

# AIRBNB CAPSTONE PROJECT

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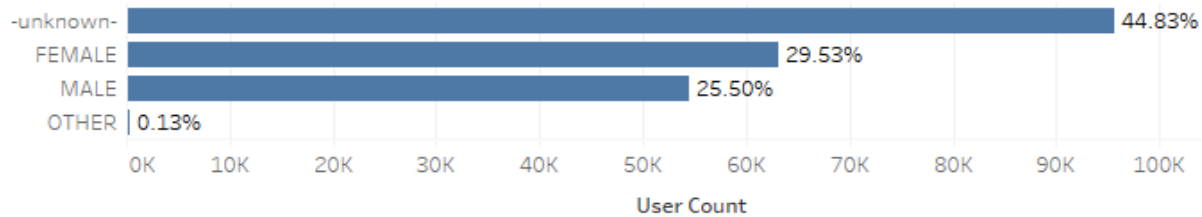
## EXPLORATORY ANALYSIS



# USER DEMOGRAPHIC

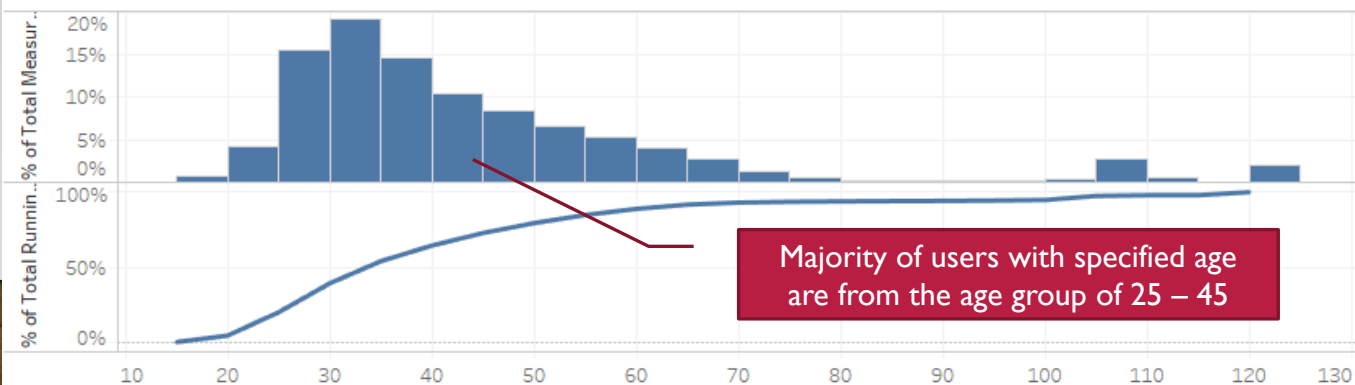
WHAT DO THE USERS IN THE DATASET LOOK LIKE ?

Dimension Distribution:  
Gender

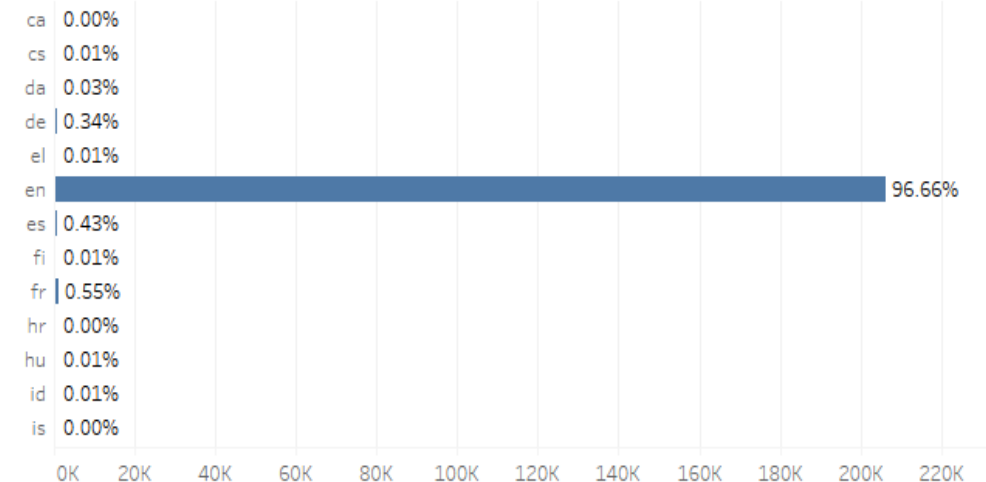


- 213,451 users in total from US.
- 45% of users have unknown gender.
- 59% of users have unknown age.

