The major goal of this analysis and dashboard is to build a story for the Customer Success team on the main reasons why some Airbnb hosts are renting more than others.

Hypothesis: There is an inverse relationship between price and occupancy rate

Global KPIs & Segment Analysis

Purpose: To compare average occupancy rates across different segments.

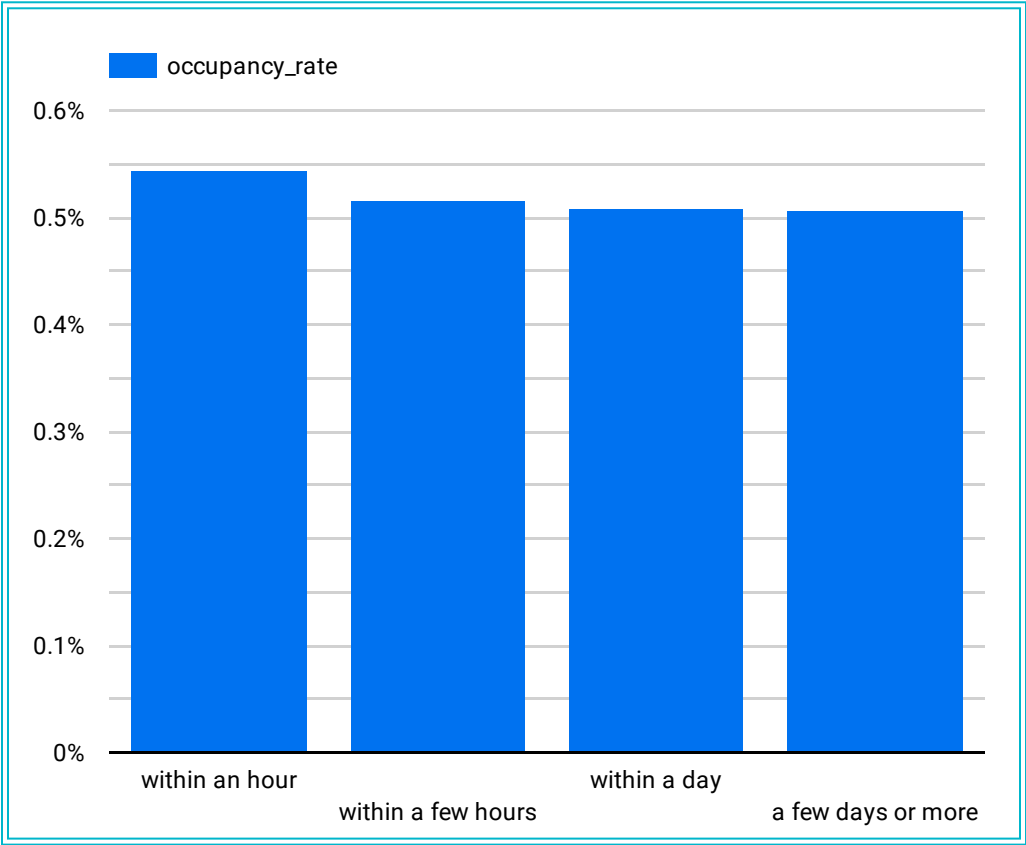| nb_of_listing	booked_days	available_days	avg_price	Avg_response_time
72,101	54,565	17,536	158.02	4

Occupancy Rate and Price basd on Room Types

Legend: ■ occupancy_rate ■ price

Room Type	occupancy_rate	price
Shared room	0.58%	41.44
Private room	0.49%	87.39
Entire home/apt	0.53%	165.98

