

AIRBNB CAPSTONE PROJECT

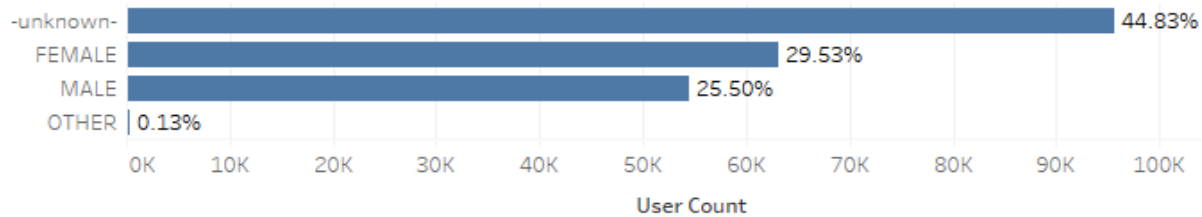
EXPLORATORY ANALYSIS



USER DEMOGRAPHIC

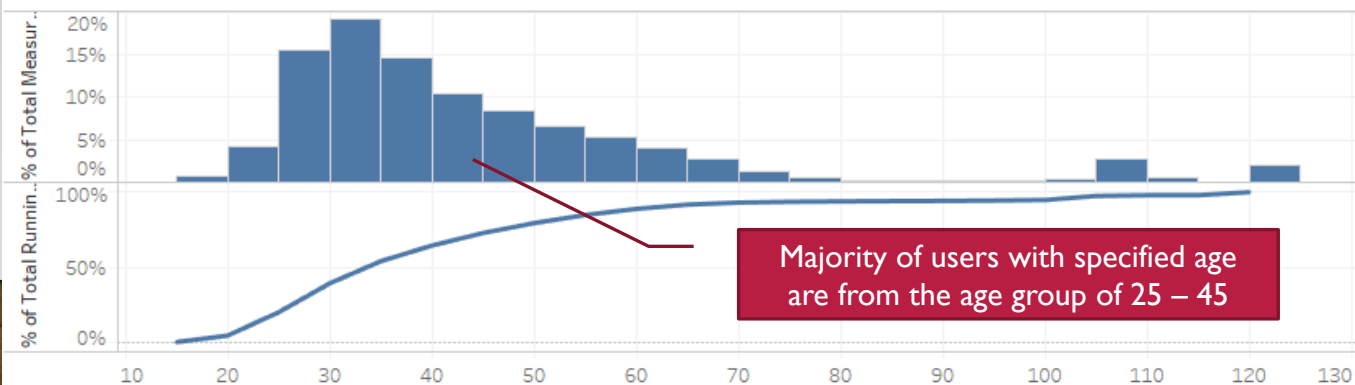
WHAT DO THE USERS IN THE DATASET LOOK LIKE ?

Dimension Distribution:
Gender

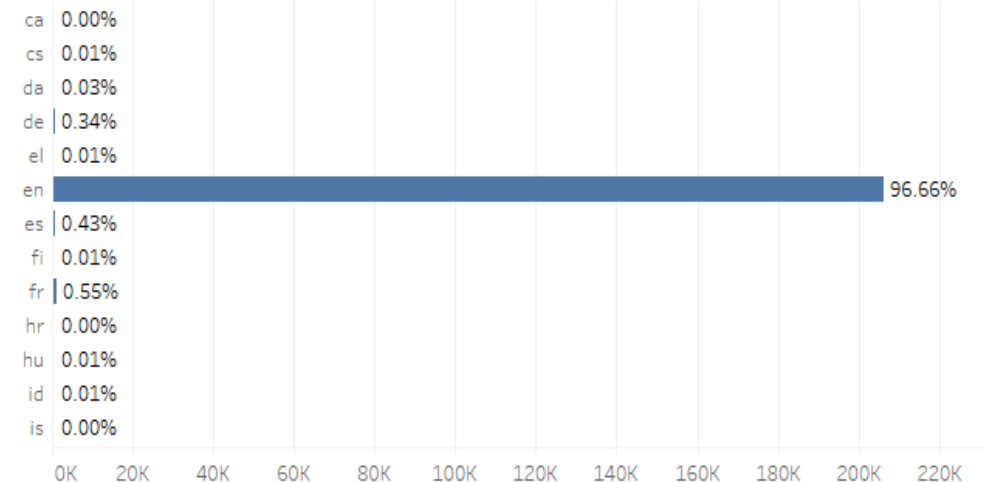


- 213,451 users in total from US.
- 45% of users have unknown gender.
- 59% of users have unknown age.