Measure Distribution:  
User Age Cleaned  
PDF & CDF Plot



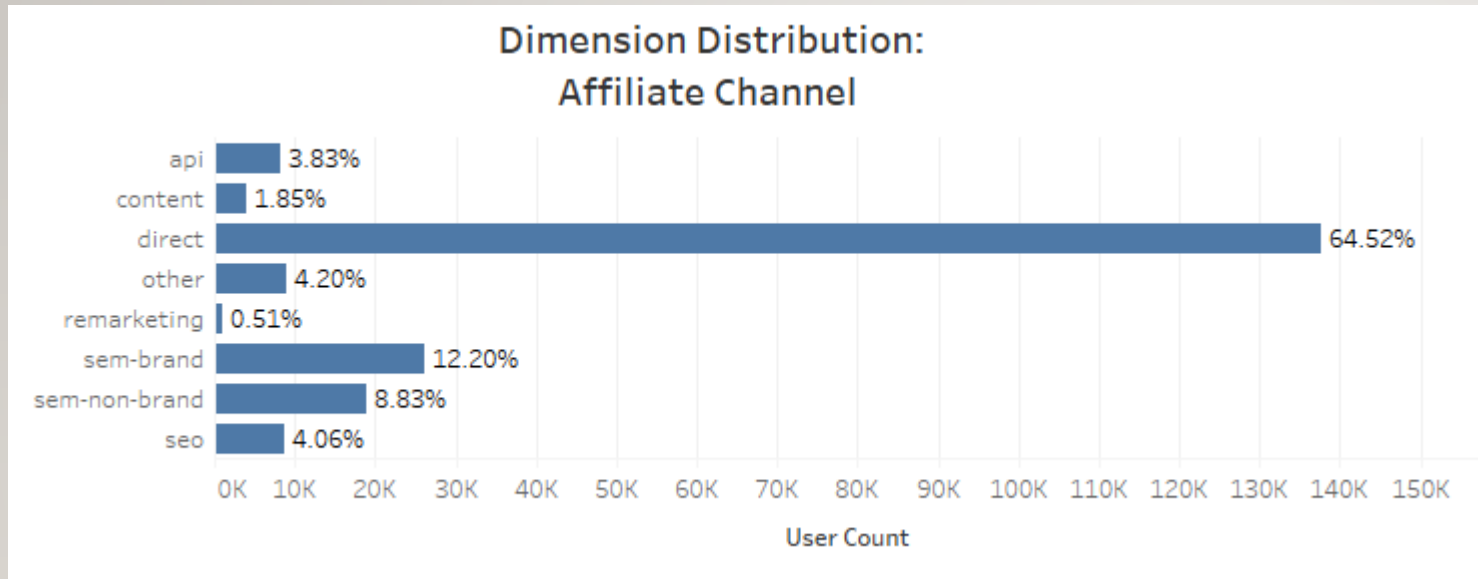
Dimension Distribution:  
Language



# USER ACQUISITION CHANNELS

WHERE DO THE USERS COME FROM ?

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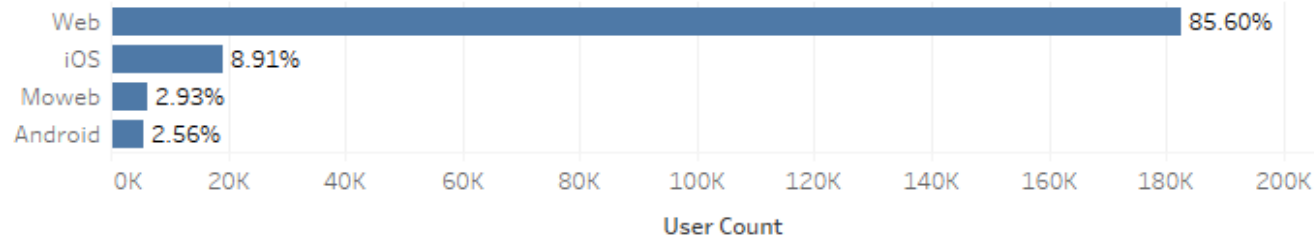
- Most users are either coming to the website by typing in URL directly or coming from Google.

