



HOLIDAY HOMES IN THE BIG CITY

AN ANALYSIS ON AIRBNBS IN NYC



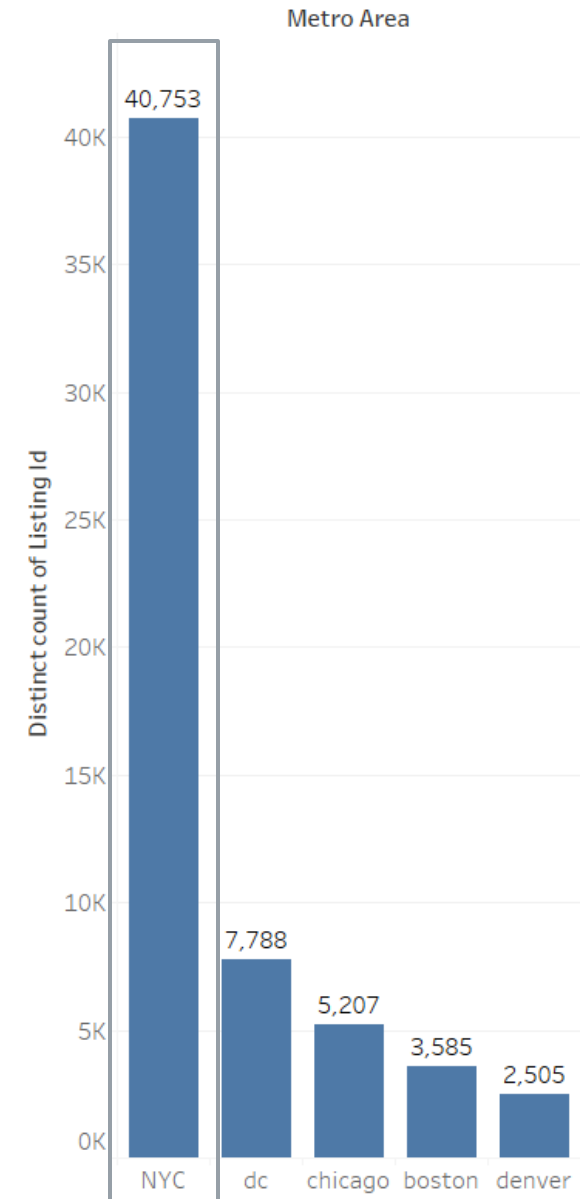
Airbnb is an increasingly popular alternative to expensive hotels for tourists on a budget



It also gives renters and homeowners an opportunity to earn some income by subletting or renting their homes out when they are not using it

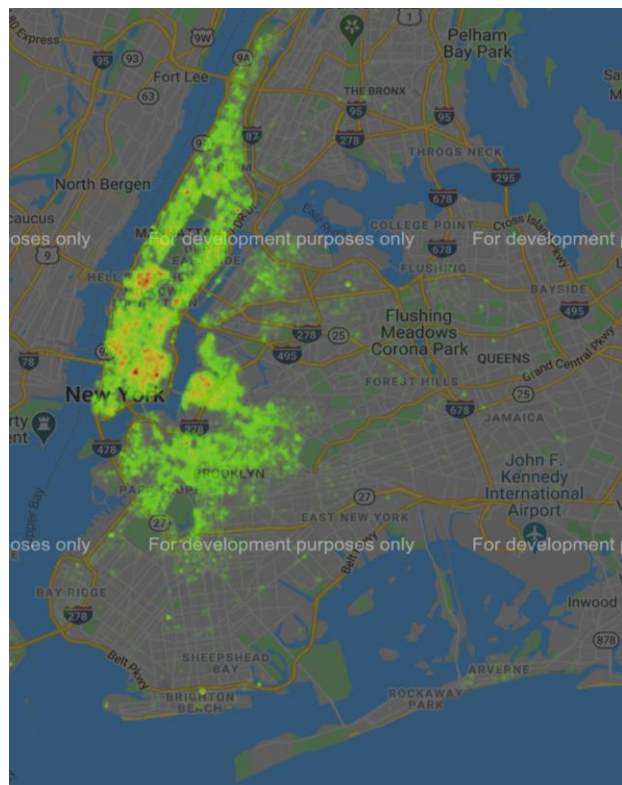
BACKGROUND

- New York City, one of the top by expensive tourist destinations
- Significantly high count of Airbnb listings



