from Kaggle Airbnb NYC Data

AIRBNB - CLASSIFICATION

Pitch

PROBLEMS

- "Revenue declined 72% amid the coronavirus outbreak leading to 1,800 job cuts in May"
- "Our Adjusted EBITDA and Free Cash Flow have been declining, and this trend could continue"
- "If we fail to retain existing hosts or add new hosts, or if hosts fail to provide high-quality stays and experiences, our business, results of operations, and financial condition would be materially adversely affected"

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PREDICT

By predicting if a given Airbnb listing will have over 165 days of availability in a given year, Airbnb can potentially reduce host churn by strategically placing their marketing efforts.

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FEATURES

- Availability 365
- Location
- Price
- Minimum nights
- Number of reviews
- Reviews per month
- Host listing count
- Entire Home/Apt
- Private Room
- Shared Room

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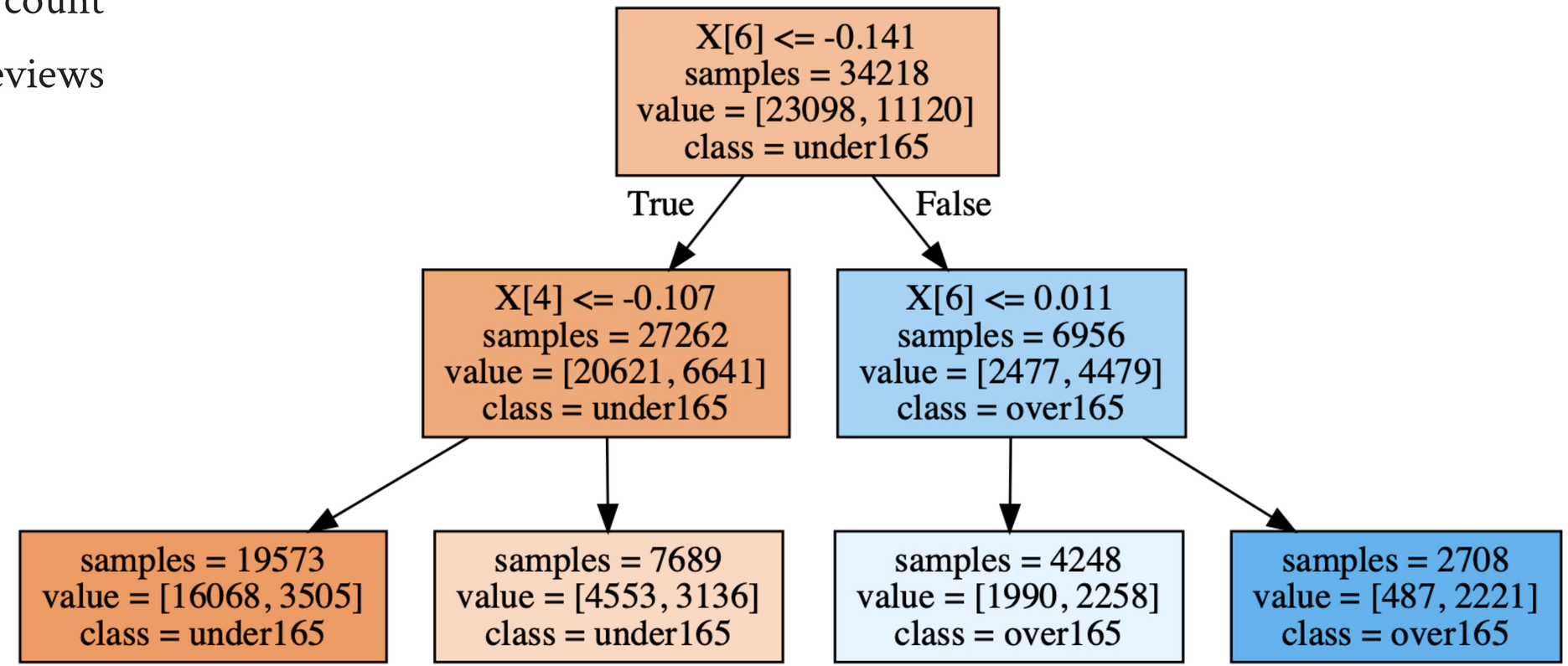
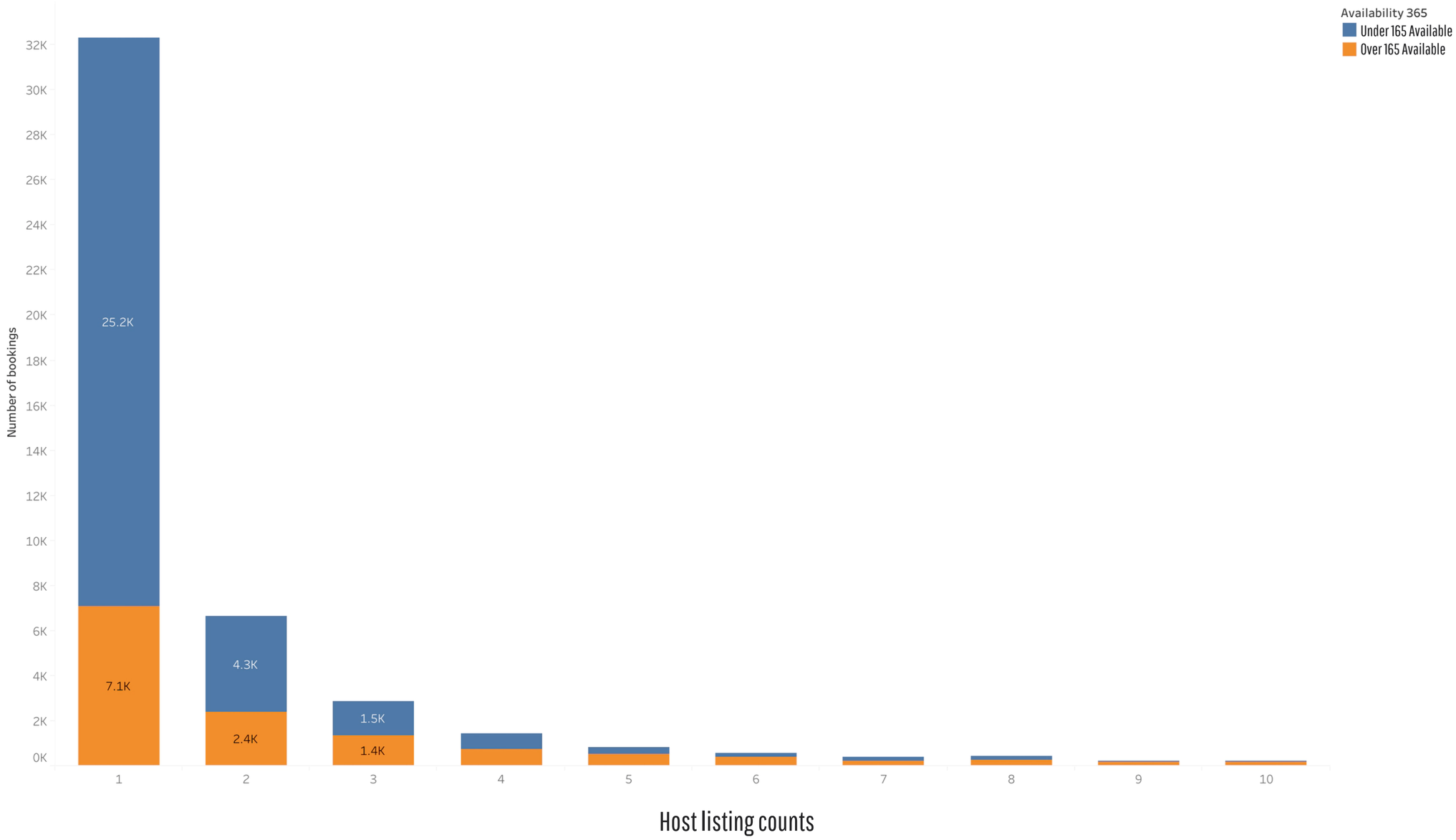
X[6] = Host listings count

