




AIR BNB STATS

09/11/22
Mibella Villafana
Ian McKenzie
Max Presley



Hypothesis

- We want to know- "As the minimum night stay goes up, does the price per night go down over time?"
- Does this change within each subset group ? Ex: entire home, private room, shared room
- Our guess is that if a guest is staying for longer, they most likely will be paying less per night
- Let's find out!

To start we gathered a little bit more info on our data presented... out of curiosity

- Average price for entire home, private room, shared room

Average prices for an entire home

```
57 ```{r}  
58 import_AB<-subset(import_AB,room_type=="Entire home/apt")  
59 mean(import_AB$price)  
60 print(import_AB)  
61 ```
```

[1] 211.7942

R Console

tbl_df
25409 x 16

[1] 211.7942

Private room

```
73  ```{r}
74  import_AB<-subset(import_AB,room_type=="Private room")
75  mean(import_AB$price)
76  print(import_AB)
77
78  ```
```

[1] 89.78097

R Console

15 2016- 22,326 x 16

tbl_df

22326 x 16

[1] 89.78097

Shared room

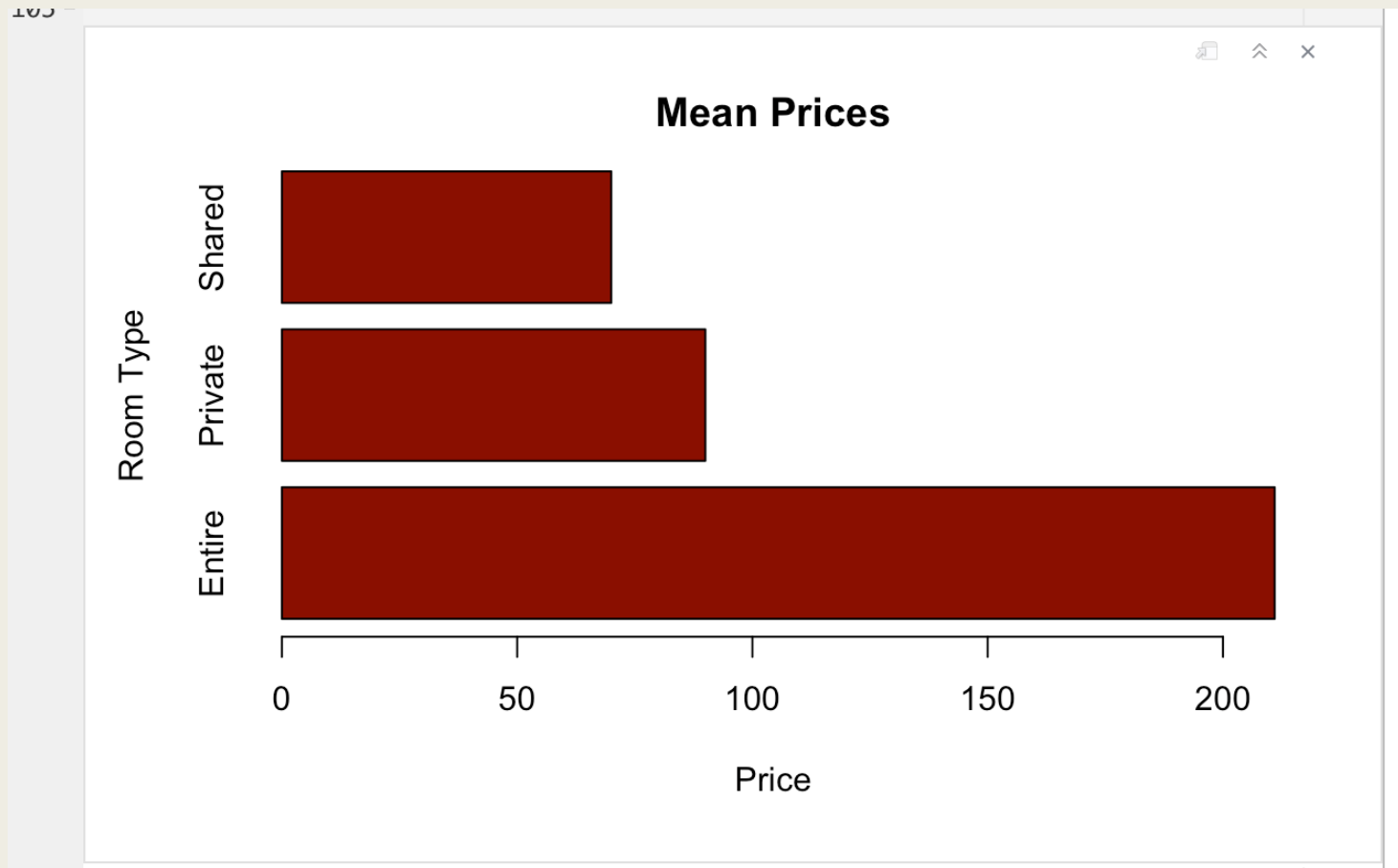
```
79 ▾ ```{r}```  
80 import_AB<-subset(import_AB,room_type=="Shared room")  
81 mean(import_AB$price)  
82 print(import_AB)  
83 ▲ ```
```