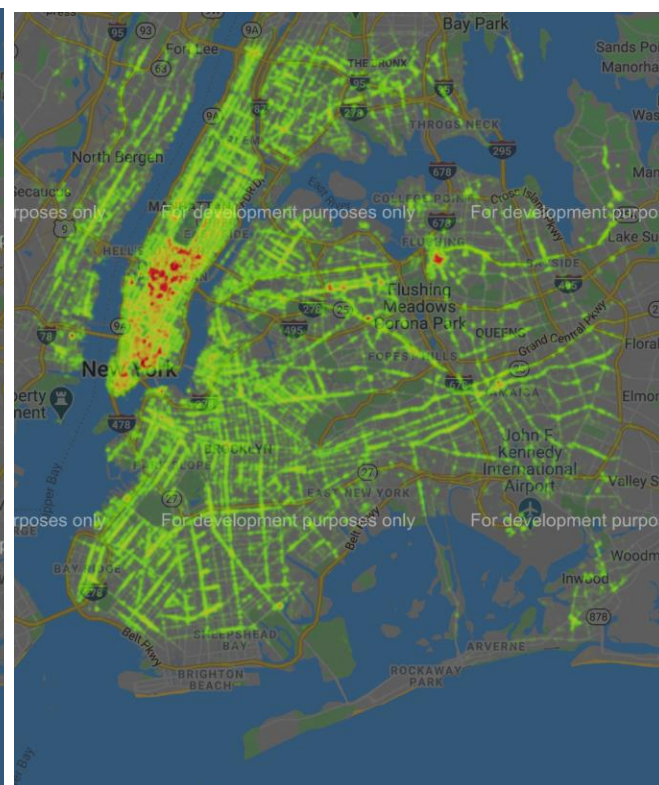
NYC BACKGROUND

AirBnB Listings in NYC



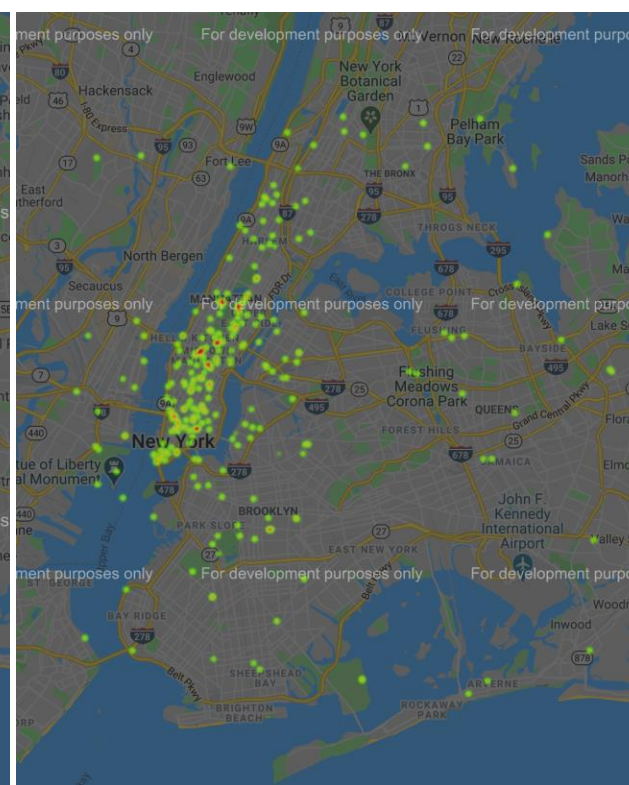
AirBnB Listings weighted by daily price

Points of Interest



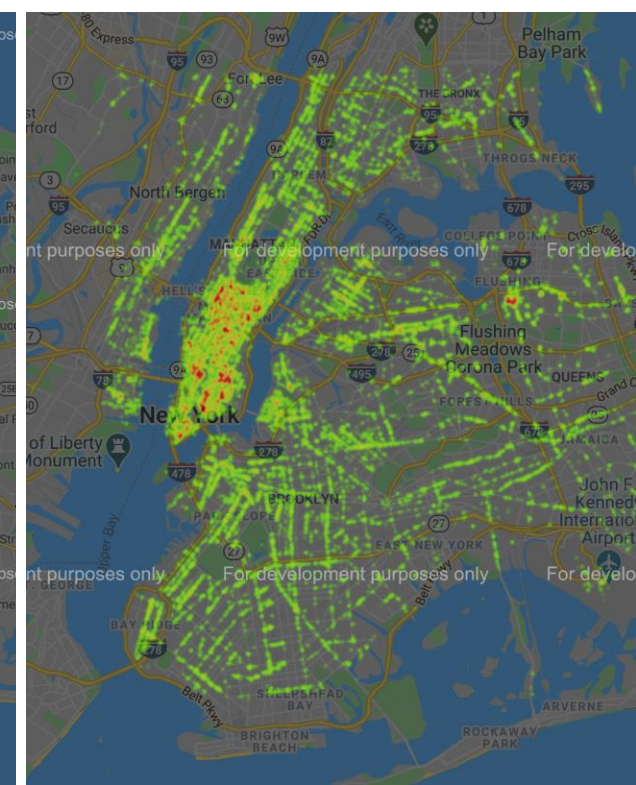
Weighted by rating [0,5]

Museums



Weighted by rating [0,5]

Restaurants



Weighted by rating [0,5]

UNDERSTANDING SUPPLY AND DEMAND TRENDS OF NYC AIRBNB HOMES

- Hosts: How to **maximise bookings** for my home?
- Guests: How to get the **best deal** if I'm planning a trip to NYC?