Measure Distribution:
User Age Cleaned
PDF & CDF Plot

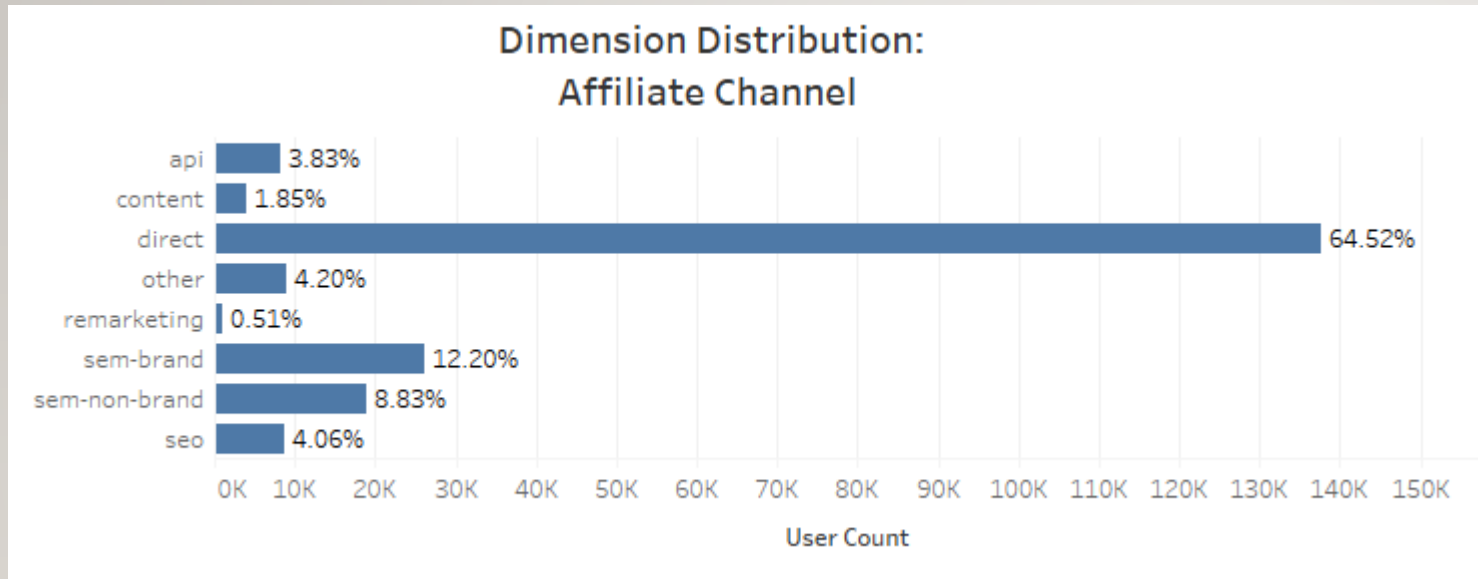


Dimension Distribution:
Language



USER ACQUISITION CHANNELS

WHERE DO THE USERS COME FROM ?

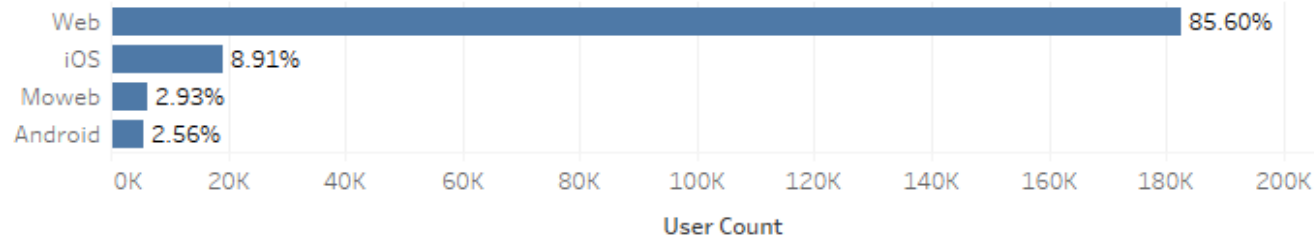


- Most users are either coming to the website by typing in URL directly or coming from Google.

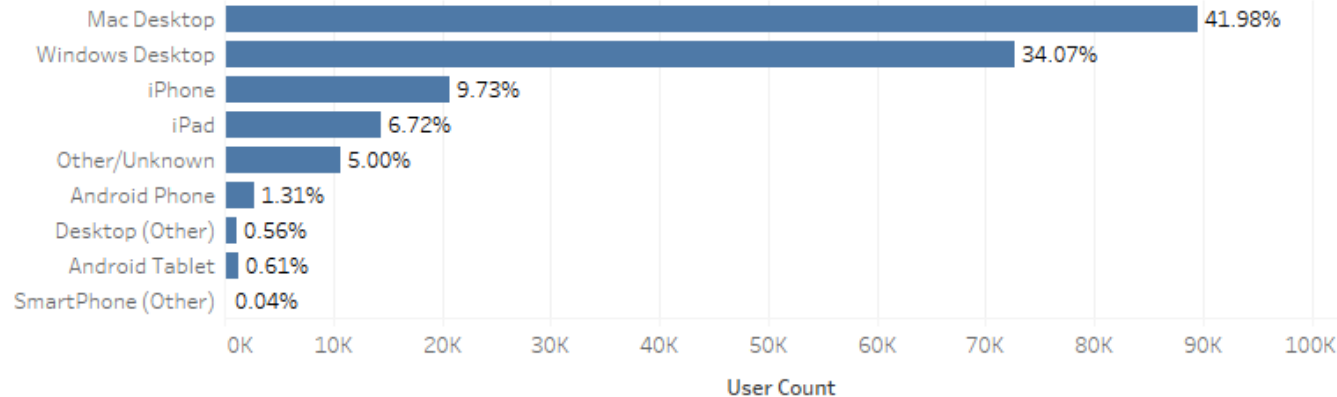
USER BEHAVIORS

HOW DID THE USERS COME TO THE WEBSITE FOR THE FIRST TIME ? HOW LONG HAVE THEY BEEN BROWSING ON THE WEBSITE?

