

Data Analysis Process

Created `minimum_cost` column

- I created this column by multiplying the daily price by the minimum number of nights and adding the service fee
- Formula for 2nd row $= (N2 * P2) + O2$
- I applied this formula to the rest of the column

Price Analysis: What Factors Influence Pricing?

PivotTable Setups:

- Rows: categorical dimension or numerical metric
- Values: price (Average),

Insights:

Neighborhood Impact on Pricing:

- The average price varies significantly across neighborhoods, with some areas commanding prices above \$1,000 while others remain below \$200.
- Higher-priced neighborhoods likely offer premium locations, tourist attractions, or luxury accommodations, making location the most critical pricing factor.

Room Type Influence on Pricing:

- Hotel rooms have the highest average price (\$666.39), reflecting their standardized services and amenities.
- Shared rooms (\$634.83) are slightly more expensive than private rooms (\$624.94) and entire homes/apartments (\$625.24), possibly due to a smaller sample size or unique high-demand listings.
- The variation in prices across room types suggests accommodation type has a strong impact on pricing.

Cancellation Policy and Pricing:

- Flexible policies command the highest average price (\$626.23), followed by moderate (\$625.21) and strict (\$624.59).
- The minimal difference suggests cancellation policy has little influence on pricing compared to neighborhood and room type.

Utilized Slicers to Perform a Segmented Analysis of Cancellation Policy & Pricing Trends by Room Type

- Hotel Rooms:
 - Consistently command the highest prices across all policies (\$565.19 - \$741.29).
 - Strict cancellation policy has the highest price (\$741.29).
- Entire Homes/Apartments:
 - Minimal variation across policies (\$621.20 - \$628.14).
 - Flexible policy slightly outperforms strict (\$628.14 vs. \$621.20).
- Private Rooms:
 - Minimal variation across policies (\$622.67 - \$628.50).
 - Strict policy (\$628.50) receives the highest price, slightly outperforming flexible (\$622.67) and moderate (\$623.69).
- Shared Rooms:
 - Minimal variation across policies (\$617.11 - \$651.18).
 - Flexible (\$651.18) and moderate (\$636.03) policies receive the highest prices, while strict (\$617.11) is slightly lower.

Cancellation Policy	Entire Home/Apt	Hotel Room	Private Room	Shared Room
Flexible	628.13	693.61	622.61	651.18
Moderate	626.21	565.19	623.70	636.04
Strict	621.24	741.29	628.54	617.11

These factors do not show any significant relationship with listing pricing

- instant_bookable - true or false; determines whether the guest can automatically book the listing without the host requiring to accept their booking request
- host_identity_verified - true or false; determines whether the identity of the host is verified or unconfirmed
- service_fee - Any additional fee
- minimum_nights - the minimum number of nights a guest must stay
- minimum_cost - the cost a guest must pay if they are spending the minimum number of nights for that listing.
- number_of_reviews - the number of reviews the listing has
- reviews_per_month - the number of reviews the listing has over the lifetime of the listing
- last_review - the date of the last/newest view
- availability_365 - the availability of the listing 365 days in the future as determined by the calendar; a listing may not be available because it has been booked by a guest or blocked by the host
- review_rate_number - overall guest satisfaction
- construction_year - the year the listing was built
- id - Airbnb's unique identifier for the listing
- host_id - Airbnb's unique identifier for the host/user

Recommendations for Hosts

Leverage High-Priced Neighborhoods:

- If located in premium-priced neighborhoods, hosts can justify higher rates by emphasizing location benefits such as safety, attractions, or public transit.
- For lower-priced neighborhoods, hosts should differentiate their listings through better amenities, unique stays, or competitive pricing.

Optimize Room Type Pricing:

- Hotel-style listings should emphasize premium services, cleanliness, and professional hospitality to justify higher pricing.
- Entire homes and private rooms should highlight space, privacy, and unique experiences to remain competitive.