ANALYSING CALENDAR AVAILABILITY OF NYC LISTINGS



AVAILABILITY FOR NEXT 365 DAYS OF NYC LISTINGS

Determined availability of listings
by listing and month

	listing_id	date	available	price	metro_area
0	2515	2018-03-05	t	69.0	NYC
1	2515	2018-03-04	t	69.0	NYC
2	2515	2018-03-03	t	69.0	NYC
3	2515	2018-03-02	t	69.0	NYC

Filtered months and listing ids with
full availability in a month

	date	listing_id	available_days	total_days	not_available_days
0	2017-05-31	2515	5	30	25
1	2017-05-31	2595	30	30	0
2	2017-05-31	3647	30	30	0
3	2017-05-31	3831	0	30	30

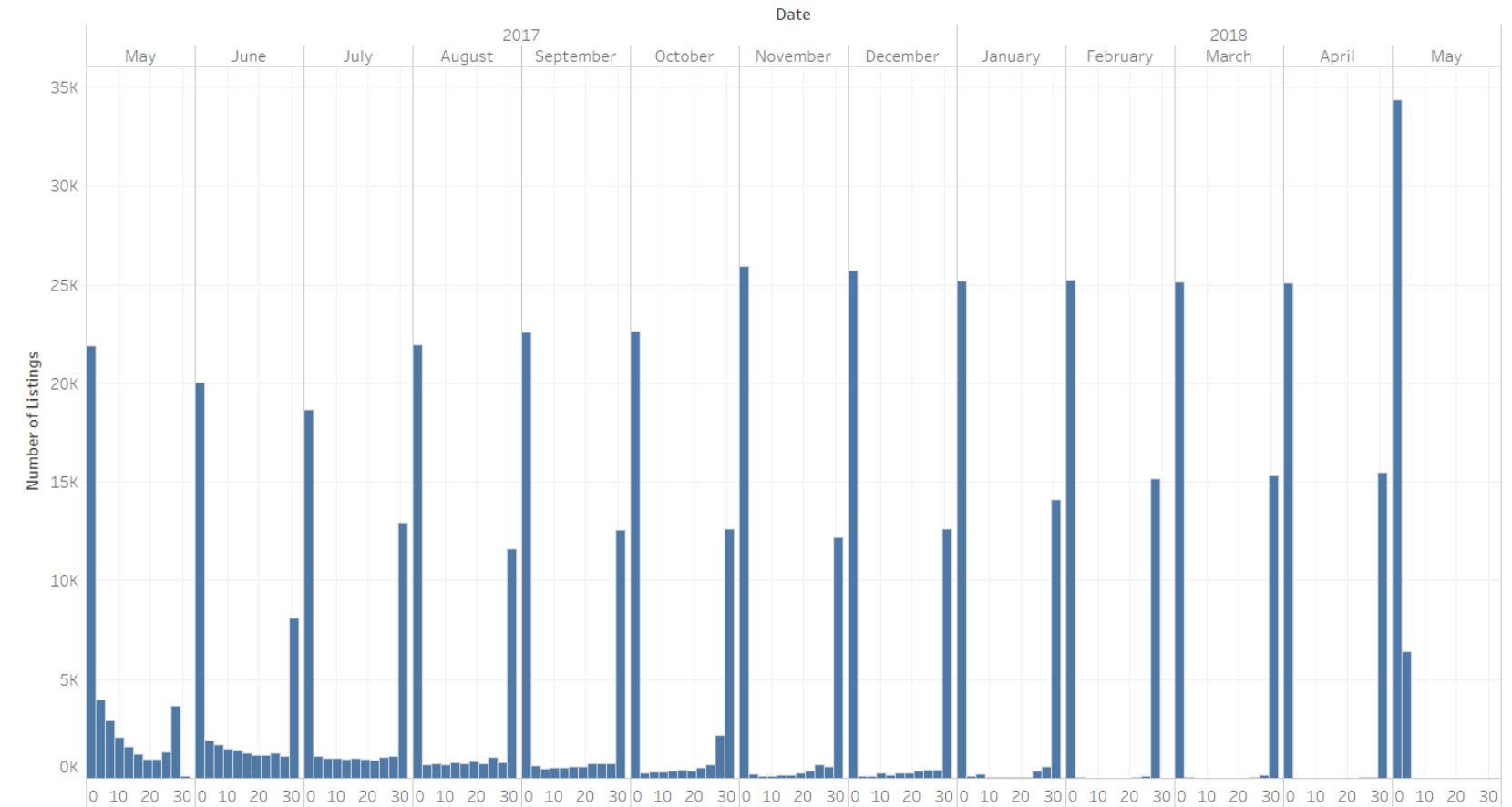
Frequency of "full-availability" months
by listing

	listing_id	no_months
0	40453	12
1	7208745	12
2	17726161	12
3	6904576	12

MOST LISTINGS HAVE MONTHS WHICH ARE EITHER FULLY-AVAILABLE OR UNAVAILABLE

- Spikes at 0 and 30/31 days in each month
- 0 available days = popular or blocked out listings
- 30/31 available days = unpopular or un-updated listings
- Pattern consistent over the year