[1] 70.12759

R Console

tbl_df
1160 x 16

[1] 70.12759

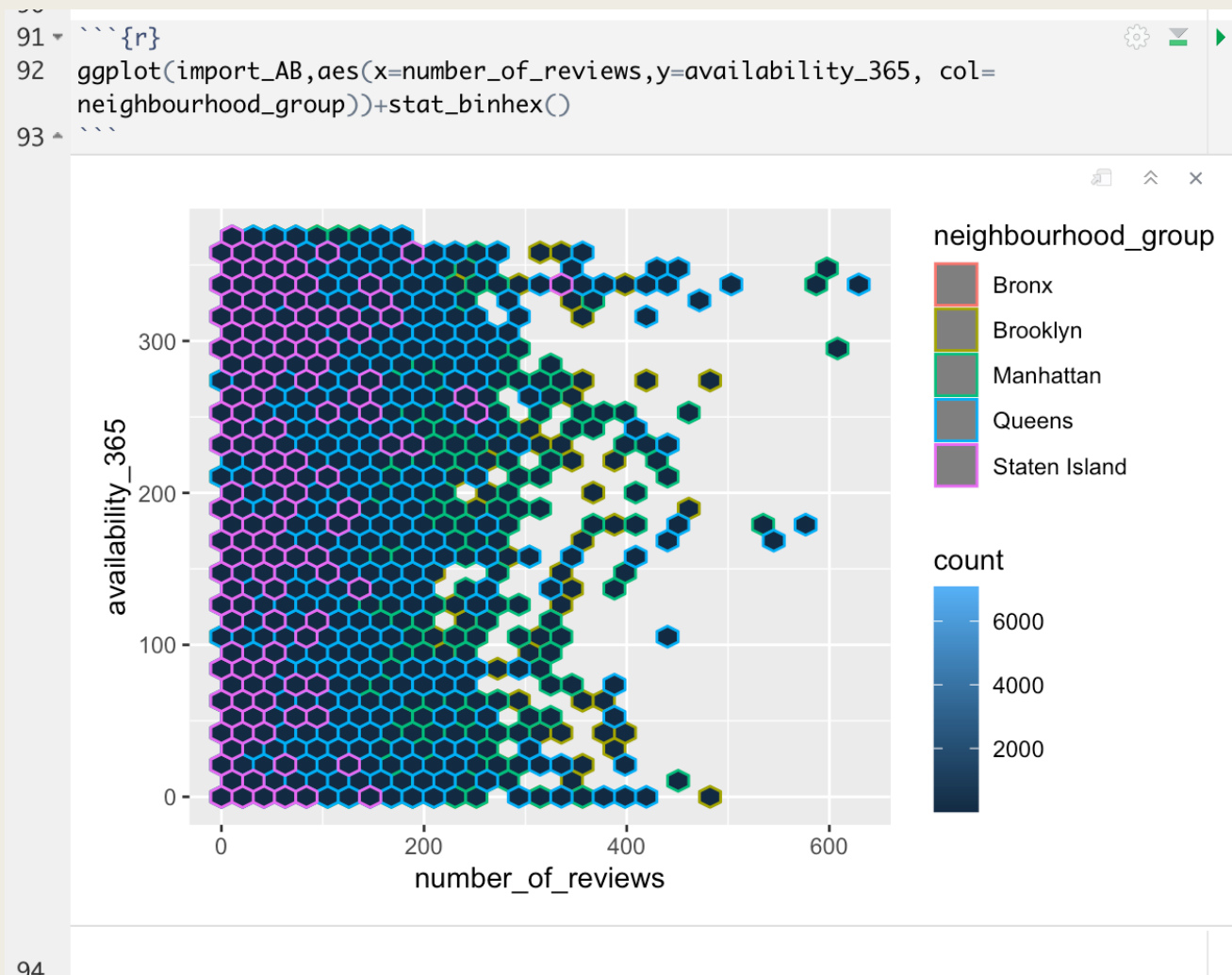


Visualising the
mean prices

Then we wanted to see if there's a correlation between the number of reviews and availability

- Perhaps if more people give reviews, there is less availability as the rentals may be more popular
- So can we see that reviews are effective for the rental owners?
- It is very hard to visualize so many data points in a scatterplot, so we used hexagonal binning.

