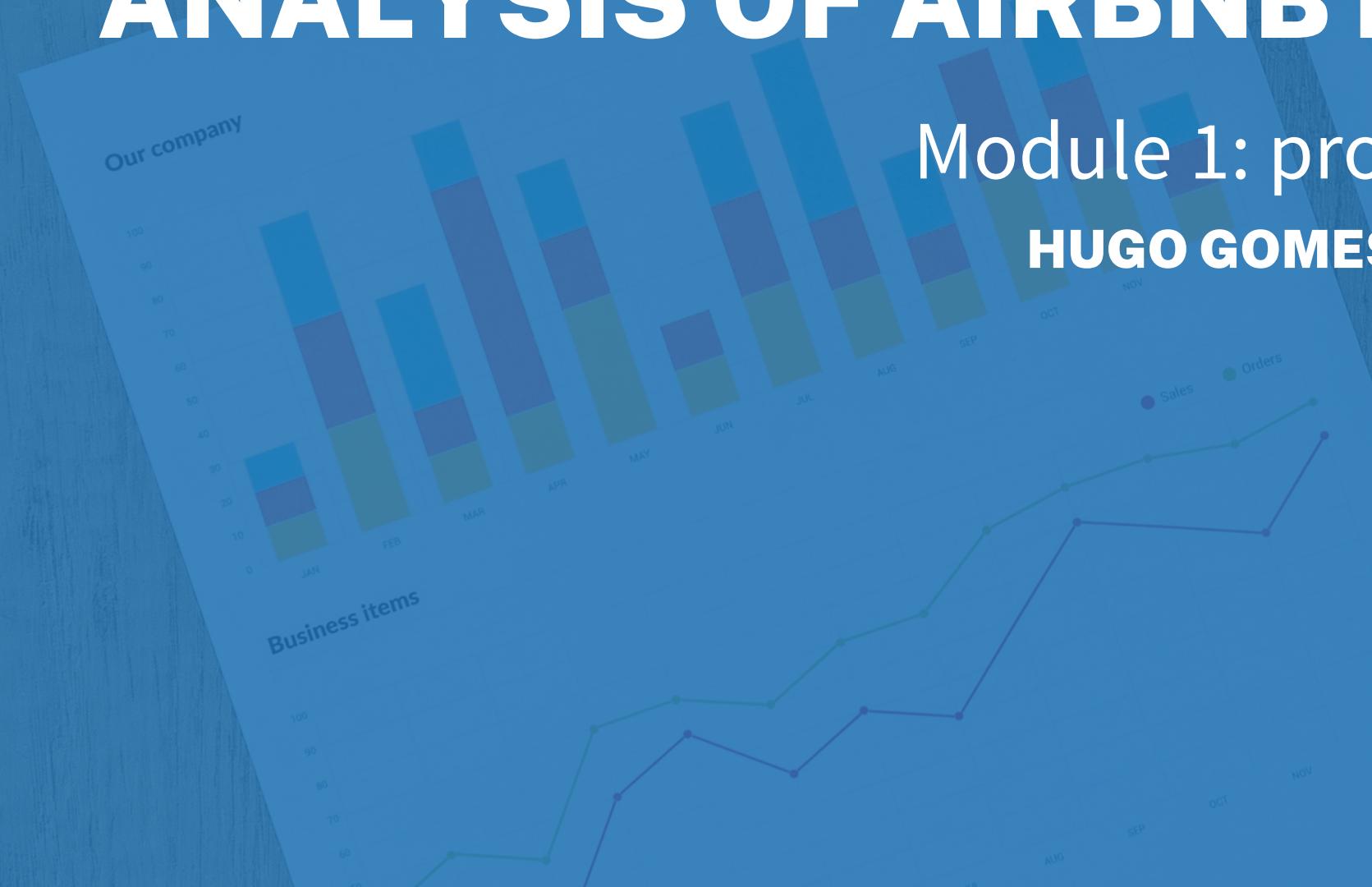


# LISBON LODGINGS: A DETAILED ANALYSIS OF AIRBNB PRICING TRENDS

Module 1: project  
**HUGO GOMES**





# HI, WELCOME!

I have embarked on an exploratory journey through the short-term rental landscape of Lisbon, a city renowned for its cultural heritage and burgeoning tourism industry. For that, I used a dataset of Airbnb listings; this study dissects the pricing strategies employed across various property types, offering a window into the economics of modern urban hospitality.