Distribution of days available in a month over time

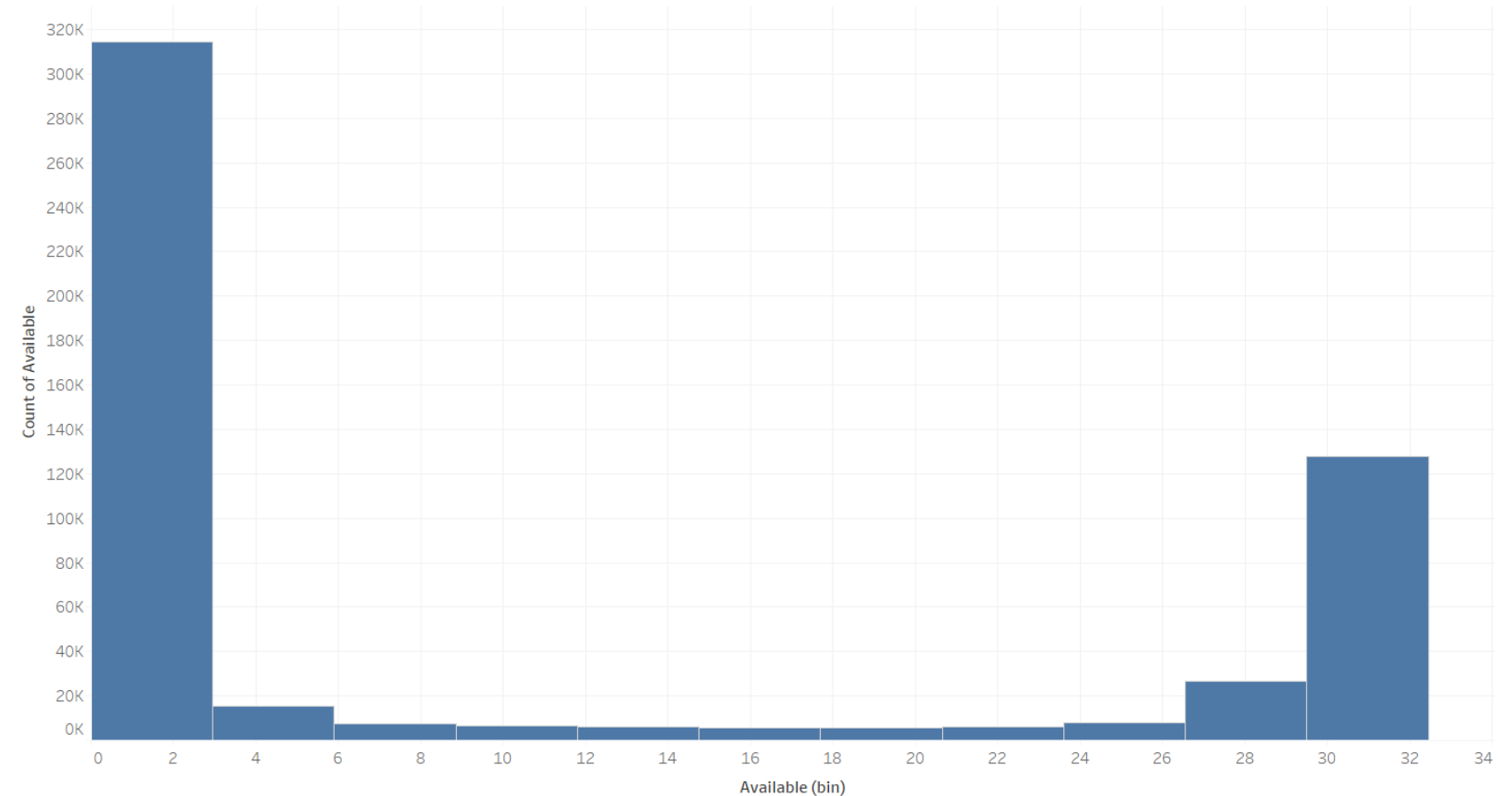


The trend of count of Available for Available (bin) broken down by Date Year and Date Month.

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Overall distribution of days available in a month