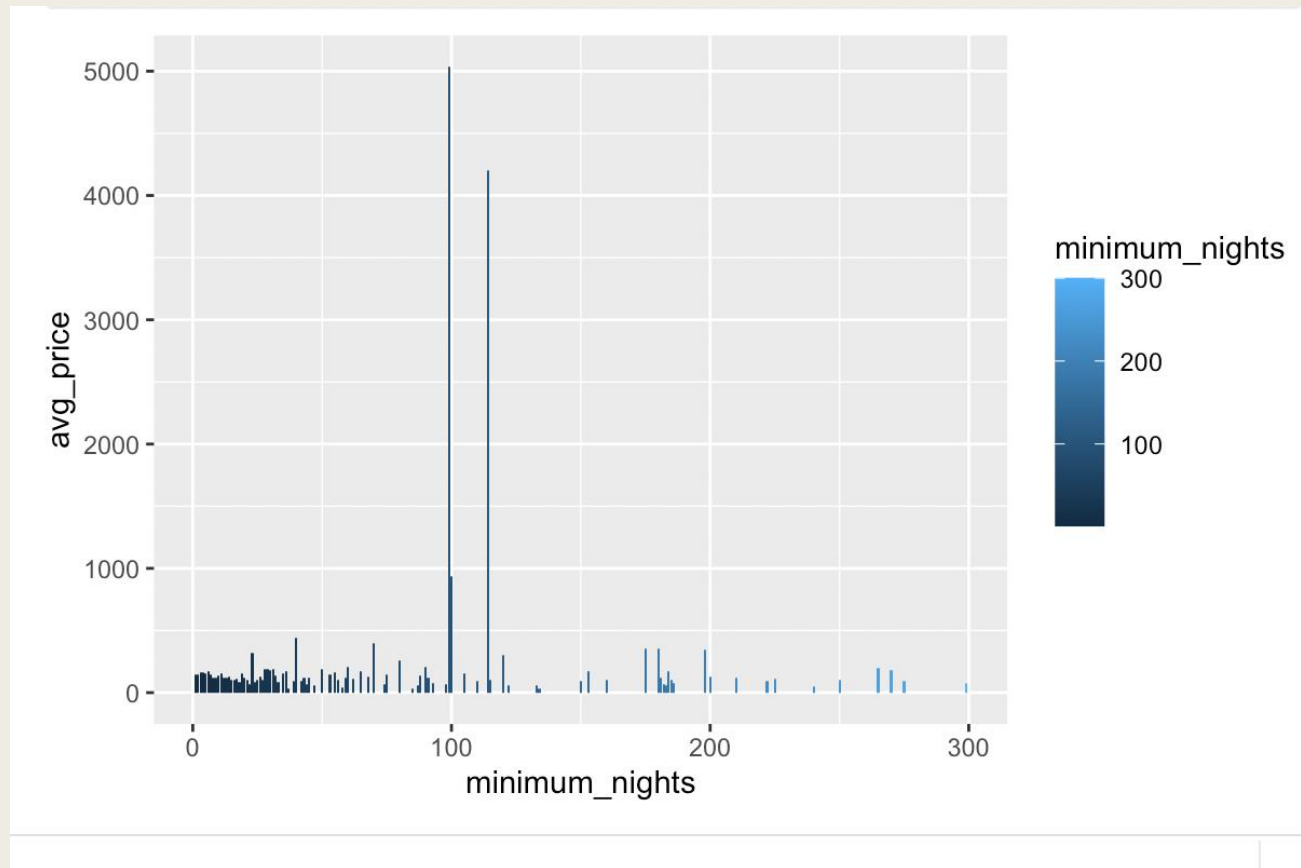
Histogram with hexagonal binning



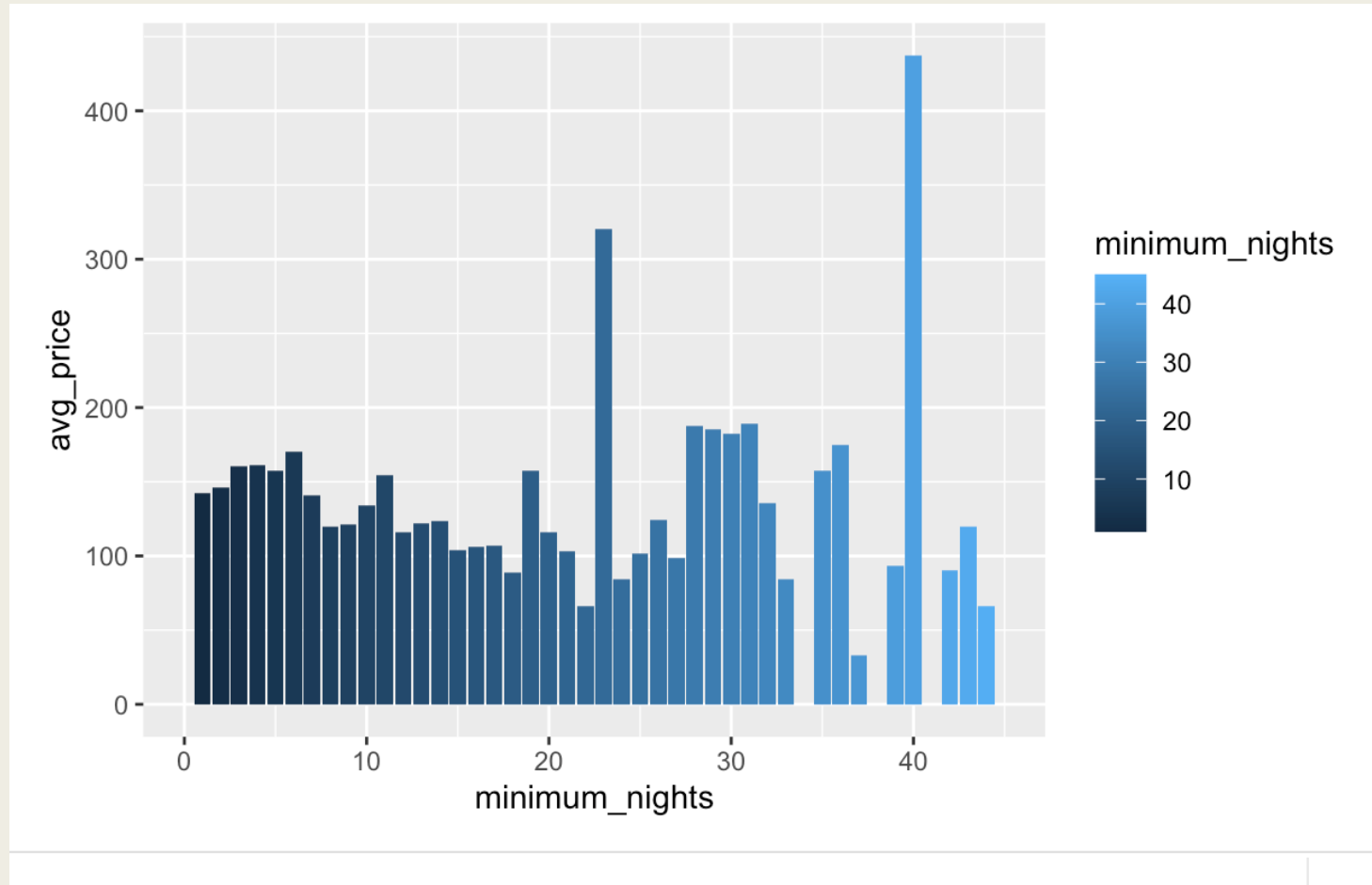
"As the minimum night stay goes up,
does the price per night go down over
time?"