**LETS GET STARTED**

# Project Overview

Raw Data: 76716 rows × 74 columns | 4 datasets concated

Time range: from 22-04-2009 until 28-11-2021

The dataset includes review scores for location and value, which opens up the possibility of exploring how these factors influence the popularity or pricing of listings

**Hypothesis 1 (H1):** There are significant differences in mean review scores across different room types

**Null Hypothesis 1 (H0):** There are no significant differences in mean review scores across different room types

**Hypothesis 2 (H2):** Guest preferences vary significantly by property type, with entire homes/apartments receiving higher scores than private or shared rooms

**Null Hypothesis 2 (H0):** Guest preferences don't vary by property type.

# Data Wrangling and Cleaning

Missing Values



Duplicates



Inconsistent Formatting



**Identifying missing data:** `.isnull()` **and** `.isna().any()`

**Quantify missing data:** `.isna().sum()` **and** `.isna().sum(axis=1)`

**Completing data:** `.fillna(median)`

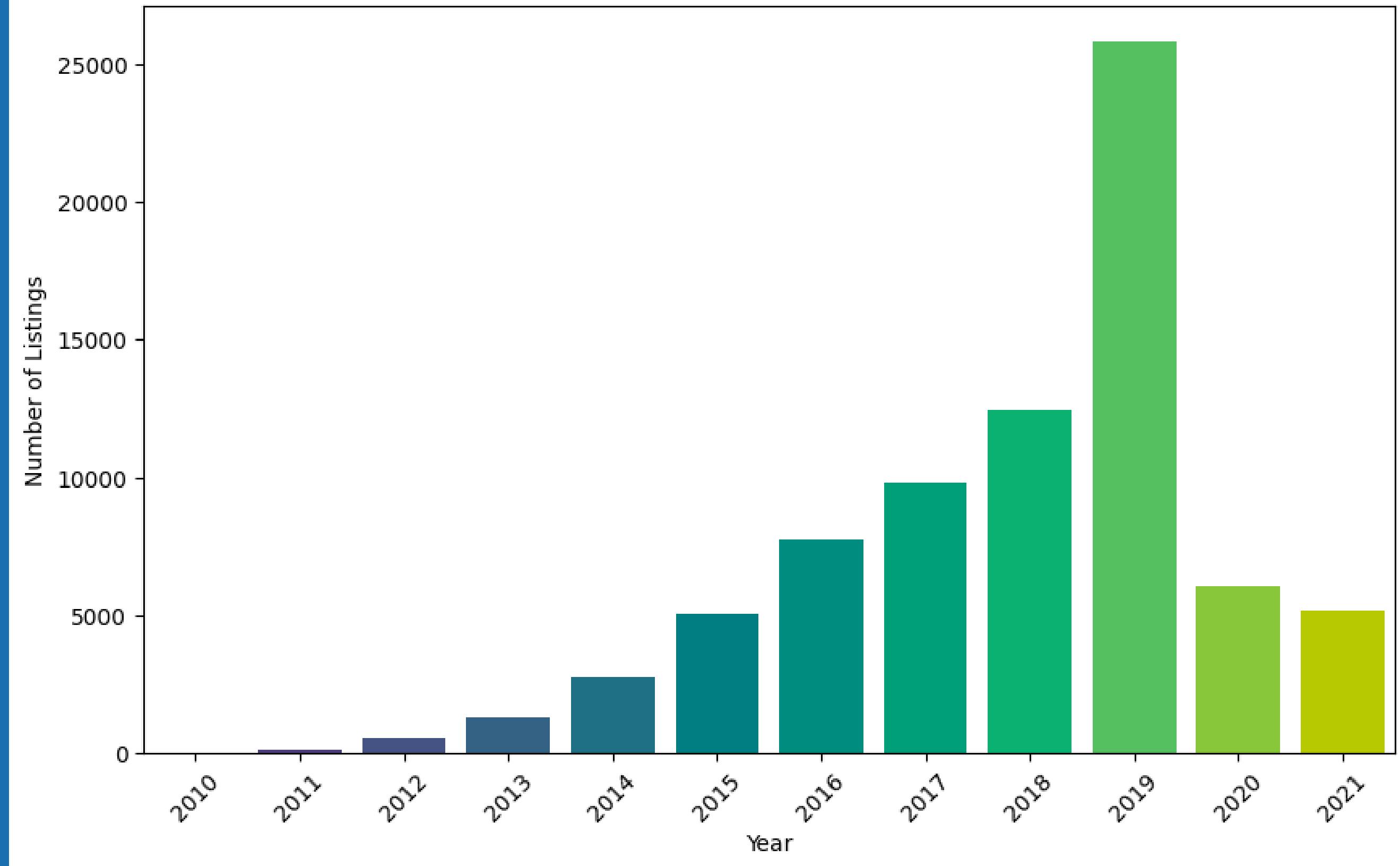
**Categorical data:** `.value_counts().sort_index()` **and** `.drop()`