# USER BEHAVIORS

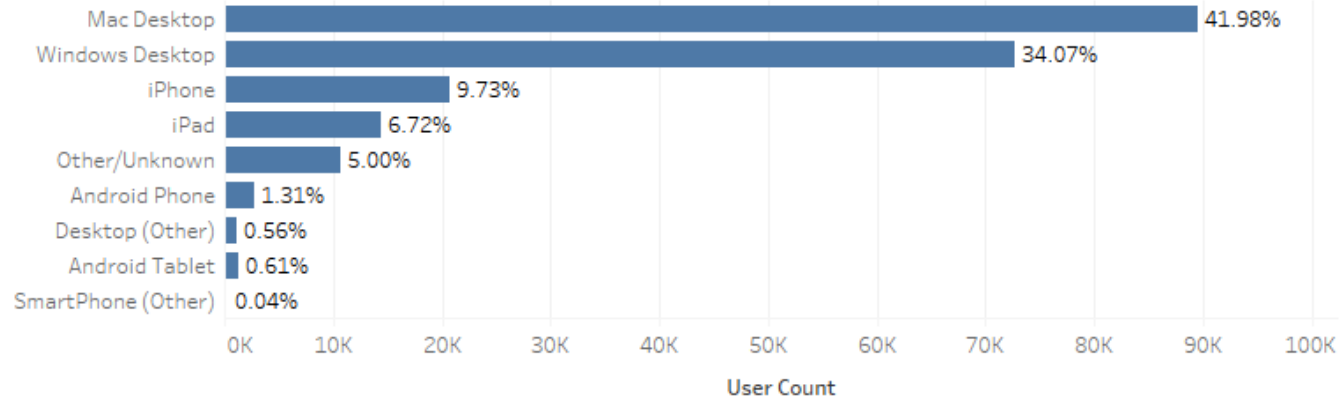
HOW DID THE USERS COME TO THE WEBSITE FOR THE FIRST TIME ? HOW LONG HAVE THEY BEEN BROWSING ON THE WEBSITE?

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Dimension Distribution:  
Signup App



Dimension Distribution:  
First Device Type



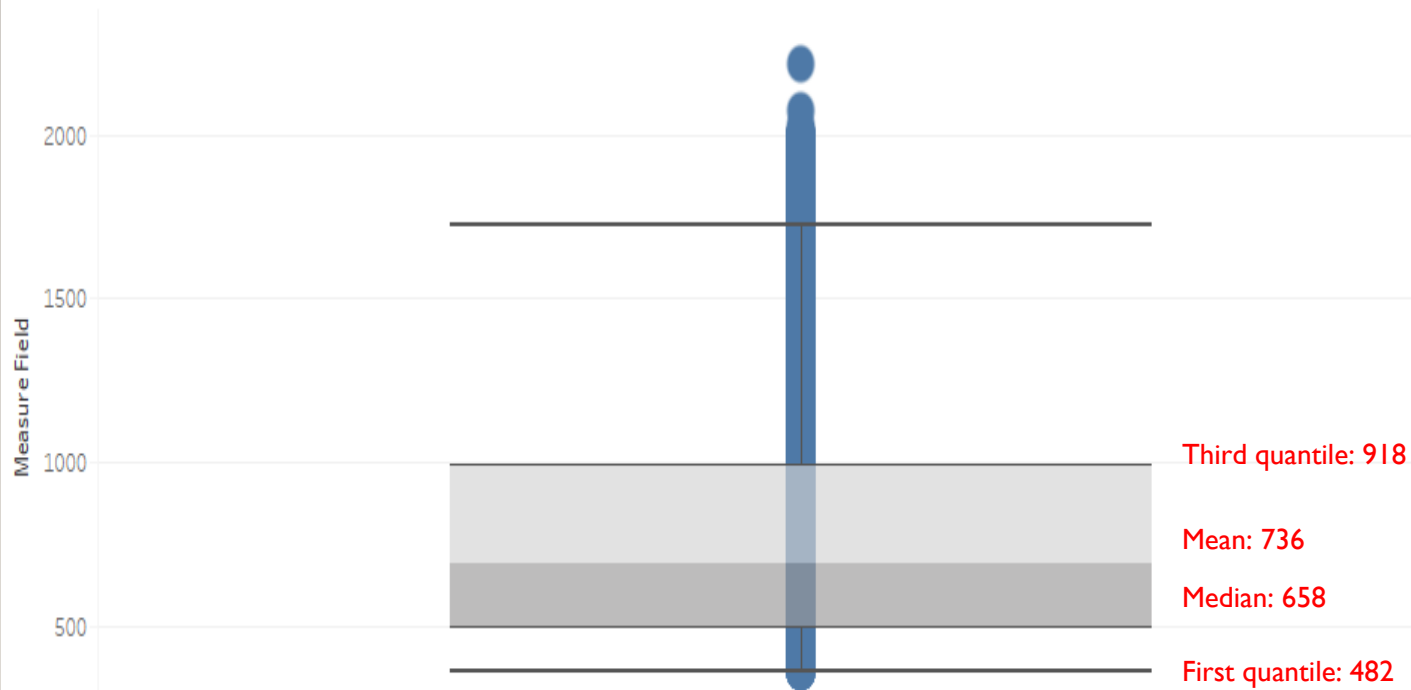
- Majority of users signed up through desktop
- Mac is more popular among users than any other device