Occupancy Rate based on Response Time

Legend: ■ occupancy_rate

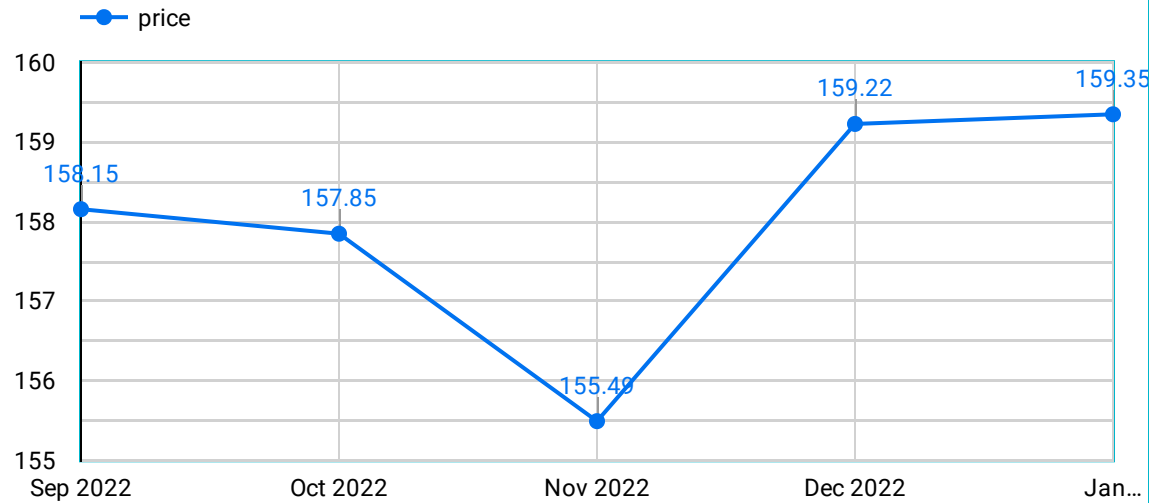| Response Time	occupancy_rate
within an hour	~0.55%
within a few hours	~0.52%
within a day	~0.51%
a few days or more	~0.51%
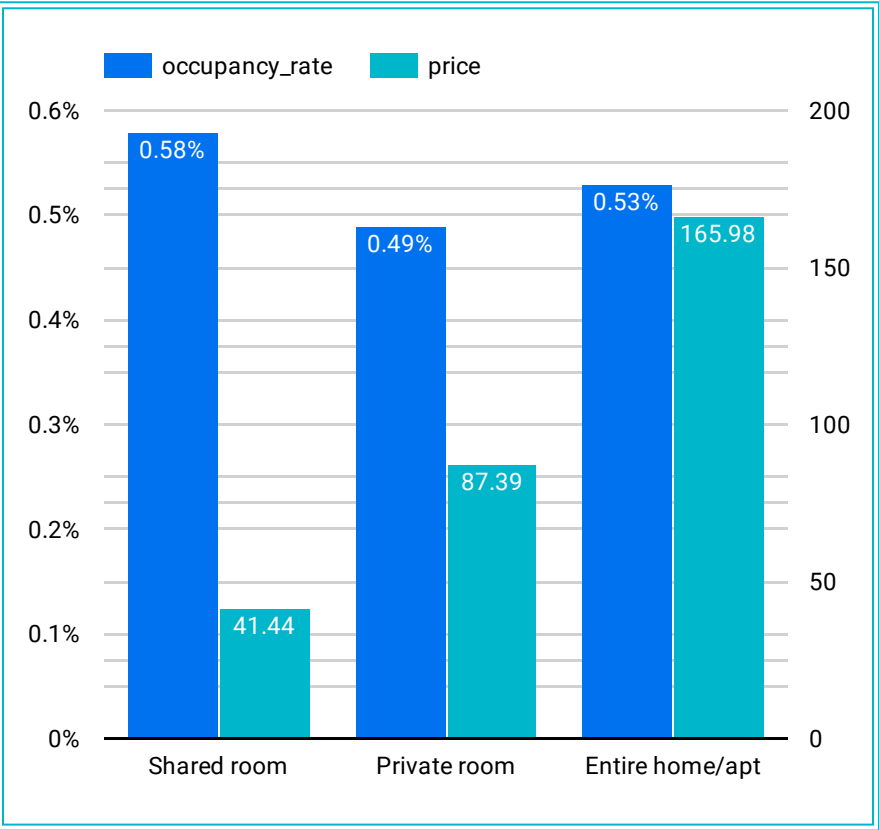
Time Series Plot for analyzing trends in price and availability over time.
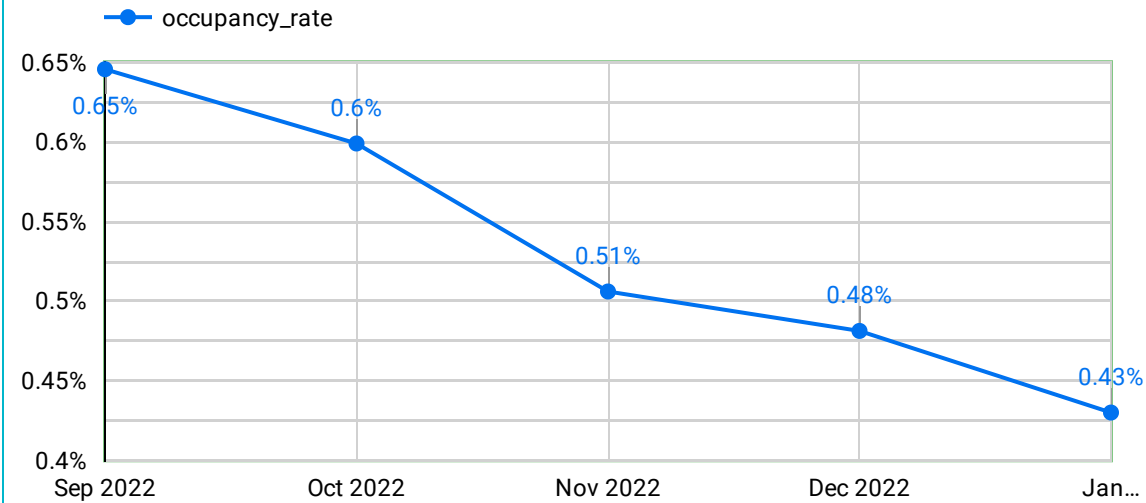
KPI Focus: Price Evolution, Availability Over Time