Dimension Distribution:
Signup App



Dimension Distribution:
First Device Type

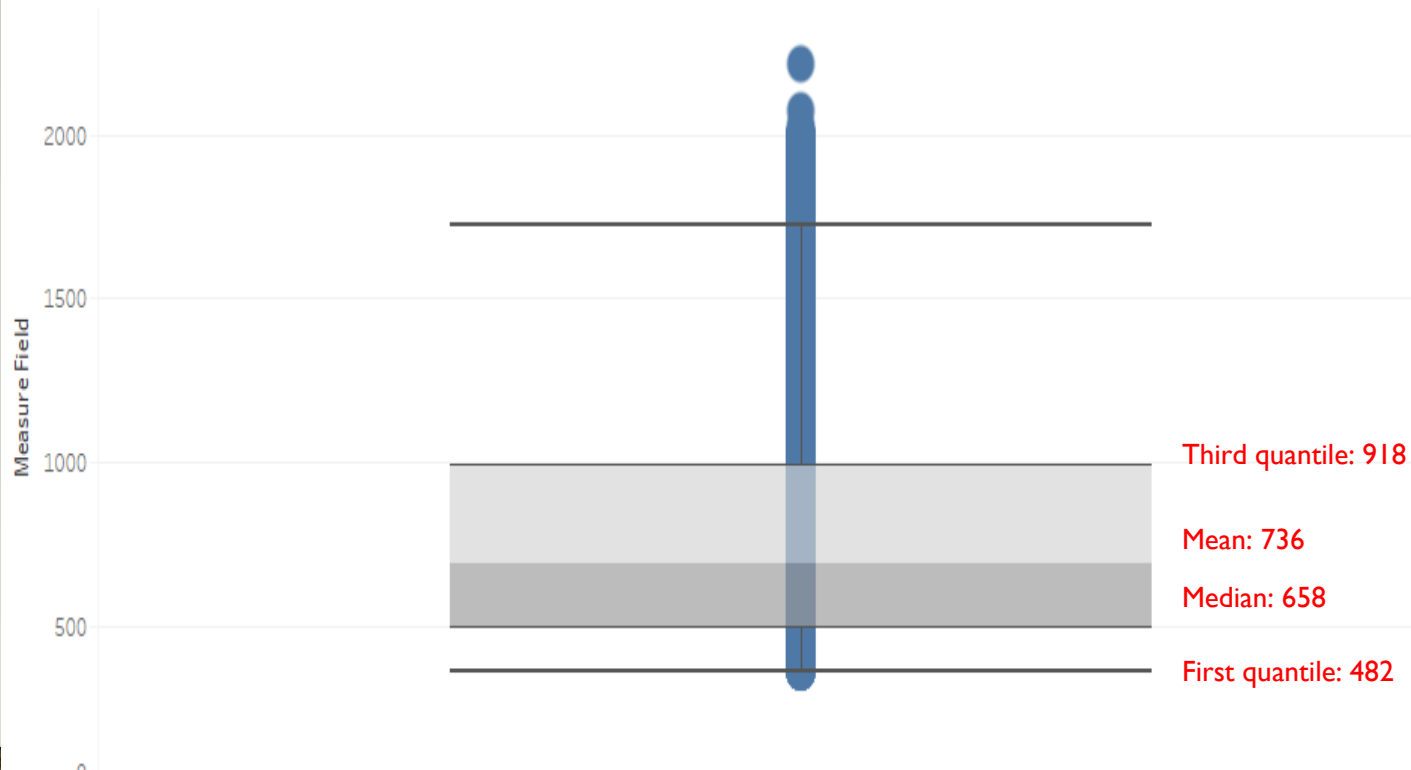


- Majority of users signed up through desktop
- Mac is more popular among users than any other device

USER BEHAVIORS

HOW DID THE USERS COME TO THE WEBSITE FOR THE FIRST TIME ? HOW LONG HAVE THEY BEEN BROWSING ON THE WEBSITE?

Box Plot: Number of active days as of latest date

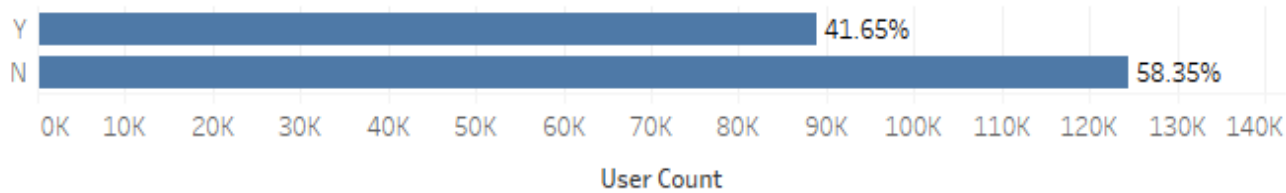


- As of 7/1/2015, user age ranges from 1 year to a bit over 6 years. Most of users are 1 to 2.5 years old based on their first active date on the site.