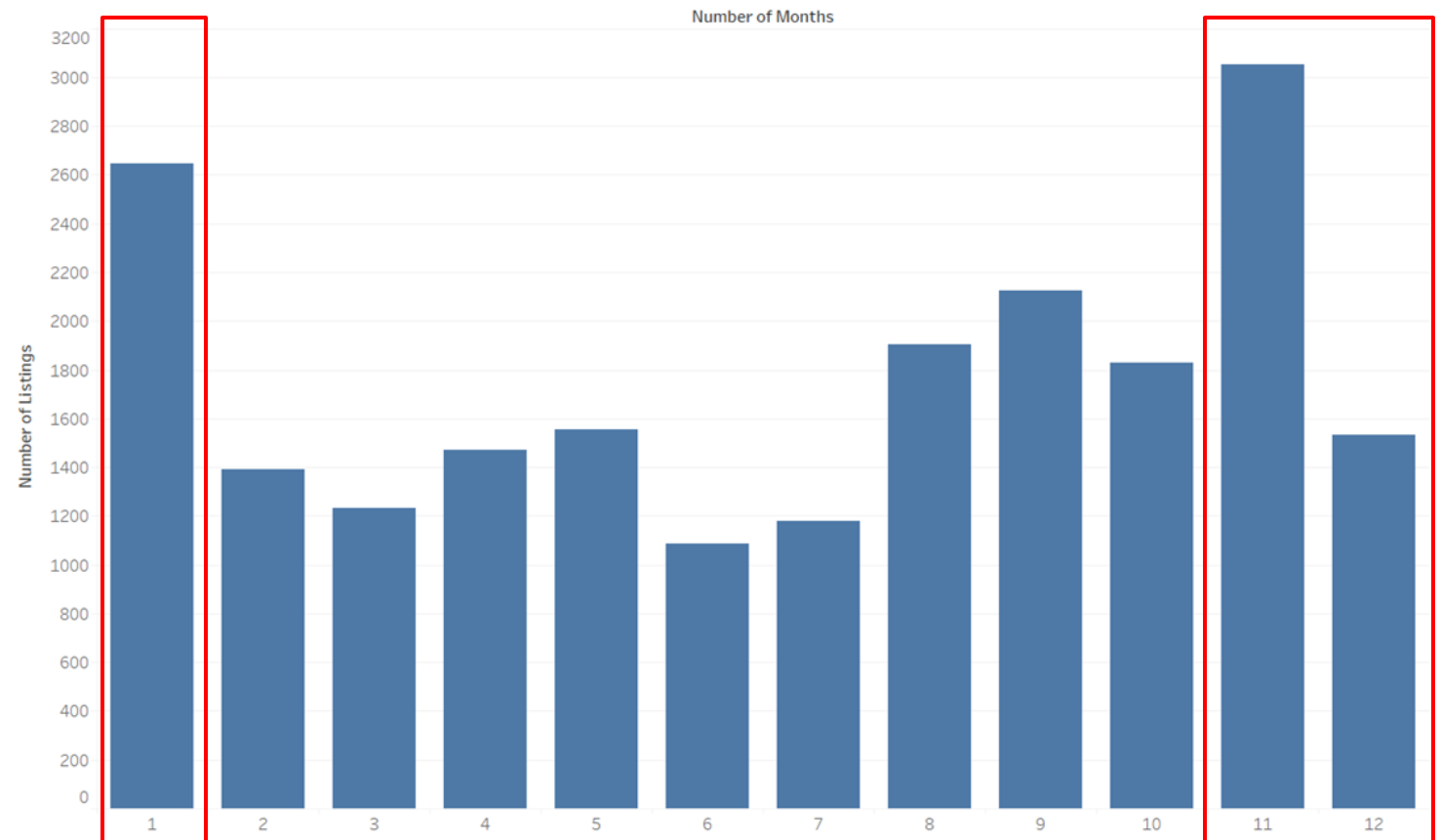


The trend of count of Available for Available (bin).

FOCUSING ON 'HIGHLY AVAILABLE' LISTINGS

- 'Highly available' = at least 1 full month available
- Most listings are fully available for either 1 month or ≥ 11 months
- Listings that are not of high demand
- Homeowners don't bother updating their listing to include the one month they use their home (?)

