



AIRBNB DYNAMIC PRICING & AVAILABILITY DASHBOARD

Internship Project – Elevate Labs | May 2025



PROJECT OVERVIEW

This project analyzes Airbnb listings data for New York City to explore how factors like room type, pricing, and availability influence estimated revenue.

Developed as the final project for my Data Analyst Internship at Elevate Labs.

- Platform: Power BI
- Theme: Airbnb Brand Colors
- Dataset: Kaggle – NYC Airbnb Open Data (2019)



OBJECTIVE

- To help Airbnb hosts and analysts optimize pricing strategies and improve listing performance by visualizing pricing trends, availability patterns, and revenue potential using interactive dashboards.

TOOLS & DATASET USED

- Power BI: Dashboard Design
- Power Query: Data Transformation
- DAX: KPI Calculations
- Dataset: NYC Airbnb Open Data (Kaggle)
- Fields: room_type, borough, price, availability_365, minimum_nights

KPIS DEFINED

- Total Listings: Count of unique property IDs
- Average Price: $\text{Mean price across listings} \times \text{Average}$
- Availability: $\text{Mean days available} / \text{year} \times \text{Total Estimated}$
- Revenue: $\text{Price} \times \text{Availability} \times 365$



VISUALIZATIONS IN THE DASHBOARD

- Avg Price by Minimum Stay Group
- Revenue by Borough
- Listings by Borough (Pie Chart)
- Avg Price by Room Type
- Avg Availability by Room Type

DESIGN CHOICES & THEME

- Clean white layout for contrast
- Rausch Red (#FF5A5F) for visual focus
- Minimalist font + card shadows for depth
- Airbnb's modern brand identity reflected in visual tone

Dashboard Screenshot



Airbnb Dynamic Pricing & Availability Dashboard

965M

Total Estimated Revenue

49K

Total Listings

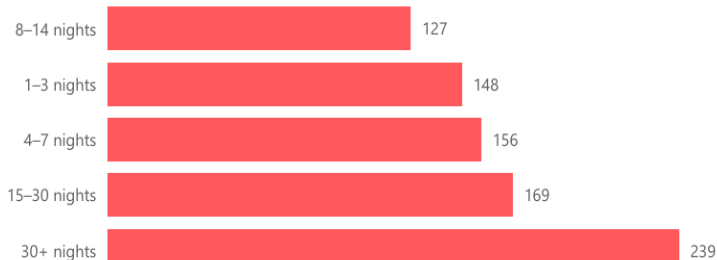
152.71

Average Price

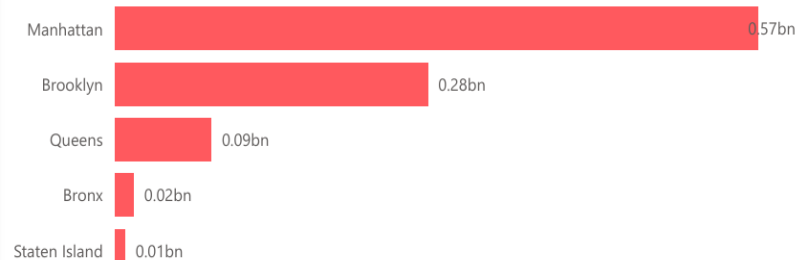
112.61

Average Availability

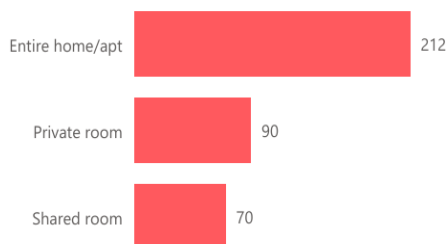
Avg Price by Minimum Stay Duration



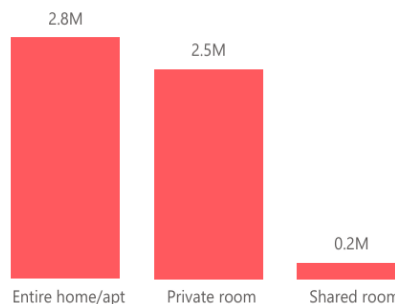
Revenue Potential by Borough



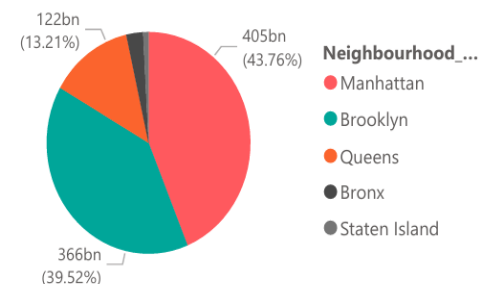
Average Price by room_type



Average Availability by Room Type



Listings by Borough





KEY INSIGHTS FROM DASHBOARD

- Entire homes yield highest average prices and availability
- Manhattan and Brooklyn dominate in revenue potential
- Longer minimum stays often result in higher prices
- Shared rooms generate least revenue and availability

PROJECT SUMMARY – AIRBNB DASHBOARD

- Project Title: Airbnb Dynamic Pricing & Availability Dashboard
- Dataset: NYC Airbnb Open Data (Kaggle, 2019)
- Focus: Understanding how pricing, room types, boroughs, and availability affect potential revenue
- KPI Metrics: Total Listings, Average Price, Estimated Revenue, Availability
- Unique Feature: Used Airbnb's brand palette (Rausch Red theme)
- Final Outcome: Dashboard deployed and shared via Power BI with all interactive visuals