BOOKING HISTORY

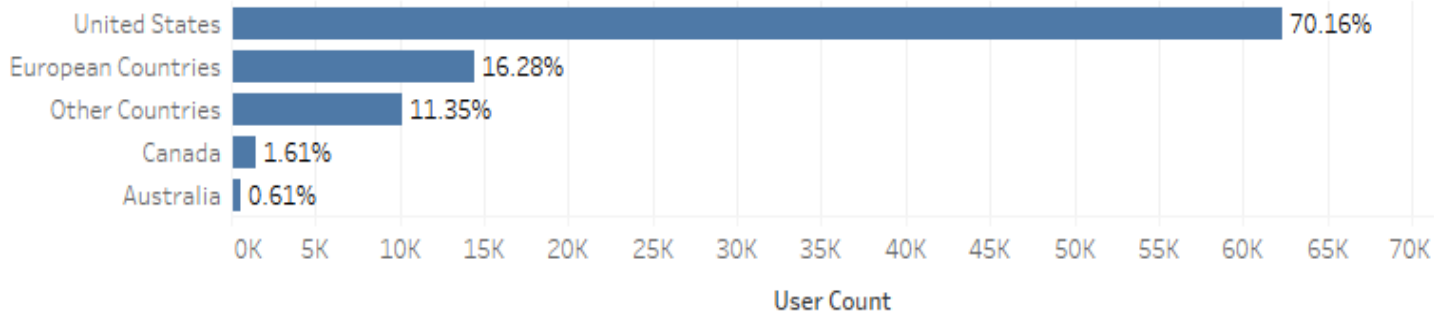
HOW MANY USERS HAVE MADE THE BOOKING ? WHAT DESTINATION ARE MORE POPULAR ? HOW LONG DID IT TAKE USERS TO COVERT AFTER GETTING ON THE SITE? HOW DOES THE USER GROWTH FOR THE WEBSITE LOOK?

Dimension Distribution:
Trip Booking Flag



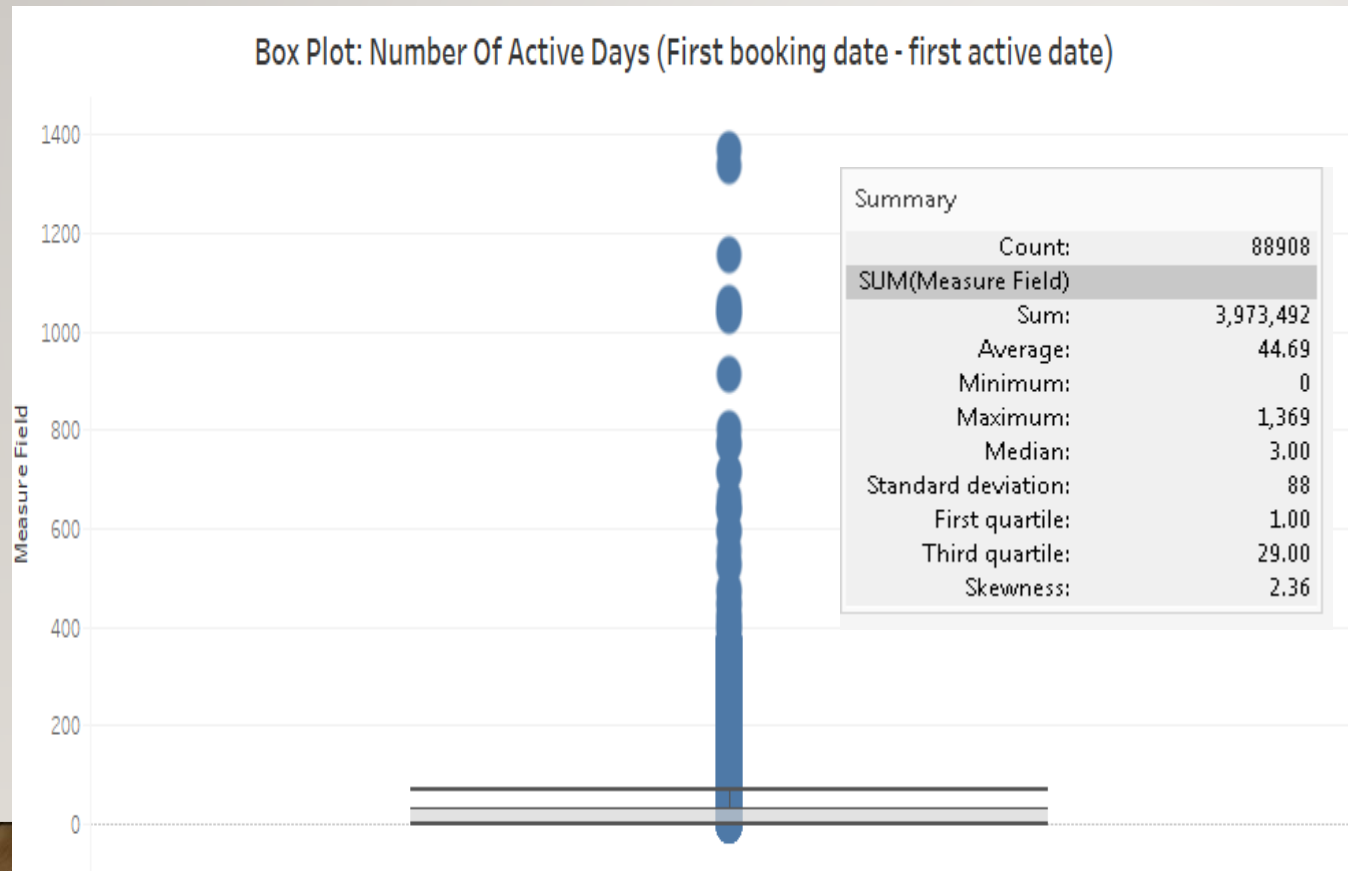
- Only 42% of users have made a booking.
- Most users like to travel within US. Europe is the second place they like to go.