Distribution of Number of Months with High Availability



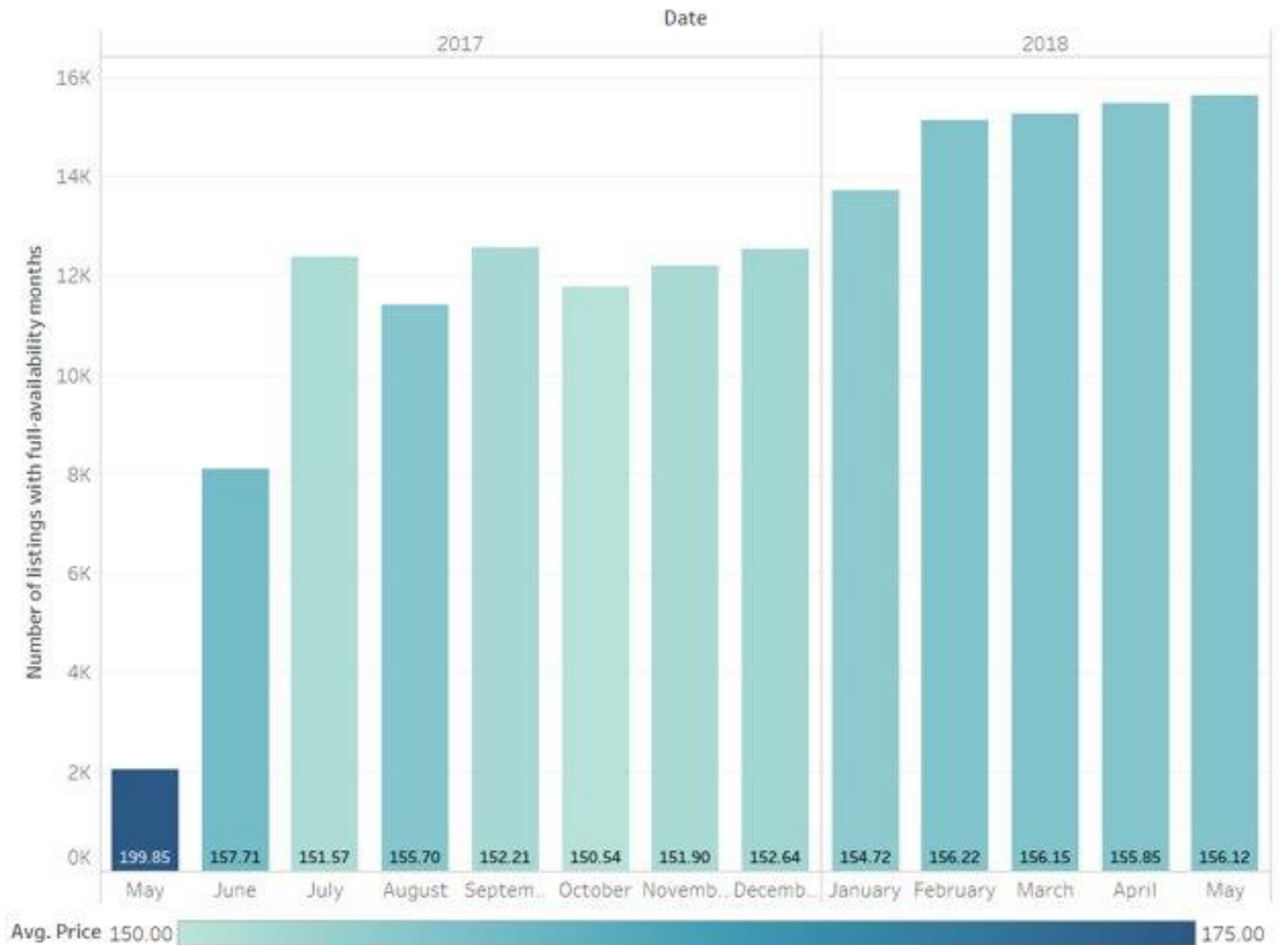


WHAT DOES THIS MEAN FOR HOSTS & GUESTS?



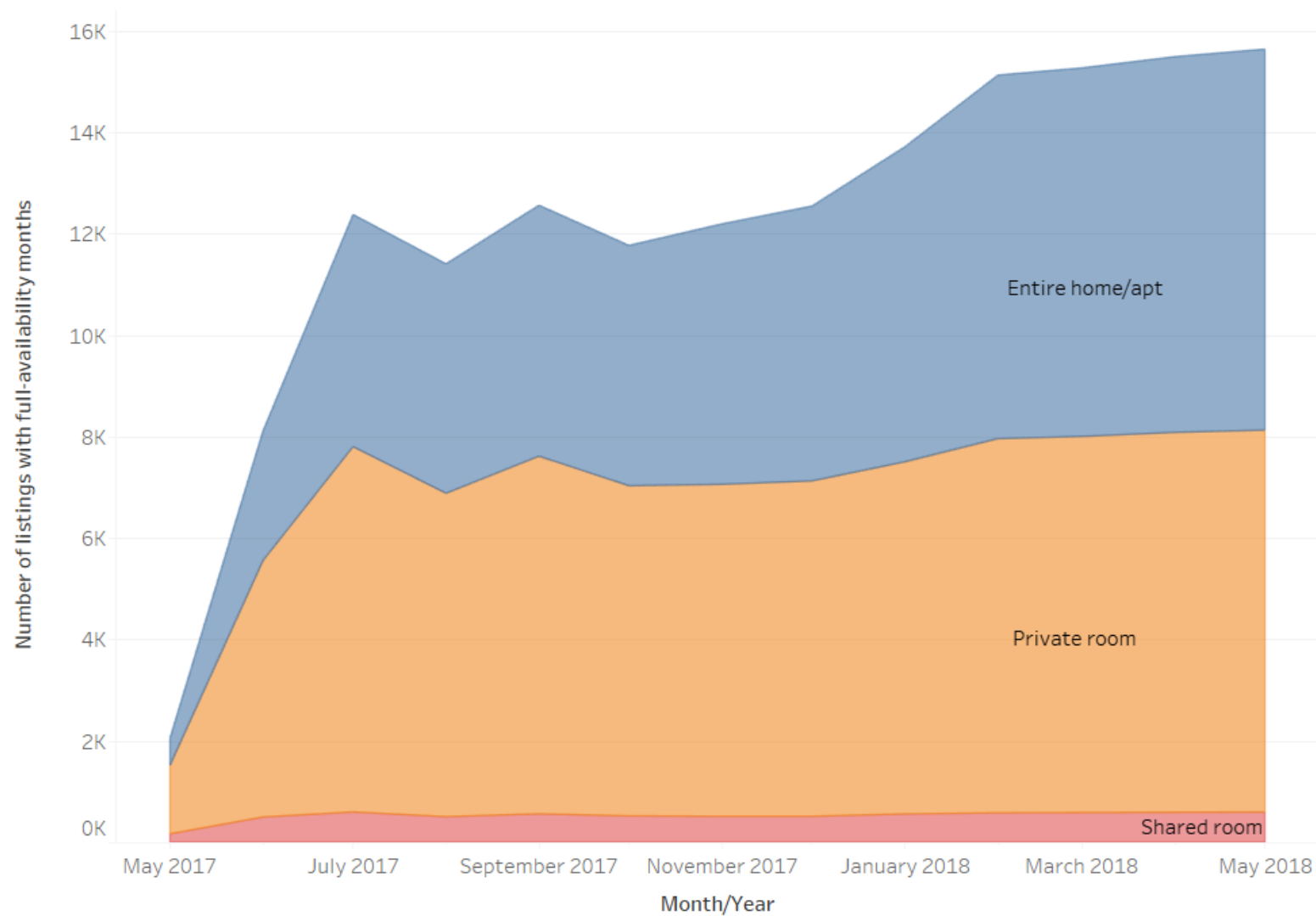
- Consumers should book > 1 **month** in advance to enjoy **lower prices** and **more options** on average
- Hosts can practice **dynamic pricing**