**Standardize numerical scores:** function that adjusted scores based on my set criteria

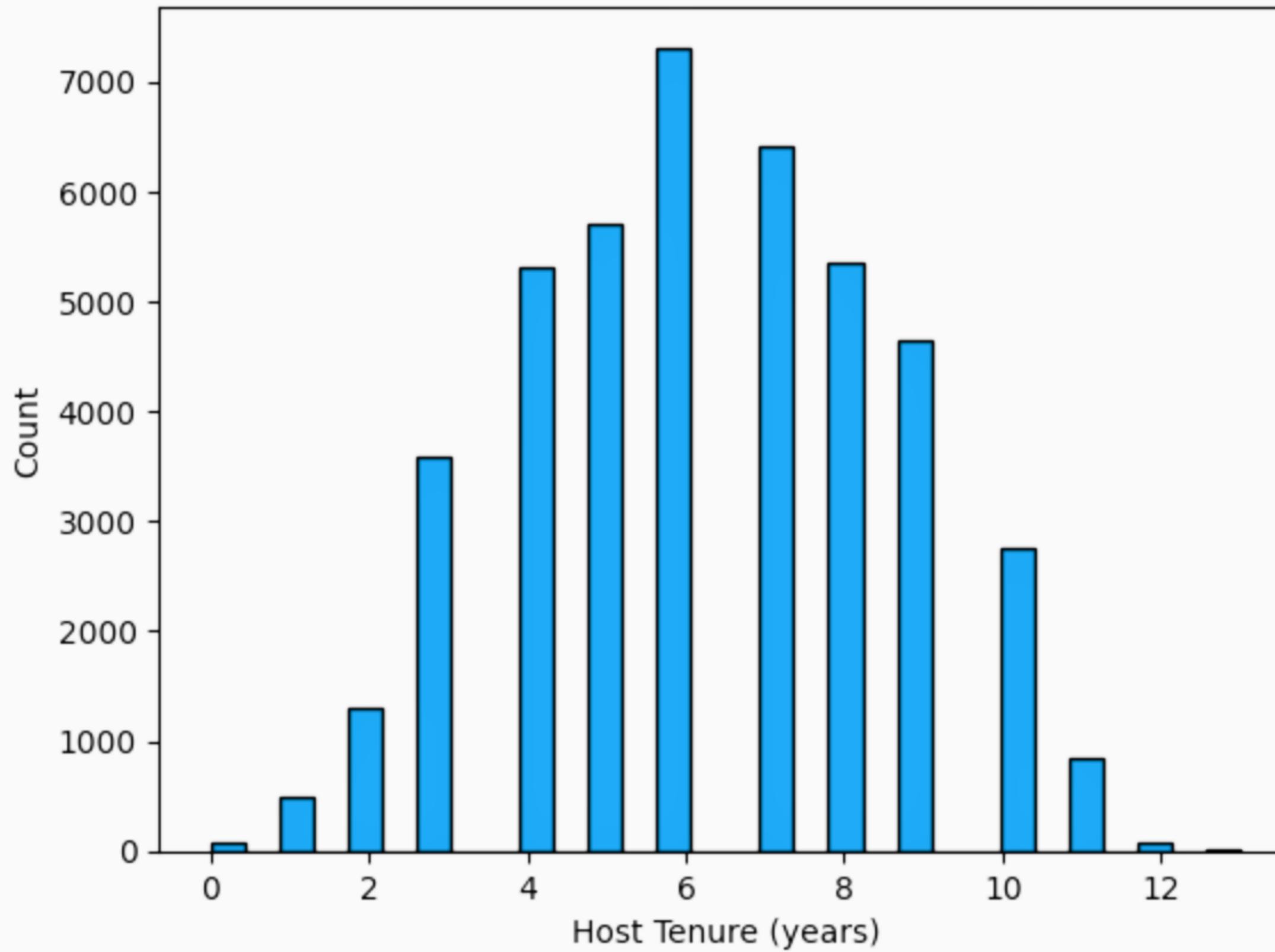
**Formatting:** `.str.replace()` **and** `astype(float/int)`