Dimension Distribution:
Country Destination Type



BOOKING HISTORY

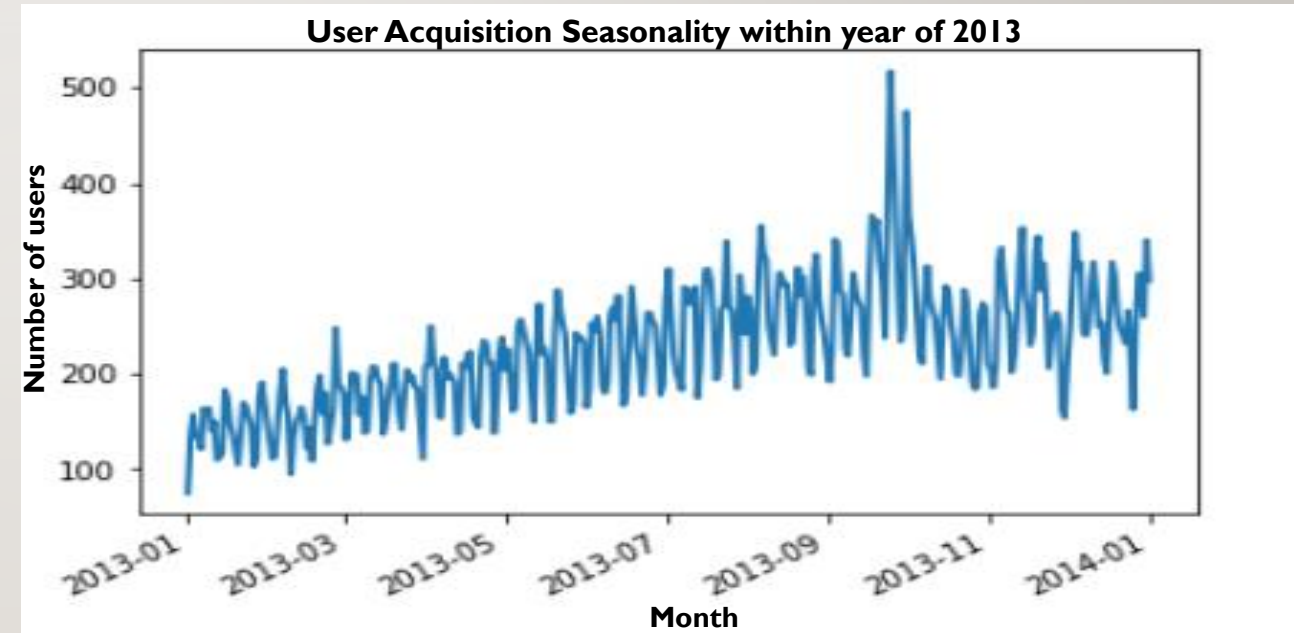
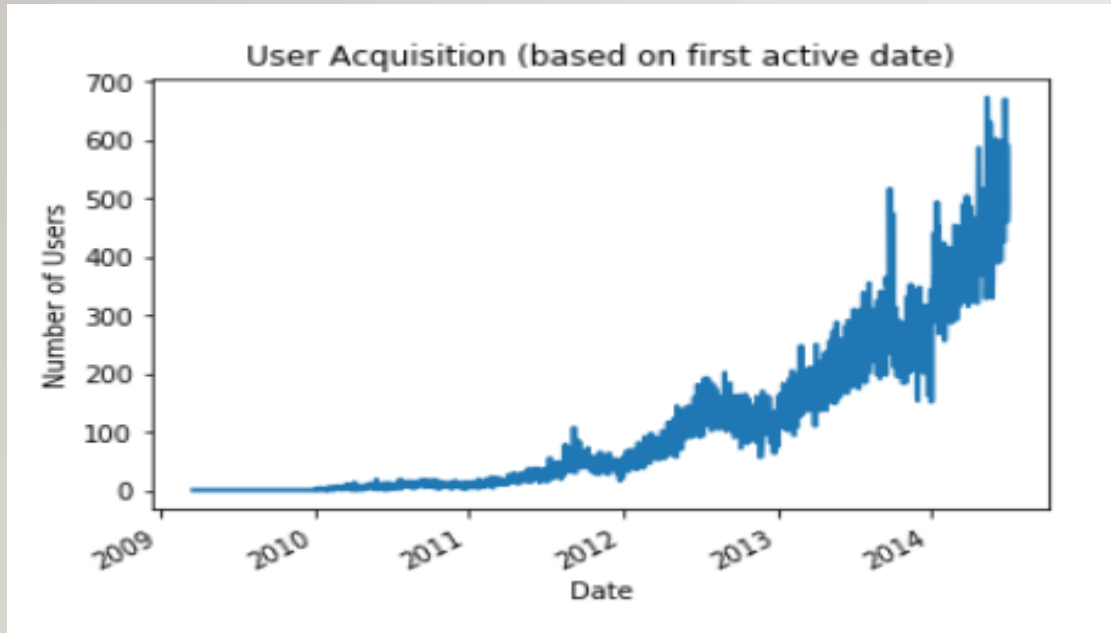
HOW MANY USERS HAVE MADE THE BOOKING ? WHAT DESTINATION ARE MORE POPULAR ? HOW LONG DID IT TAKE USERS TO CONVERT AFTER GETTING ON THE SITE? HOW DOES THE USER GROWTH FOR THE WEBSITE LOOK?



- Majority of users (75%) that have booked their first destination within 30 days since they got on the website for the first time.

BOOKING HISTORY

HOW MANY USERS HAVE MADE THE BOOKING ? WHAT DESTINATION ARE MORE POPULAR ? HOW LONG DID IT TAKE USERS TO CONVERT AFTER GETTING ON THE SITE? HOW DOES THE USER GROWTH FOR THE WEBSITE LOOK?