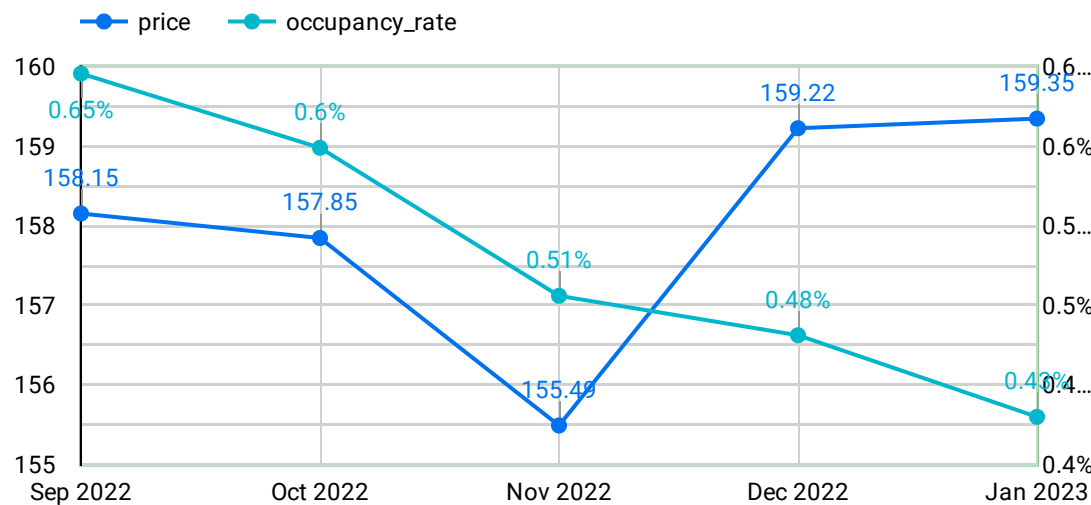**Purpose: To analyze price changes over time and their impact on occupancy**