# USER BEHAVIORS

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

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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 since their first activity on the site.

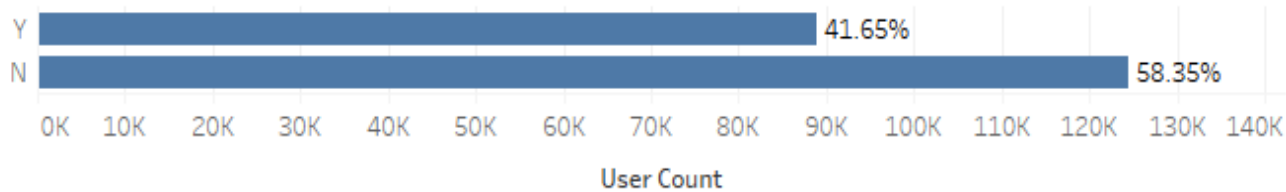


# BOOKING HISTORY

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?

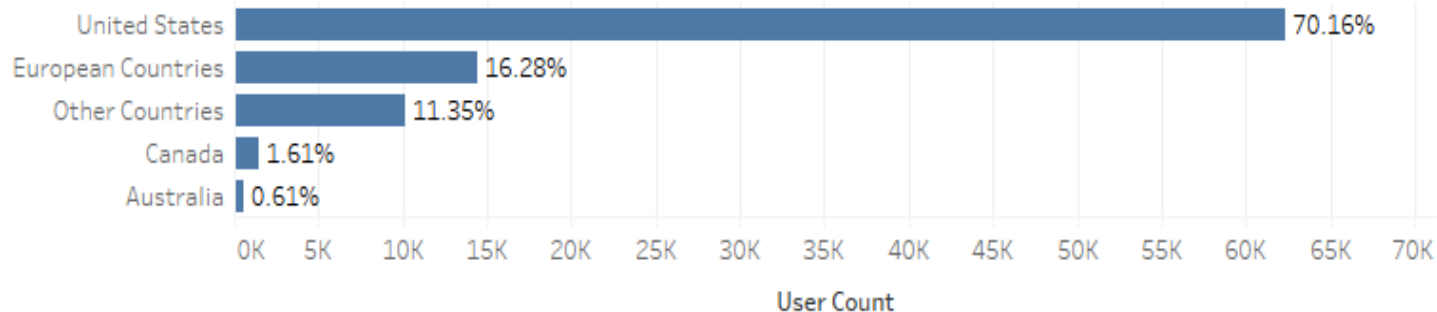
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Dimension Distribution:  
Trip Booking Flag