Monthly availability and average price of listings



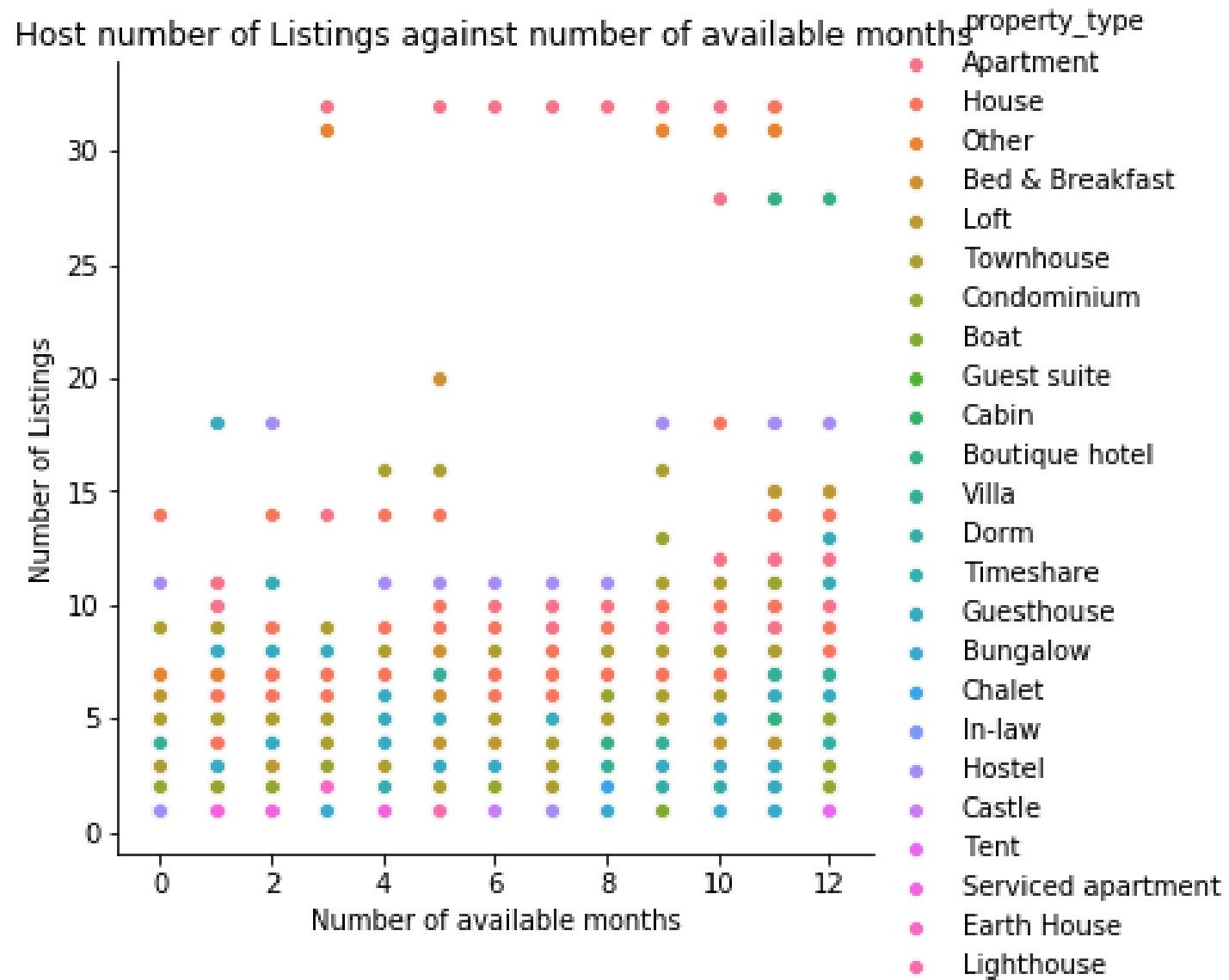
- Consumers should book early if preference is for **private rooms** or **entire homes**

