

# Final Project of Airbnb in Amsterdam

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## 1. Overview

### 1.1 Introduction

This project focuses on digging into the Airbnb dataset of Amsterdam. My main objective is to find out the relationship between reviewers' comments and price regarding to different room type and neighborhood. Then, I want to generate a shiny app to show an Airbnb location map of Amsterdam.

### 1.2 Motivation

I am planning on take a vacation to Europe next spring break these days. Amsterdam is on top of my visiting lists. I believe Airbnb Amsterdam dataset could give me some help both in finding great neighborhood to stay and also positive reviewed places to stay while my visiting.

### 1.3 Dataset: Airbnb Amsterdam from Kaggle

source: <https://www.kaggle.com/erikbruin/airbnb-amsterdam>.

### 1.4 Research Questions

- Is there any relationship between the price and the attitude of reviewers of an Airbnb?
- Is there any relationship between the price and the neighborhood of the Airbnb located?
- Is there any difference in prices regarding different room types of Airbnb?
- Is there any relationship between the price and the availability of an Airbnb?
- Generate a shiny app to show locations of Amsterdam's Airbnb places.

## 2. Exploratory Data Analysis

### 2.1 Basic Statistics

	Maximum	Minimum	Mean	Median
Availability in nights during a year	365.00	0.00	59.913680	3.00
Number of reviews per month	11.85	0.01	1.062080	0.62
Number of reviews in total	695.00	0.00	21.560459	8.00
Price	8500.00	0.00	152.181178	125.00
Minimum nights of stay	1001.00	1.00	3.328707	2.00

### 2.2. Graph Presentations

## 3. Principal Component Analysis

## 4. Text Analysis

First, I conduct a text analysis on three Airbnb places from each room type (shared room, entire home/apt, and private room).

## 4. Conclusion and Discussion

### 4.1. Results

### 4.2. Limitations and Concerns

## 5. Appendix