Price Evolution Over Time

Availability Evolution Over Time

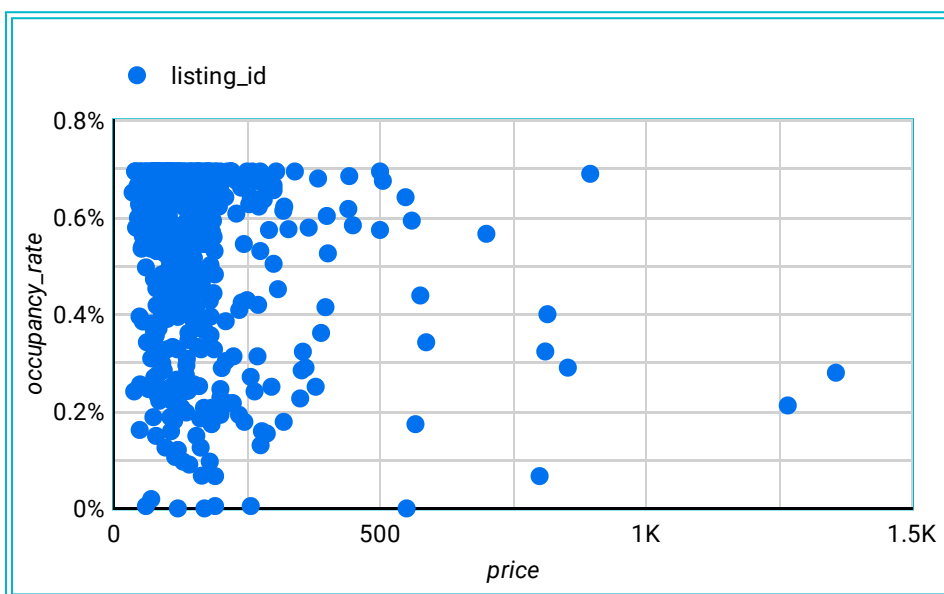## Trend of Price and Availability Over Time

Exploring Relationships between Variables

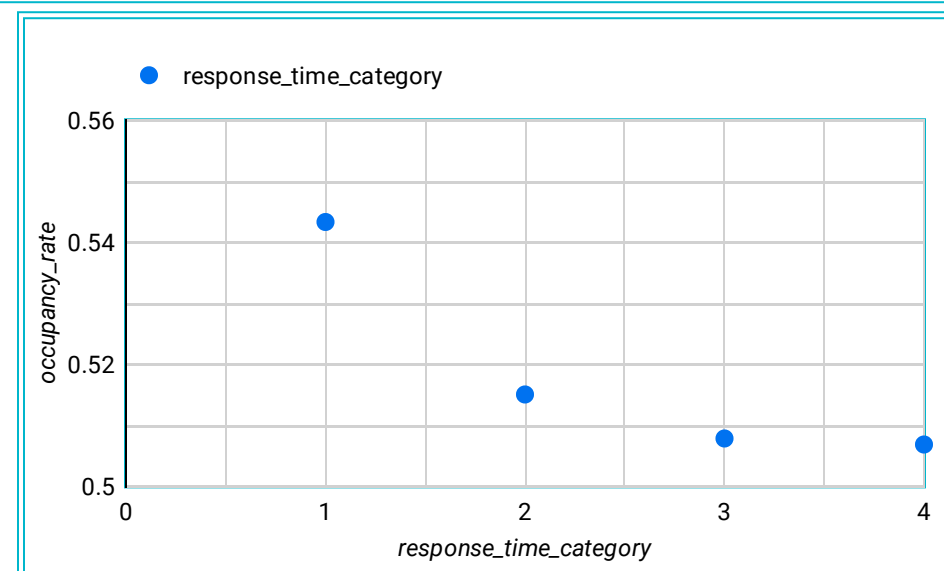KPI Focus: Occupancy Rate, Average Price, Average Review Score, Response Time Categorization

