Project Over view

At **NYC Luxe Stay Analytics**, we specialize in optimizing short- and mid-term rental income (Airbnb-style) for **luxury properties in key New York boroughs** (Manhattan and Brooklyn)..

✍️ Description of the project

Our expertise lies in transforming raw market data (price, room type, location, reviews, etc.) into **dynamic pricing strategies and precise investment recommendations**. We help property owners and managers maximize their **occupancy rate** and **Revenue Per Available Room (RevPAR)** by identifying the factors that most influence the price and performance of their listings.

Using the historical Airbnb dataset, we will:

1. **Segment the market** to identify areas with the highest profitability.
2. **Model pricing factors** (location, property type, reviews) to justify a premium price.
3. Provide **targeted recommendations** to investors: what type of property to buy, in which neighborhood, and how to price it to target the luxury segment.

Our approach ensures that our clients are positioned for excellence and increased profitability in the competitive NYC market.

🎯 Data Analysis Hypotheses (Based on `AB_NYC_2019.csv`)

To complete this project as a Data Analyst, you will need to formulate and test clear hypotheses using the available columns (`neighbourhood_group`, `price`, `room_type`, `minimum_nights`, `number_of_reviews`, `availability_365`, etc.).

This hypothesis aims to validate the **price premium** associated with location.

H1: The Manhattan Price Premium Factor⏳(easier to clean)

- **Statement:** Listings located in the **Manhattan** borough will have a significantly higher average price (e.g., $200 or more) than those in all other boroughs, especially for the **"Entire home/apt"** room type.
- **Data Focus:** Compare the **Average (AVG)** price for `neighbourhood_group = 'Manhattan'` vs. all other groups, specifically filtering for `room_type = 'Entire home/apt'`.

H2: The Minimum Occupancy Threshold

This hypothesis focuses on the relationship between **availability** and **price**, assuming that high-end properties are less reliant on last-minute bookings.

- **Statement:** Listings classified as **"Entire home/apt"** showing **low annual availability** (e.g., `availability_365 < 90` days) will have a **higher average price** than those with high availability, suggesting a premium positioning and/or high demand.
- **Data Focus:** Calculate the **Average (AVG)** price for the group `room_type = 'Entire home/apt'` where `availability_365` is low, and compare it to the group where `availability_365` is high.

H3: The Impact of Customer Engagement (Reviews)

This hypothesis explores the relationship between **customer experience** and **price** to identify a positive correlation.

- **Statement:** For listings in the higher price brackets (e.g., `price > $300`), there will be a **significant positive correlation** between the **number of reviews** (`number_of_reviews`) and the price, indicating that proven luxury properties can sustain a high price point.
- **Data Focus:** Calculate the **correlation** between `price` and `number_of_reviews` only for properties with a price above a certain threshold (e.g., **$300**), and potentially segment by `neighbourhood_group`.

~~H4: The Specificity of Minimum Stay Length (Long vs. Short Stay)~~

~~This hypothesis segments the market by stay duration and its impact on price.~~

- ~~**Statement:** Listings targeting **long stays** (`minimum_nights > 7` days) in **Manhattan** will show a **lower** average nightly price than those targeting short stays (`minimum_nights <= 3`), reflecting a strategy to attract long-term tenants with a reduced rate to ensure occupancy.~~
- ~~**Data Focus:** Compare the **Average (AVG)** price for listings with `minimum_nights > 7` versus `minimum_nights <= 3`, filtering only for `neighbourhood_group = 'Manhattan'` and `room_type = 'Entire home/apt'`.~~

Team

Rôle	Nom
Gestionnaire de projet	utilisez @ marta
Responsable du design	utilisez @ alexandra
Responsables ingénierie	utilisez @ Davy
Responsable marketing	utilisez @ veronique

Following project

Nous utilisons cet outil de suivi des tâches pour assurer le suivi des tâches de l'équipe :

Suivi de projet
Veronique FANCHONNA 1er déc.

Main ressources

link_1

link_2