X[4] = Number of reviews

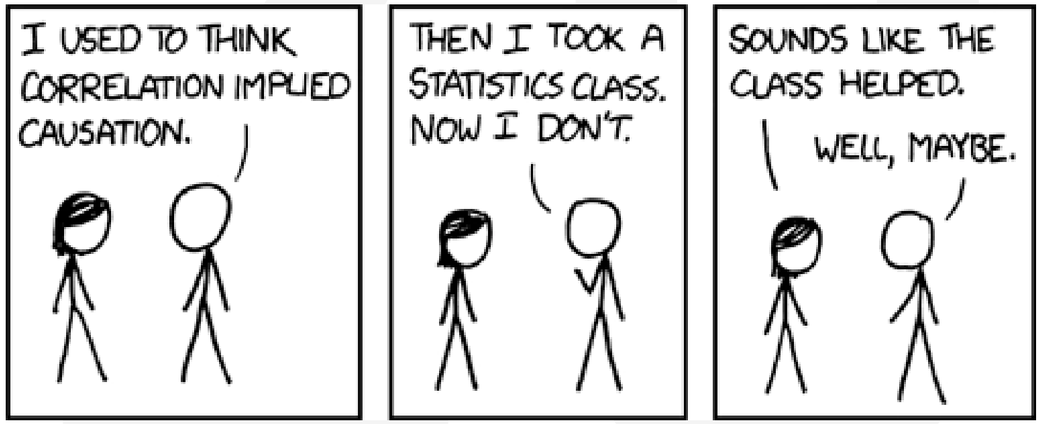



```
Accuracy on training set: 0.732
Accuracy on test set: 0.736
```

Pitch


Availability 365
Under 165 Available
Over 165 Available
Number of bookings
32K
30K
28K
26K
24K
22K
20K
18K
16K
14K
12K
10K
8K
6K
4K
2K
0K
25.2K
7.1K
4.3K
2.4K
1.5K
1.4K
1
2
3
4
5
6
7
8
9
10
Host listing counts

Pitch



ANALYSIS

- "March 2019 saw Airbnb branching out to acquire a last-minute hotel room site called ‘HotelTonight’ for $400 million USD."
- Many of these hotel hosts have numerous listings

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"Nearly 90 percent of guests who first used Airbnb to book a hotel room have returned to our platform and booked a room in a home or an entire home for their next trip."

ANALYSIS

Target audiences are probably looking for a real neighborhood experience

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ANALYSIS

Pricing of these hotels are not necessarily cheaper on Airbnb

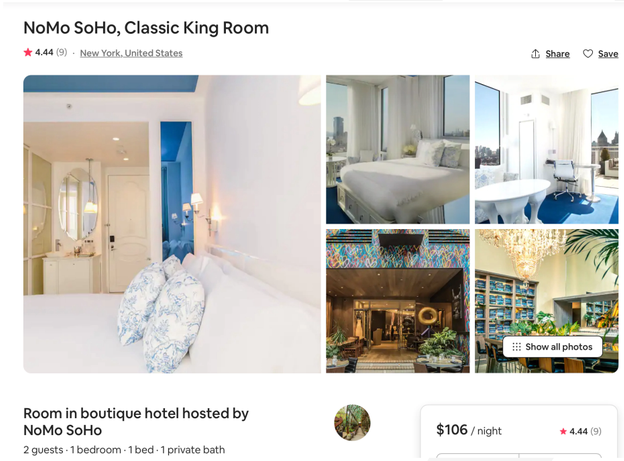
Classic King

Sleeps 2 | 1 King | 190 to 210 ft²

Classic King Rooms feature one King sized bed, and have SoHo views from the floor to ceiling windows. Located between the 3rd – 11th floor.

$85
Per Night
+ 3 Free Rewards
Excluding Taxes & Fees

BOOK NOW



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RESULTS

```
Accuracy: 0.781
Confusion matrix:
[[7537  758]
 [1920 2006]]
```

AUC for Random Forest: 0.819

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CONCLUSION

By discovering the pool of listings with high availabilities, we've also discovered the pool of listings with low availabilities where Airbnb can make more efficient use of their capital to reduce host churn.

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Airbnb

THANK YOU

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LIMITATIONS/IMPROVEMENTS

- The data did not contain the initial listing post date
- Try a different

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