Purpose: To explore the relationship between availability (or occupancy rate) and other metrics.
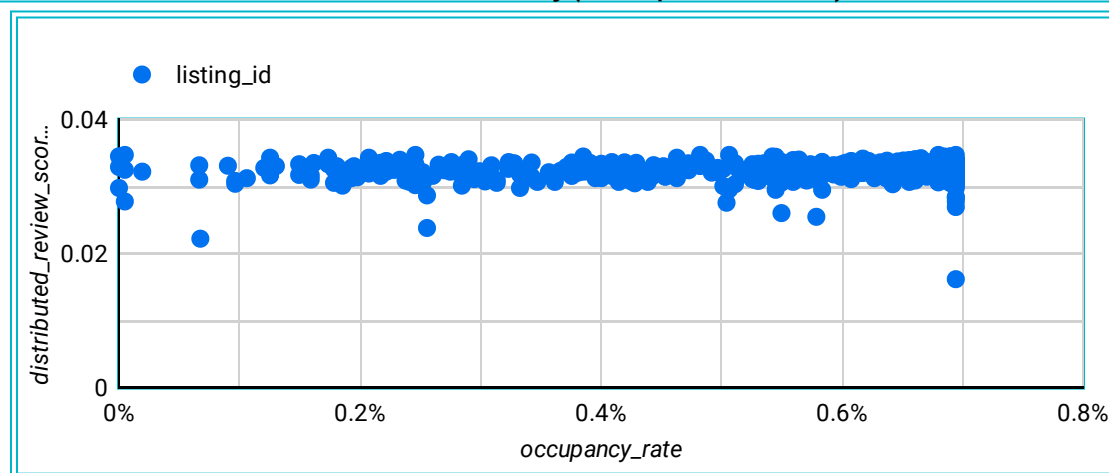
room_type ▾

Correlation between Availability(occupation_rate) and Price

Correlation between Availability(occupation_rate) and Response Time

Correlation between Availability(occupation_rate) and Revie

Based on the charts and data provided in the image, here are some business insights and conclusions you can draw:

1. Price vs. Occupancy Rate Over Time

Observation: There is an inverse relationship between price and occupancy rate over time. As the price increases, the occupancy rate tends to decrease.

Business Advice:
Price Optimization: Consider implementing a dynamic pricing strategy to optimize for higher occupancy. During periods of low occupancy, reducing prices slightly might increase bookings.
Seasonal Pricing: If this trend corresponds to specific seasons, adjust pricing accordingly to balance revenue and occupancy.

2. Occupancy Rate and Price Based on Room Types

Observation: Different room types exhibit varying occupancy rates and average prices. For example, the room type with a lower price (e.g., $87.39) has a slightly lower occupancy rate compared to more expensive ones.

Business Advice:
Room Type Segmentation: Identify which room types are most sensitive to price changes. For more expensive room types, even small adjustments in price could maintain a higher occupancy.

Targeted Marketing: Market higher occupancy rate room types more aggressively to maintain their occupancy while exploring potential price increases.

3. Occupancy Rate Based on Response Time

Observation: Response time does not seem to significantly affect occupancy rates as the rates are relatively similar across different response times.

Business Advice:
Focus on Other Factors: Since response time doesn't have a strong impact on occupancy, resources might be better spent optimizing other areas, such as enhancing the listing descriptions, photos, or improving the overall customer experience.
Maintain Quick Response: While the occupancy rate may not vary significantly, maintaining a quick response time could still be important for guest satisfaction and reviews.

4. General Trend Analysis

Observation: There is a notable decrease in occupancy rate over the analyzed period while prices have remained relatively stable.

Business Advice:
Demand Analysis: Investigate if the decreasing occupancy rate is due to a drop in demand, seasonality, or increased competition. If it's a seasonal effect, plan marketing campaigns or promotions during low-demand periods.
Enhanced Value Proposition: If the occupancy drop isn't seasonally driven, consider enhancing the value proposition of your listings—this could include added amenities, better communication, or loyalty discounts.

5. Data-Driven Decision Making
Use these insights to make informed decisions about pricing, marketing, and operational efficiency. Consider A/B testing different pricing models or marketing strategies to validate the best approach.
These insights should help guide business strategies to improve both occupancy rates and revenue across different periods and room types.