Source: New York City Airbnb Open Data

Description of relevant variables:

- Response Variable (Y):
  - Price (US $): The price of the listing in US dollars.
- Explanatory Variable (X):
  - Room Type (Categorical: Entire home/apt, Private room, Shared room): The type of Airbnb listing.
  - Number of Reviews (Continuous): The total number of reviews the listing has received.
  - Availability (days per year) (Continuous): The number of days the listing is available for booking in a year.
- Other variables (unused):
  - Listing ID: A unique identifier for each listing.
  - Name: Name of the listing.
  - Host ID: A unique identifier for each host.
  - Host Name: Name of the host.
  - Neighborhood Group: The borough in which the listing is located.
  - Neighborhood: The specific neighborhood within the borough.
  - Latitude: One geographical coordinate of the listing.
  - Longitude: Another geographical coordinate of the listing.
  - Minimum Nights: The minimum number of nights required per stay.
  - Last Review: Date of last review by guest.
  - Reviews per month: The number of reviews per month.
  - Calculated host listings count: The number of listings managed by the same host.

Research question:

How do different listing characteristics (room type, number of reviews, and availability) influence Airbnb prices in New York City?

Background and motivation:

New York is one of the largest cities in the world and has extremely high housing prices. Many tourists visit NYC and look for places to stay. In recent years, Airbnb listings have become increasingly popular as they are often more affordable than hotels. Analyzing the New York Airbnb dataset can help us understand how factors such as room type, number of reviews, and availability influence pricing. This analysis can assist hosts in optimizing their pricing strategies and provide insights into market trends and demand patterns across different neighborhoods. Additionally, it can help tourists make better-informed decisions by balancing cost and quality when choosing accommodations.