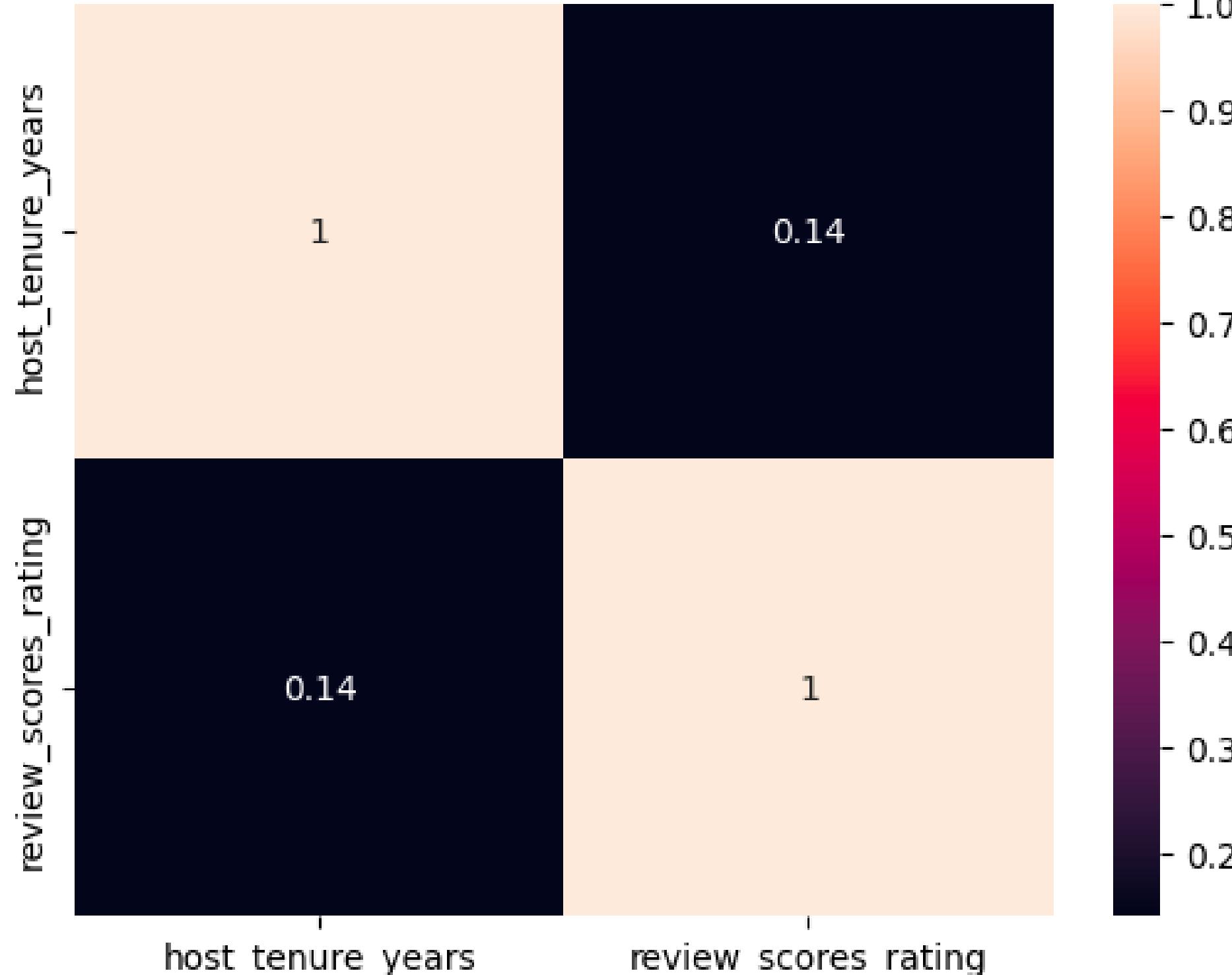
### Number of Listings by First Review Year