Listings with full-availability months by room type

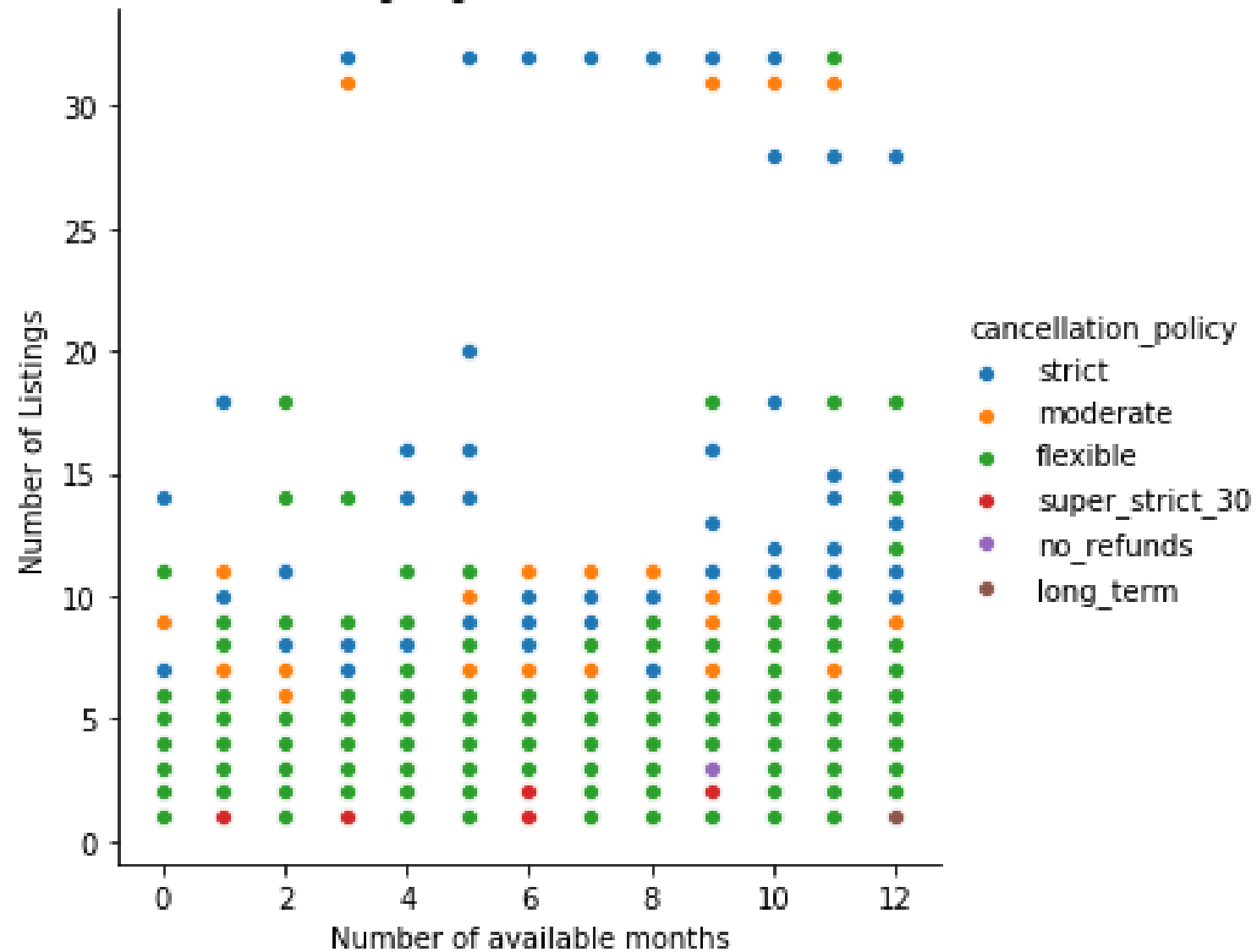


	state	metropolitan	name
960	NY	NYC	Sunny room in Williamsburg!
1144	NY	NYC	1 Bedroom, borders Williamsburg and Clinton Hill
1286	NY	NYC	Cozy Private Room btw Williamsburg and Bushwick
1724	NY	NYC	Spacious artist loft close to Williamsburg
1913	NY	NYC	Williamsburg One Bedroom With Private Entry
2049	NY	NYC	Elegant, Convenient in Williamsburg
22819	NY	NYC	Awesome apartment in Williamsburg!
22820	NY	NYC	Romantic Williamsburg Apartment
22821	NY	NYC	Sunny 1 Bedroom Condo Williamsburg
22824	NY	NYC	Cute Room In our Williamsburg Share
22825	NY	NYC	Cozy room in East Williamsburg
22827	NY	NYC	Sunny Cozy Williamsburg Room w/Patio-Near Train

1092 rows × 3 columns



Host number of Listings against number of available months



CONCLUSION & FURTHER INVESTIGATION

- Examining availability of listings is critical in understanding demand and supply interactions
 - Facilitate hosts in accelerating booking of their listings
 - Make recommendations to guests to help them book the most suitable listings for them
- Further steps can be taken;
 - Evaluate specific time trends for 'availability'
 - Characterise listings with various levels of availabilities to understand reasons for high availabilities