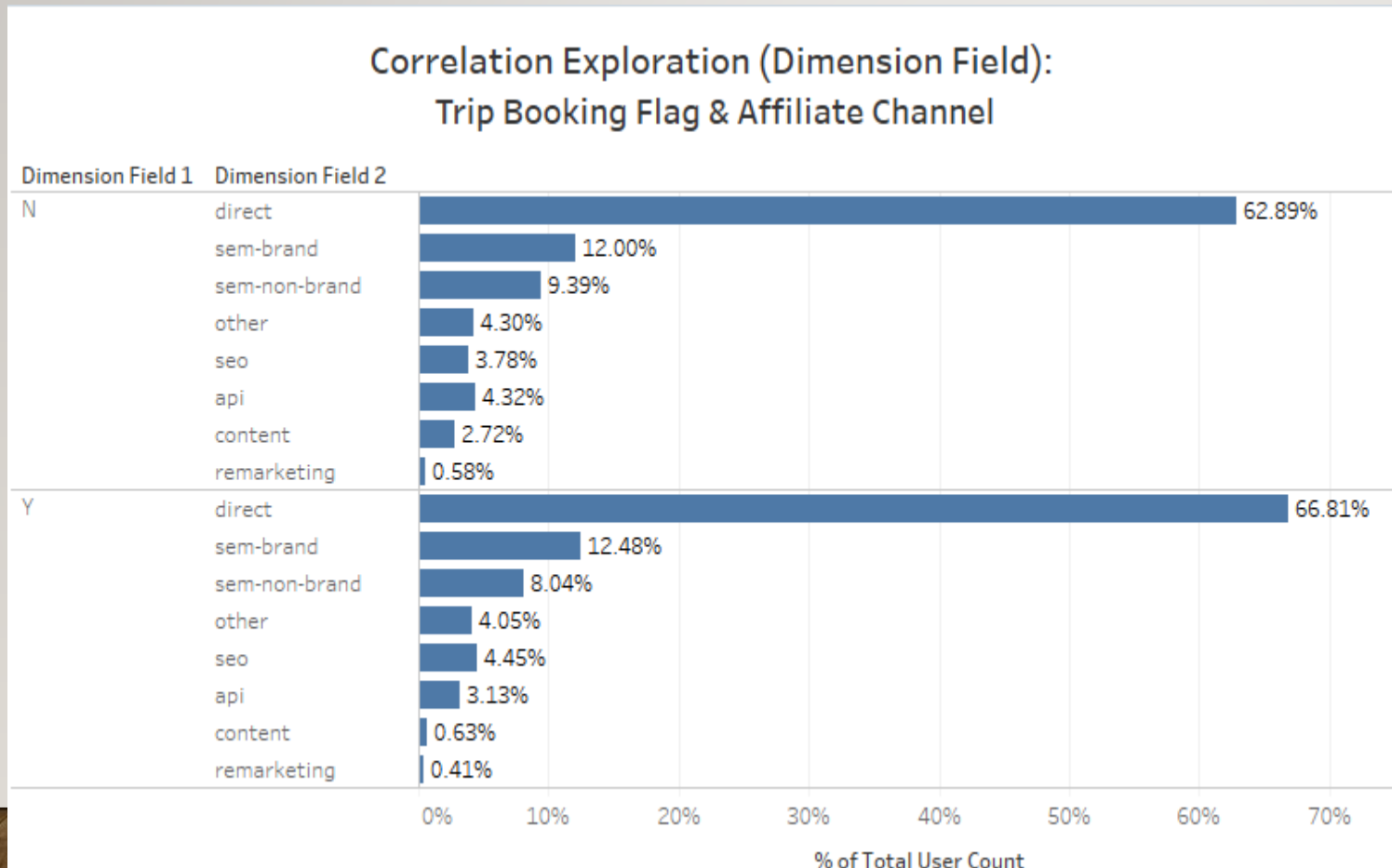


- Between 2013 and 2014, number of users on Airbnb has grown dramatically.
- Take 2013 as an example to take a look at the new user acquisition trend, you will see there's seasonality when it comes to the user acquisition. October is peak month for user acquisition while the beginning of the year is the off-peak season for user acquisition for Airbnb.

CORRELATION EXPLORATION

IS THERE ANY CORRELATION BETWEEN USER ACQUISITION CHANNEL AND THEIR BOOKING BEHAVIOR ?

IS IT TRUE THE MORE TIME USERS HAVE SPENT WITH WEBSITE THE MORE LIKELY USERS ARE TO MAKE A BOOKING ?



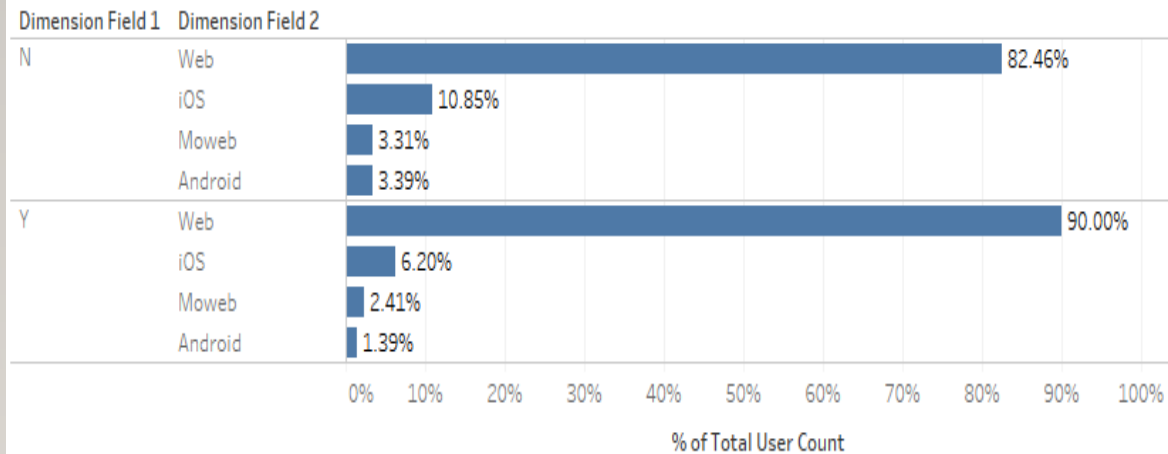
- Users coming directly to the website are slightly more likely to make a booking.

