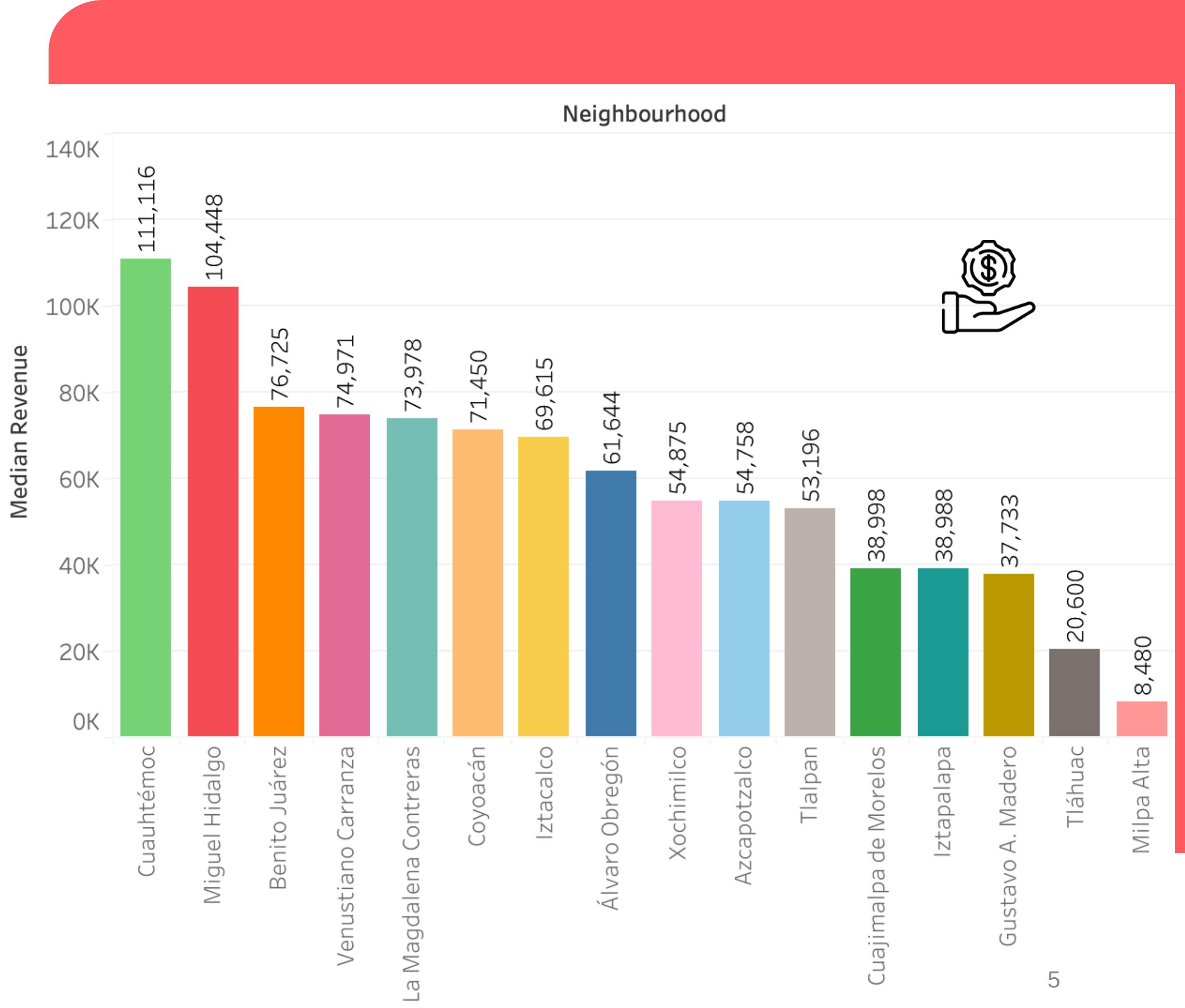
Conclusions

The most popular neighbourhoods for Airbnb in Mexico City



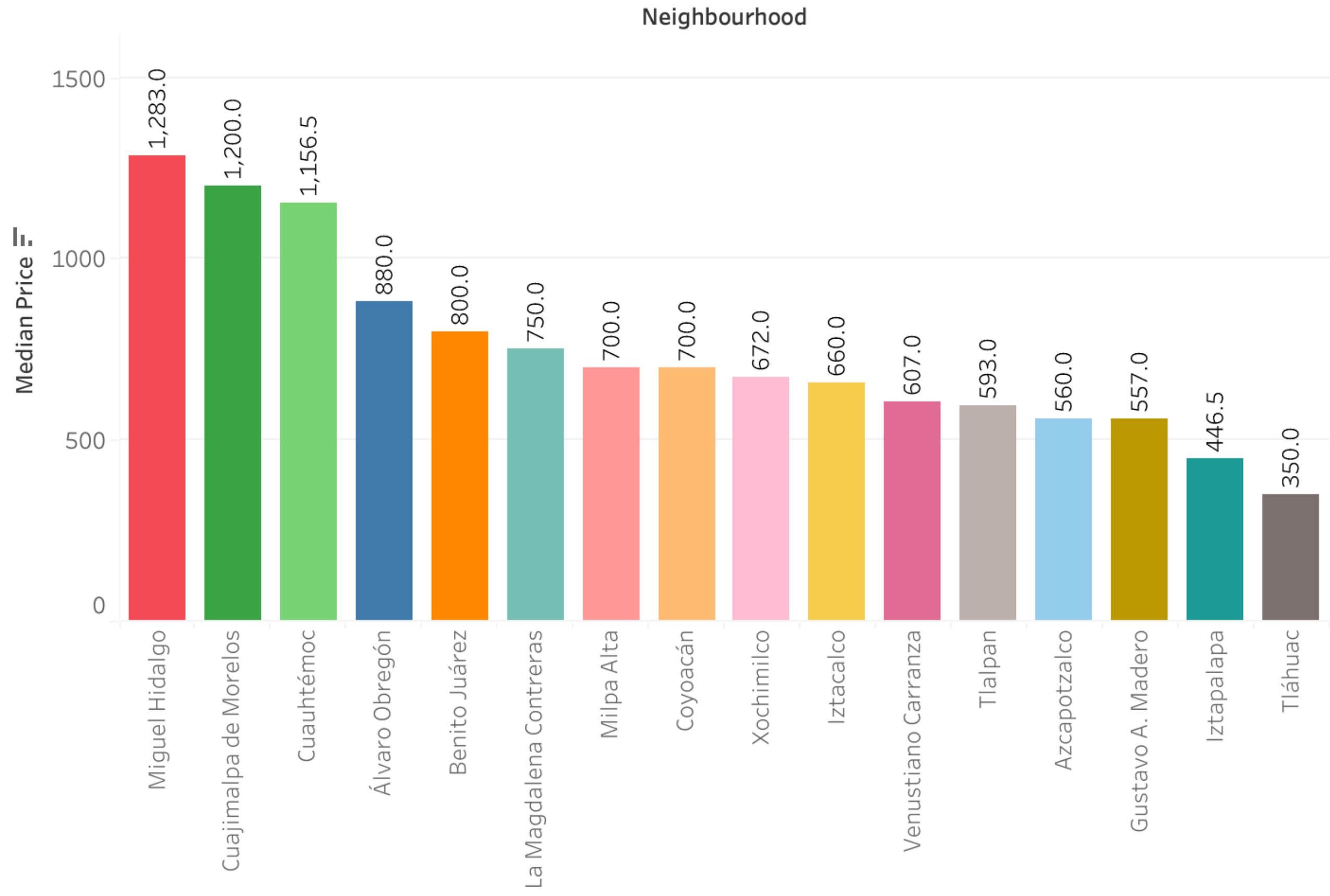
Median yearly revenue

- **Higher Revenues in Cuauhtemoc and Miguel Hidalgo**
- **Average booked days:**
140



Median price per night

- Higher median average prices in Miguel Hidalgo and Cuajimalpa
- Average accommodation: 3 people



A photograph of a large, two-story wooden beach house with a prominent gabled roof and a wrap-around porch. The house is situated on a wooden deck overlooking a swimming pool. Several lounge chairs with patterned pillows are arranged around the pool area. In the background, a Ferris wheel is visible against a clear sky.

Thank you!