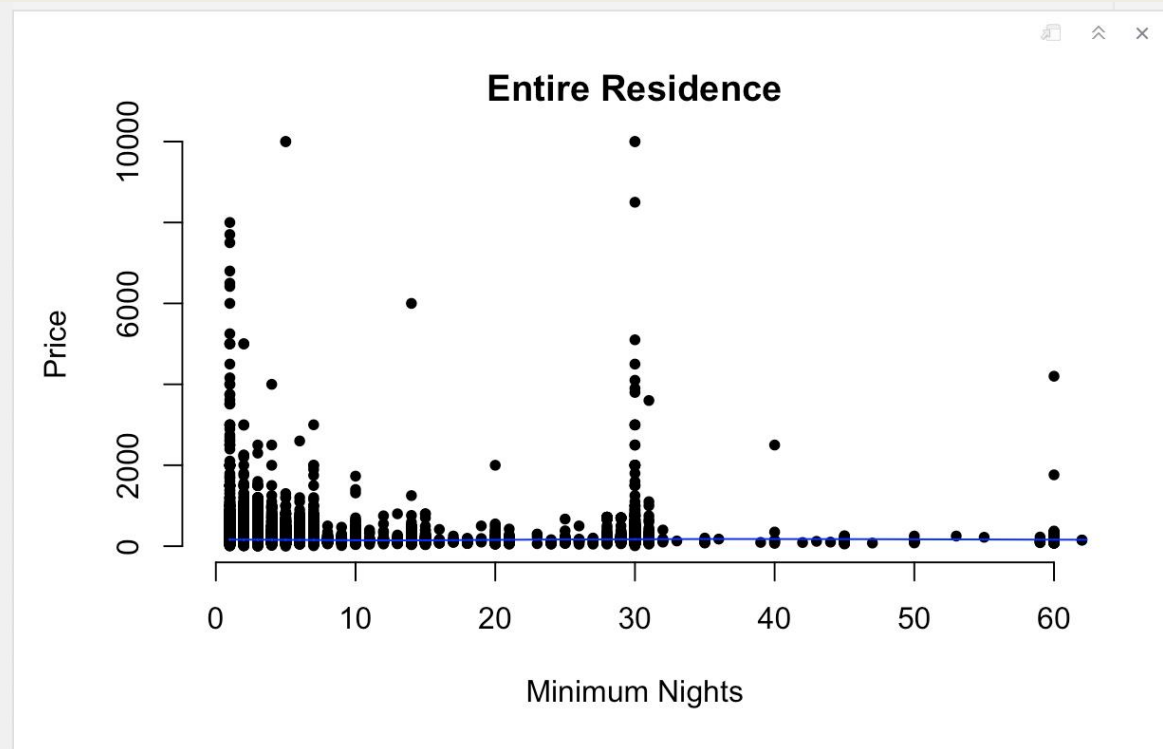
Why such a high average price ??