CORRELATION EXPLORATION

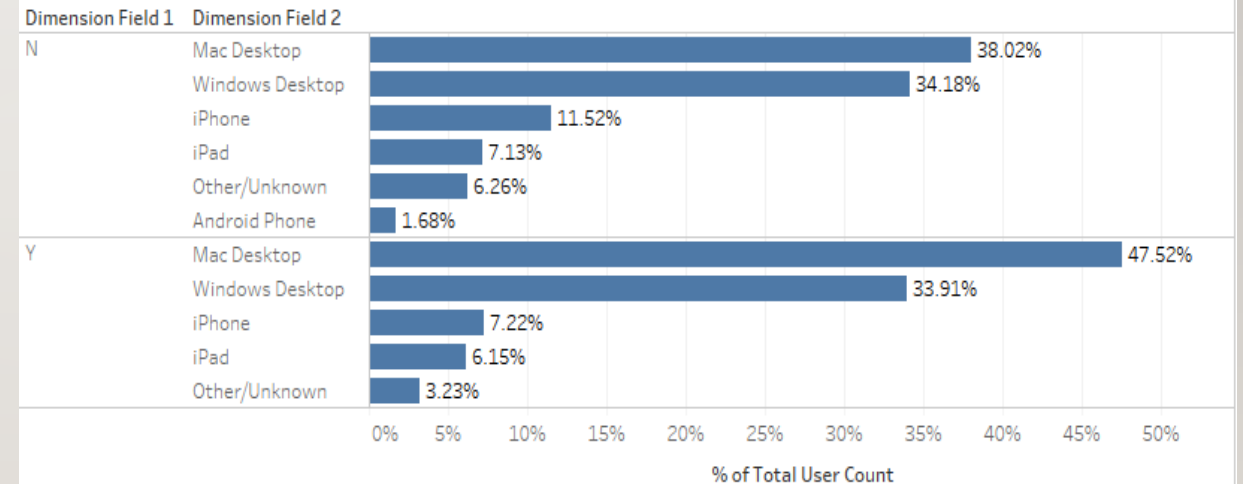
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Correlation Exploration (Dimension Field):
Trip Booking Flag & Signup App



