

# Airbnb Analysis Report

The dataset consists of Airbnb listings from New York City for the year 2024. It includes various attributes describing each listing, such as its location (neighbourhood and neighbourhood group), room type, number of bedrooms, beds, and bathrooms. It also provides information about listing activity, including the number of reviews, reviews per month, availability throughout the year, and host details. The target variable for analysis is the listing price. This dataset is suitable for exploring how different factors affect Airbnb pricing and for building predictive models to estimate rental prices.

## Insites from Modelling

After modelling the Airbnb dataset using multiple linear regression model we come to conclusion that certain features have a strong impact on Airbnb listing prices. The most influential factor is the number of bathrooms, where each additional bath increases the predicted price by approximately \$110, highlighting its importance in guest comfort. The rating of the listing also plays a significant role that is, a 1-point increase results in an average price increase of about \$51, suggesting that higher guest satisfaction which allows hosts to charge more. Each additional bedroom adds around \$26, and each additional bed adds about \$17, both contributing positively to price, though to a lesser degree.

But room type has negative effect, with a coefficient of around -41, meaning certain room categories (likely shared or private rooms versus entire homes) are priced significantly lower

Coumns	Coefficient
baths	109.979168
rating	51.016488
room_type	-40.783642
bedrooms	26.120558
beds	16.720338
reviews_per_month	-11.591405
neighbourhood_group	4.891608
minimum_nights	-3.126456
calculated_host_listings_count	-0.568661
availability_365	0.036617
number_of_reviews	0.001233

## Insites from Dashboard

The AirBnB dashboard provides a concise overview of listing trends across New York City. Midtown and Hell's Kitchen lead in the number of listings, indicating high host activity in those neighborhoods. Price trends show a clear seasonal pattern, with both prices and bookings peaking during the summer months and dipping in winter. Manhattan has the highest average nightly price at \$227.9, followed by Brooklyn at \$187.0, while the Bronx, Queens, and Staten Island are more affordable. The platform features 21,000 total listings, with properties available for an average of 206 days per year and an impressive average guest rating of 4.75. Room types and locations can be filtered for more tailored insights.