### Distribution of Host Tenure in Years



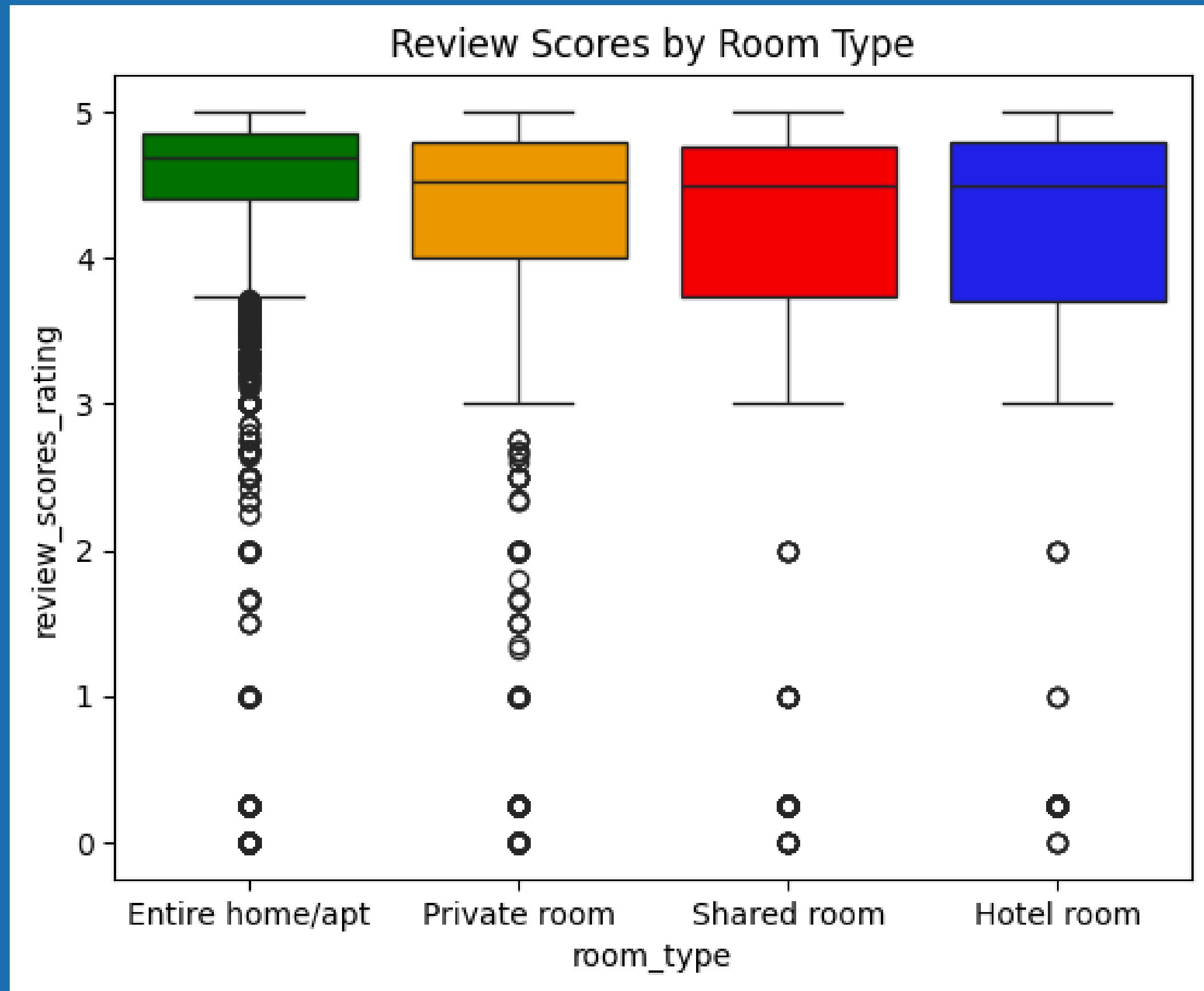
### Correlation between Host Tenure and Review Scores