Correlation Exploration (Dimension Field):
Trip Booking Flag & First Device Type

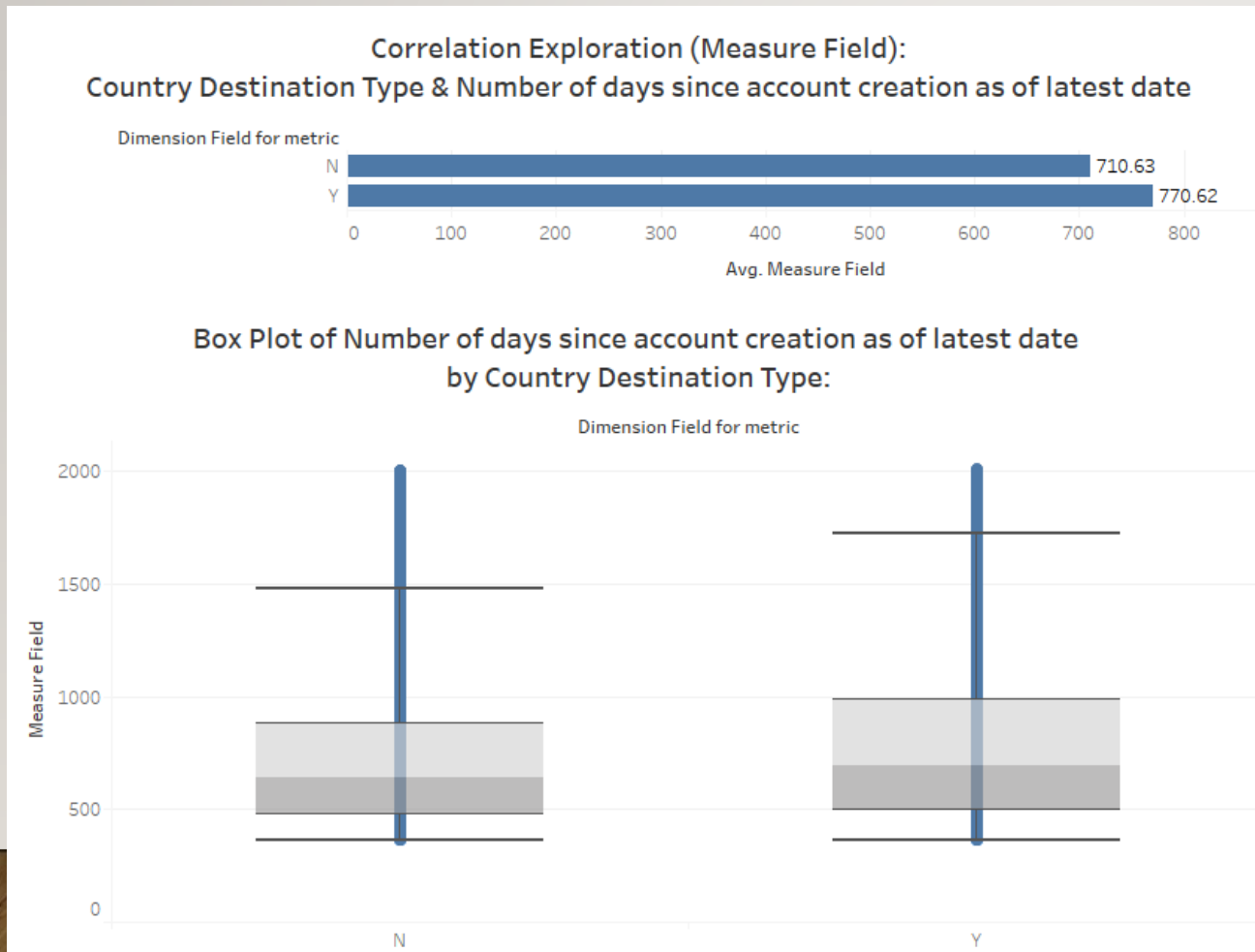


- Users coming from Web are more likely to make a booking.
- Users signing up using Mac are more likely to make a booking.

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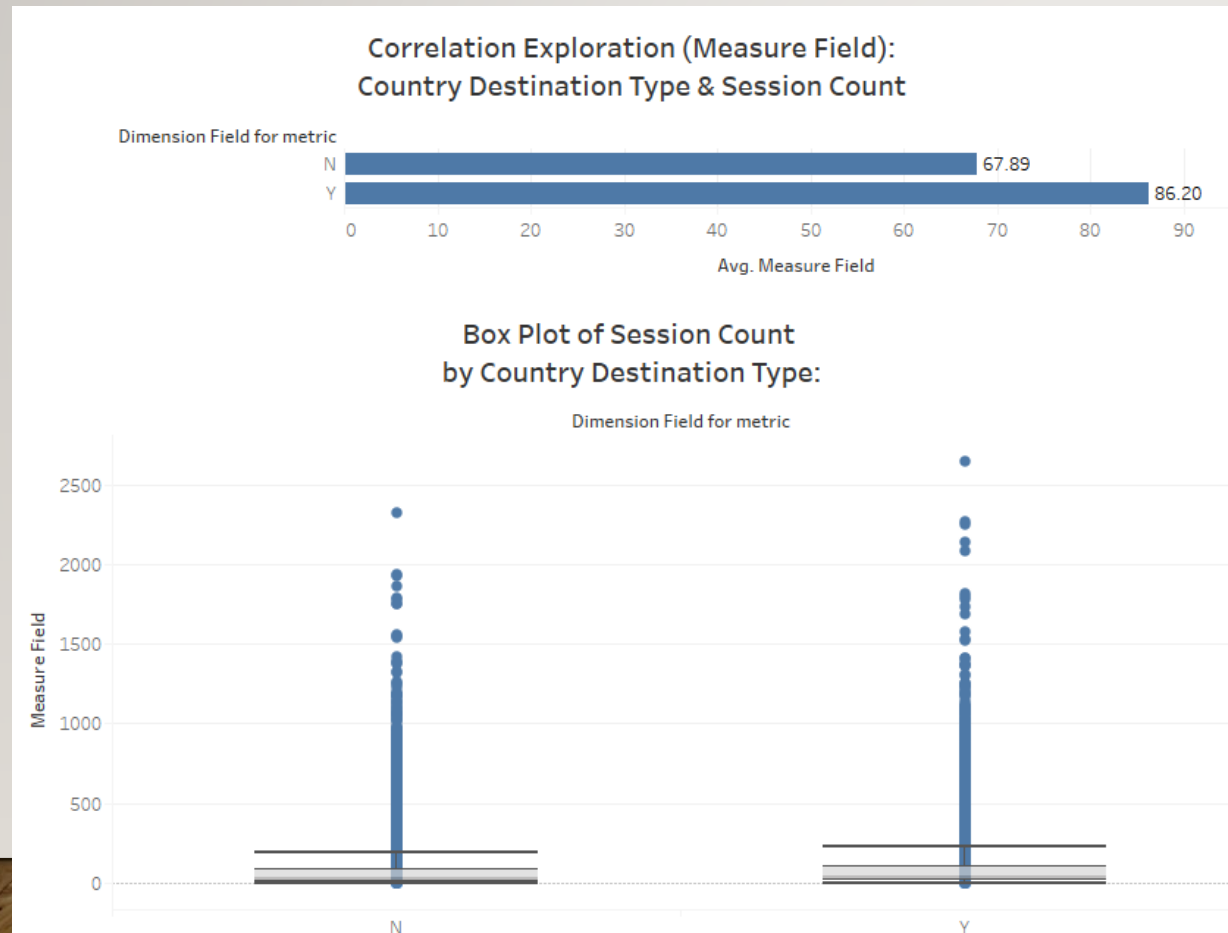


- Users that have made a booking have longer account age on average than users that have not made a booking as of 7/1/2015.

CORRELATION EXPLORATION

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IS IT TRUE THE MORE TIME USERS HAVE SPENT WITH WEBSITE THE MORE LIKELY USERS ARE TO MAKE A BOOKING ?



- Users that have made a booking have done more activities and spent more time with the website on average than users that have not made a booking.