Cancellation Policy Considerations:

- Choose the right cancellation policy:
 - For Hotel Listings: Interestingly, strict cancellation policies for hotel rooms have the highest average price (\$741.29), which indicates a strict policy is optimal for maximizing prices.
 - For Entire Homes/Apartments: Since cancellation policy has little effect, focus on improving other property characteristics.
 - For Private Rooms: A strict policy may provide a slight advantage.
 - For Shared Rooms: Since flexible and moderate policies receive the highest prices, hosts can prioritize these policies for shared rooms.

Review Rating Analysis: What Factors Influence Ratings?

PivotTable Setups:

- Rows: categorical dimension or numerical metric
- Values: `review_rating` (Average),

Neighborhood Impact on Ratings

- The average rating per neighborhood varies significantly.
- Some neighborhoods consistently receive higher ratings, while others tend to score lower.
- This could be due to factors such as location appeal, safety, proximity to attractions, and overall customer experience.

Room Type and Review Ratings

- Hotel rooms receive the highest average review rating (3.539), suggesting that guests find them more reliable or comfortable.
- Shared rooms have a slightly higher rating (3.305) than private rooms (3.281) and entire homes/apartments (3.275).
- The small difference between private rooms and entire apartments suggests that both are well-received, but hotel-style accommodations seem to have a better overall experience.

Cancellation Policy and Review Ratings

- Flexible cancellation policies receive the highest average rating (3.280), followed by moderate (3.279) and strict (3.277).
- The differences are minimal but indicate that a flexible policy might contribute to a slightly better guest experience.

Utilized Slicers to Perform a Segmented Analysis of Cancellation Policy & Pricing Trends by Room Type

Cancellation Policy	Entire Home/Apt	Hotel Room	Private Room	Shared Room
Flexible	3.265	3.409	3.296	3.287
Moderate	3.268	3.603	3.289	3.300
Strict	3.277	3.407	3.281	3.299

These factors do not show any significant relationship with listing pricing

- `instant_bookable` - true or false; determines whether the guest can automatically book the listing without the host requiring to accept their booking request
- `host_identity_verified` - true or false; determines whether the identity of the host is verified or unconfirmed
- `service_fee` - Any additional fee
- `minimum_nights` - the minimum number of nights a guest must stay
- `minimum_cost` - the cost a guest must pay if they are spending the minimum number of nights for that listing.
- `number_of_reviews` - the number of reviews the listing has
- `reviews_per_month` - the number of reviews the listing has over the lifetime of the listing
- `last_review` - the date of the last/newest view
- `availability_365` - the availability of the listing 365 days in the future as determined by the calendar; a listing may not be available because it has been booked by a guest or blocked by the host
- `review_rate_number` - overall guest satisfaction
- `construction_year` - the year the listing was built

- id - Airbnb's unique identifier for the listing
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Recommendations for Hosts

Choose the Right Location or Optimize Your Listing for Your Area

- If you're selecting a new property, prioritize neighborhoods with historically higher ratings and pricing.
- If your property is in a lower-rated area, improve the listing with:
 - High-quality photos showcasing the best features.
 - Detailed descriptions emphasizing safety, amenities, and proximity to attractions.
 - Guest testimonials highlighting positive experiences.

Optimize Room Type for Higher Revenue

- Hotel-style accommodations (private rooms with professional service) receive the highest ratings and can command higher prices.
 - Consider adding hotel-like features:
 - High-quality linens, complimentary toiletries, and a streamlined check-in process.
 - Professional cleaning services between stays.
- If renting an entire home, focus on comfort and unique experiences:
 - Highlight features such as a workspace, fully equipped kitchen, or outdoor spaces.
- Choose the Right Cancellation Policy:
 - For Hotel Listings: A moderate policy is optimal for maximizing ratings.
 - For Entire Homes/Apartments: Since the cancellation policy has little effect, focus on improving other property characteristics.
 - For Private Rooms: A flexible policy may provide a slight advantage.
 - For Shared Rooms: Since strict and moderate policies receive the highest ratings, hosts can prioritize other property characteristics over a flexible cancellation policy.