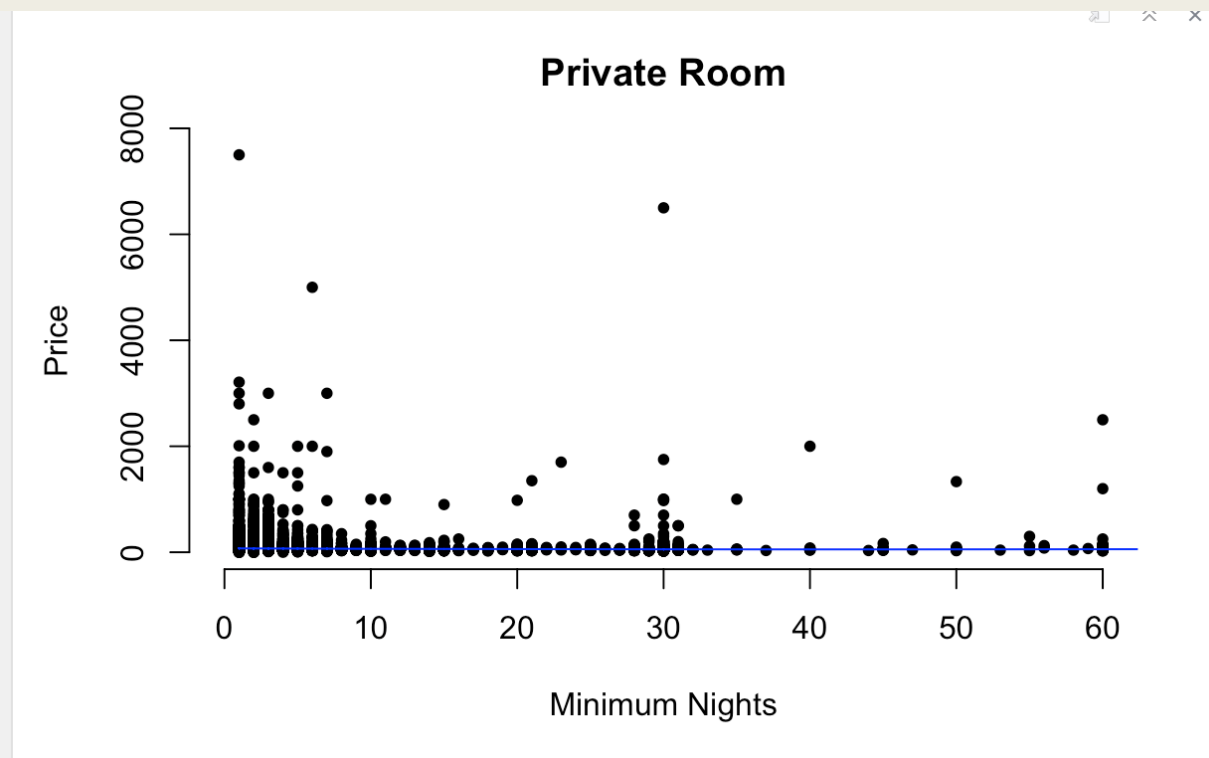
- The average price for 114 nights is \$400 because there's only one rental for 114 nights. So we have taken the outliers out after 45 min night stay.