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

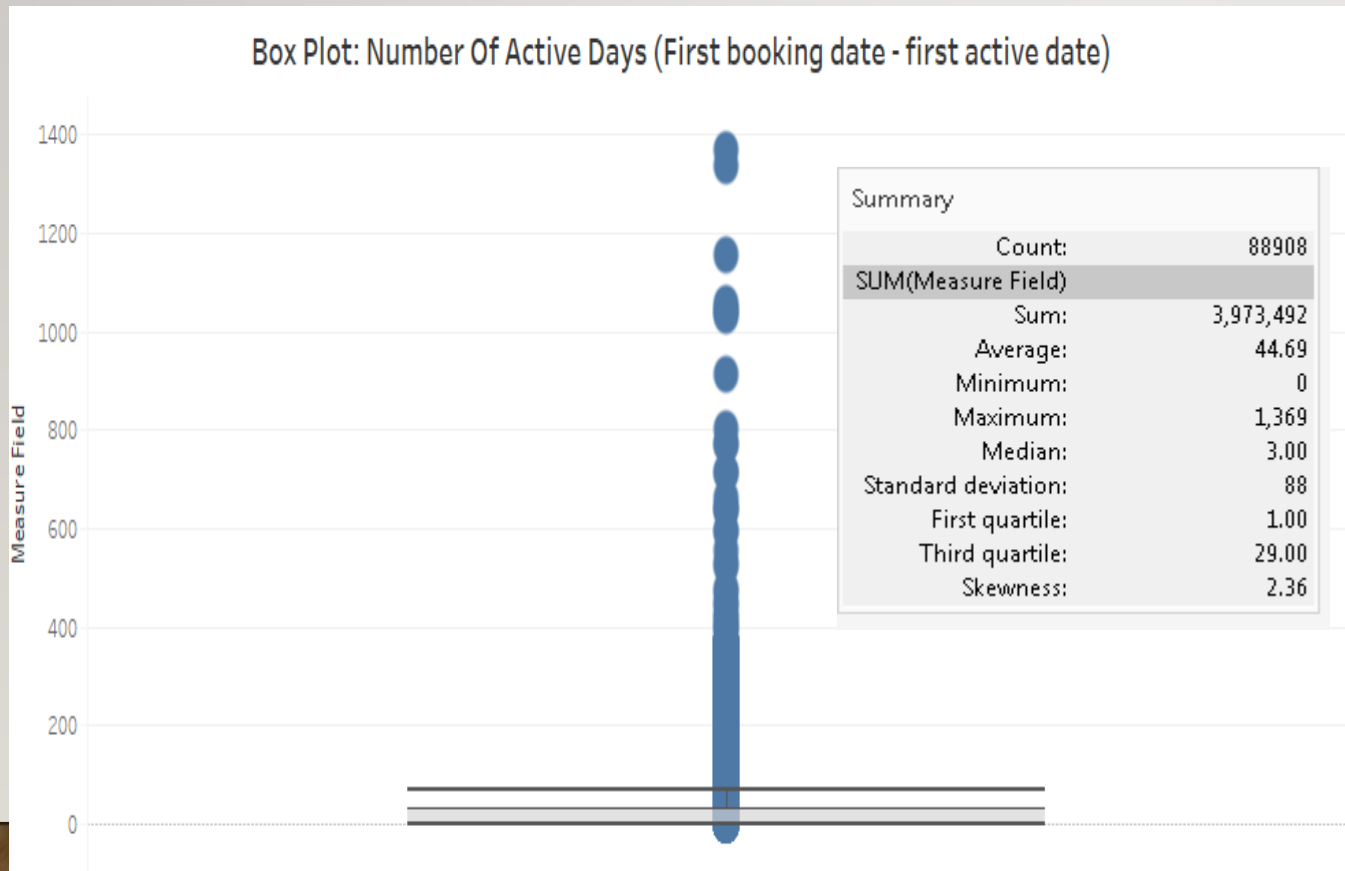
Dimension Distribution:  
Country Destination Type



# BOOKING HISTORY

HOW MANY USERS HAVE MADE THE BOOKING ? WHAT DESTINATION ARE MORE POPULAR ?  
HOW LONG DID IT TAKE USERS TO COVERT AFTER GETTING ON THE SITE?