Spearman Correlation: 0.033527044837496606

Grading Standards	Correlation Degree
$\rho = 0$	no correlation
$0 <  \rho  \leq 0.19$	very weak
$0.20 \leq  \rho  \leq 0.39$	weak
$0.40 \leq  \rho  \leq 0.59$	moderate
$0.60 \leq  \rho  \leq 0.79$	strong
$0.80 \leq  \rho  \leq 1.00$	very strong
1.00	monotonic correlation

ANOVA test results for room type and review scores: F-statistic = 320.14, p-value = 9.69





**Hypothesis 1 (H1):** There are significant differences in mean review scores across different room types

~~**Null Hypothesis 1 (H0):** There are no significant differences in mean review scores across different room types~~

**Hypothesis 2 (H2):** Guest preferences vary significantly by property type, with entire homes/apartments receiving higher scores than private or shared rooms

~~**Null Hypothesis 2 (H0):** Guest preferences don't vary by property type.~~

IRON  
HACK



# THANKS FOR WATCHING



**SAMANTHA BLACK**  
sales director

**EDUCATION**

- WEB ADVERTISING SEMINAR  
2015  
University of London, UK
- GRAPHIC DESIGN CREW  
2013  
London Art College, UK  
Leader of the group, lorem ipsum
- HIGH SCHOOL UNIVERSITY  
2008 - 2014  
Short description of the school and the responsibilities you had in this position.  
Lorem ipsum dolor sit amet, ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
- SCHOOL TITLE LOREM  
2004 - 2008  
Short description of the position and the responsibilities you had in this position.

**POSITION TITLE** for company tld  
Present responsibilities you had in this position.

**POSITION TITLE** for company tld  
2003 - 2010  
Short description of the position and the responsibilities you had in this position.

**POSITION TITLE** for company tld  
2001 - 2003  
Short description of the position and the responsibilities you had in this position.

**POSITION TITLE** for company tld  
2000 - 2001  
Short description of the position and the responsibilities you had in this position.

**PROFESSIONAL STATEMENT**  
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse suscipit efficitur lectus, Fusce laculis, leo nec vulputate efficitur lorem interdum elit, ut vestibulum nisl metus, non mi.

**REFERENCES**

- ELIOT BROWN  
0028 01234 5678  
eliot@mypage.com
- ELIOT BROWN  
0028 01234 5678  
eliot@mypage.com
- ELIOT BROWN  
0028 01234 5678  
eliot@mypage.com

**SKILLS**

- PHOTOGRAPHY
- PHOTOSHOP
- INDESIGN
- WORDPRESS
- TIME KEEPING
- ORGANISATION

[View GitHub Profile](#)

Our company's growth over the last year has been impressive. We've seen significant increases in sales and orders throughout the year, particularly in the latter half. Our team has worked hard to develop new products and expand our market reach, and it's paying off.

As we look forward to the future, we're excited about the opportunities ahead. We have several new projects in the pipeline, and we're confident that with continued hard work and innovation, we'll continue to grow and succeed.

If you have any questions or would like to learn more about our company, please don't hesitate to get in touch. We'd be happy to answer any questions you may have.

Best regards,

Samantha Black

Sales Director

125 Name Street,  
Town / City,  
State / Country,  
Postal / ZIP code

PHONE  
0028 01234 5678

EMAIL  
info@samanthablaq.com

WEBSITE  
www.mypage.com

SKYPE  
skype: samblack