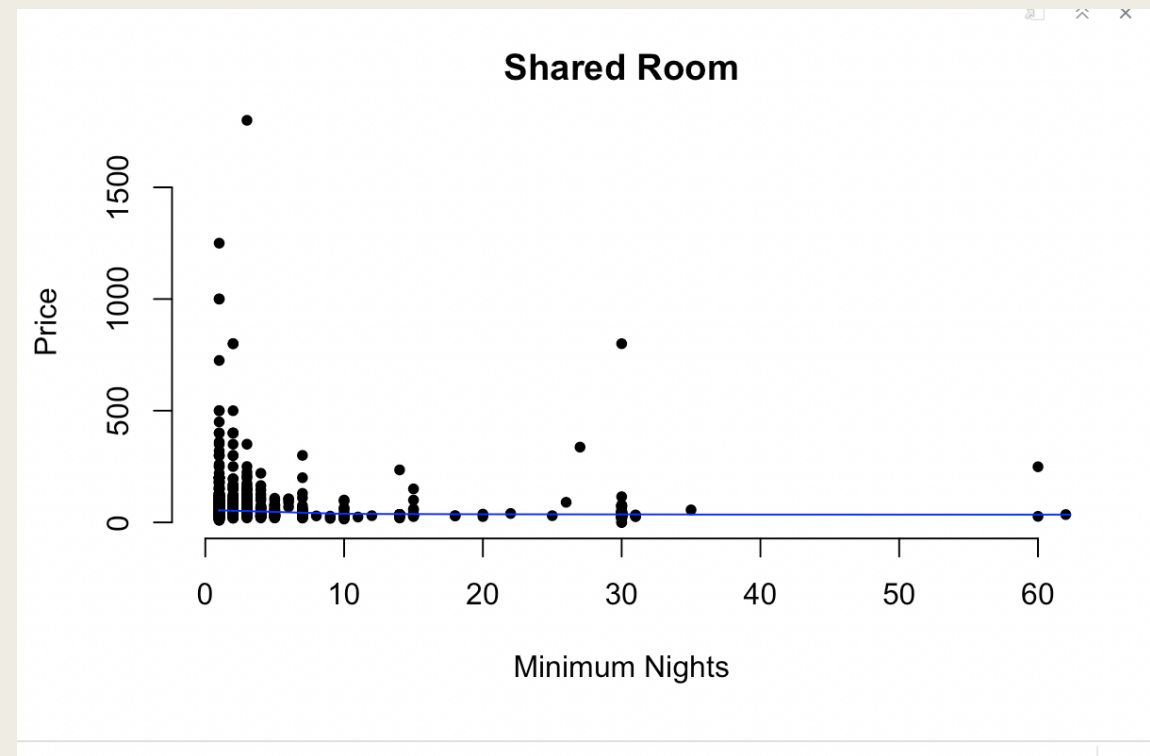


Same data, new look, so sneaky...









Conclusions

- We have found that there is a correlation between minimum night stay and price.
- We can see that overall, the prices reduce on average up until the 30 night mark, then they spike.
- Entire Residences, and Private Rooms, are the most popular listings in AirBNB
- There is no correlation between an area's availability, and the prices of listings in that area.
- There is no correlation between an area's average number of reviews, and the prices of listings in that area.
- A lower prices listing will have a higher number of reviews, and lower priced listings have less availability. However, a high number of reviews does not seem to decrease availability
- The number of reviews a listing has is directly tied to its last review date. If a listing has been reviewed in the last year, it will have drastically more reviews. Price appears inversely related to number of reviews

- Manhattan is the most expensive region of New York.
- It has 60% of the top 10 most expensive properties.
- It has 64% of the top 25 most expensive properties.
- If you are going to stay in New York beware that if you want to stay in Manhattan, it will likely cost more than any other region. This has its upsides though as it is in the middle of the city.

QUESTIONS?