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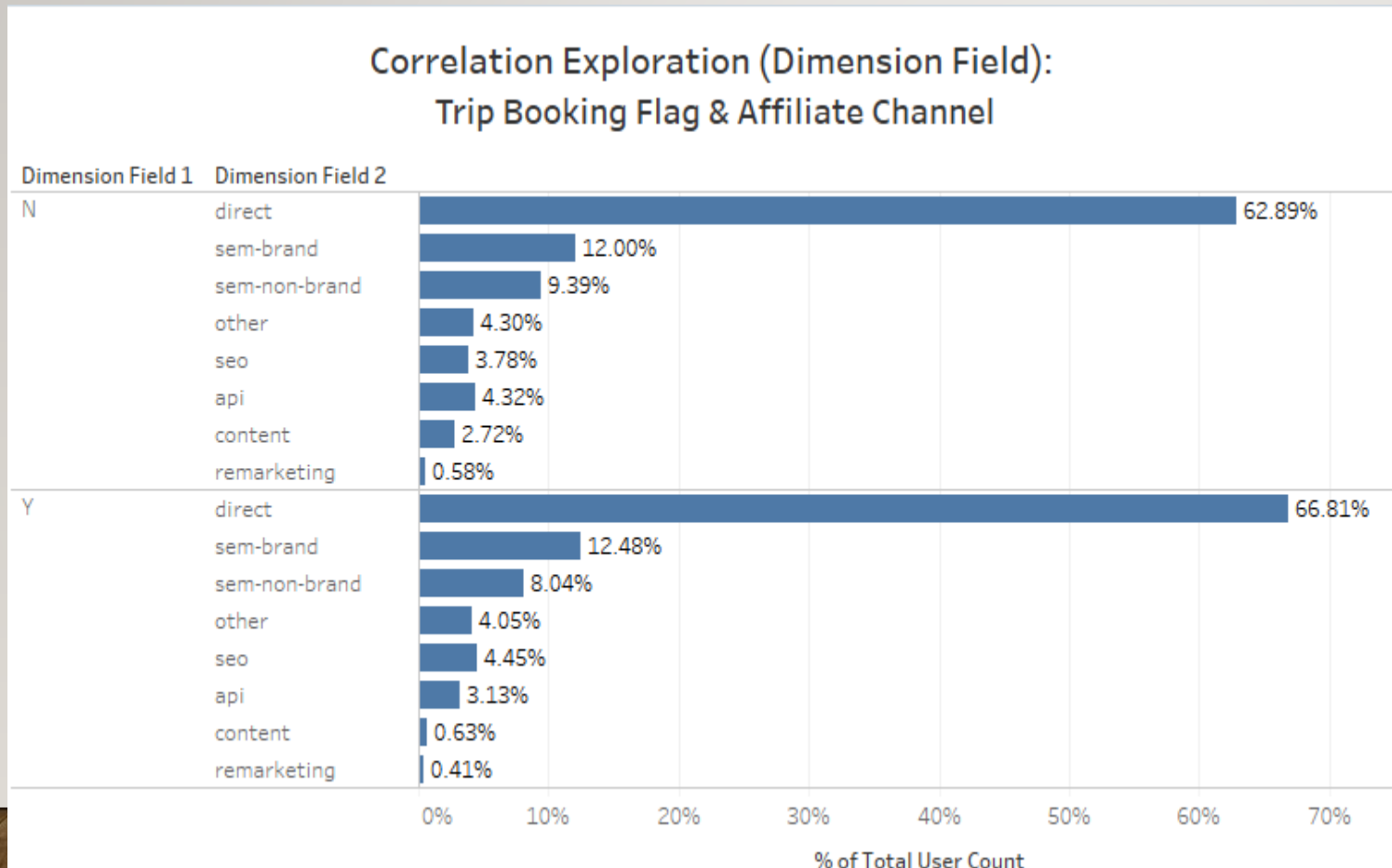


- Majority of users (75%) that have made a booking booked their first destination within 30 days since they got on the website for the first time.

# 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.

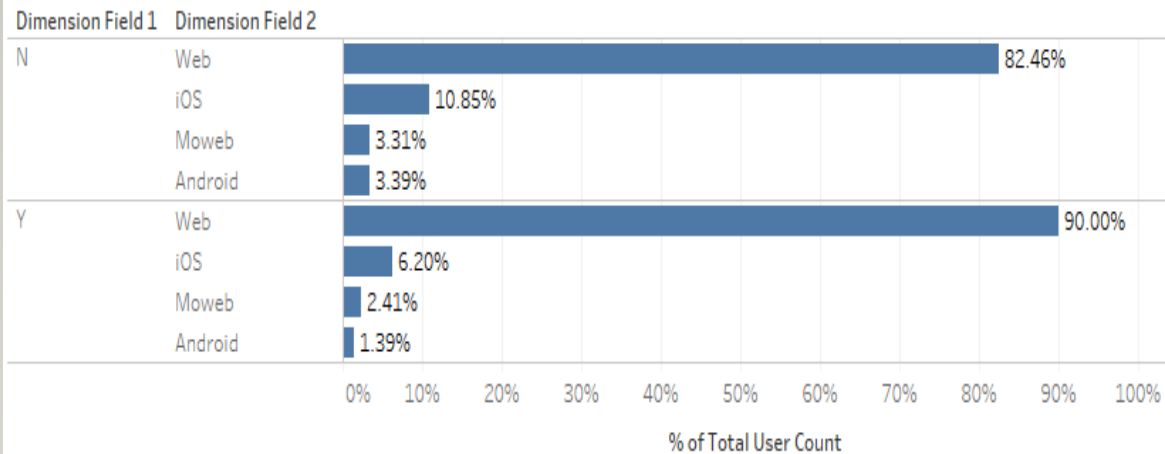


# CORRELATION EXPLORATION

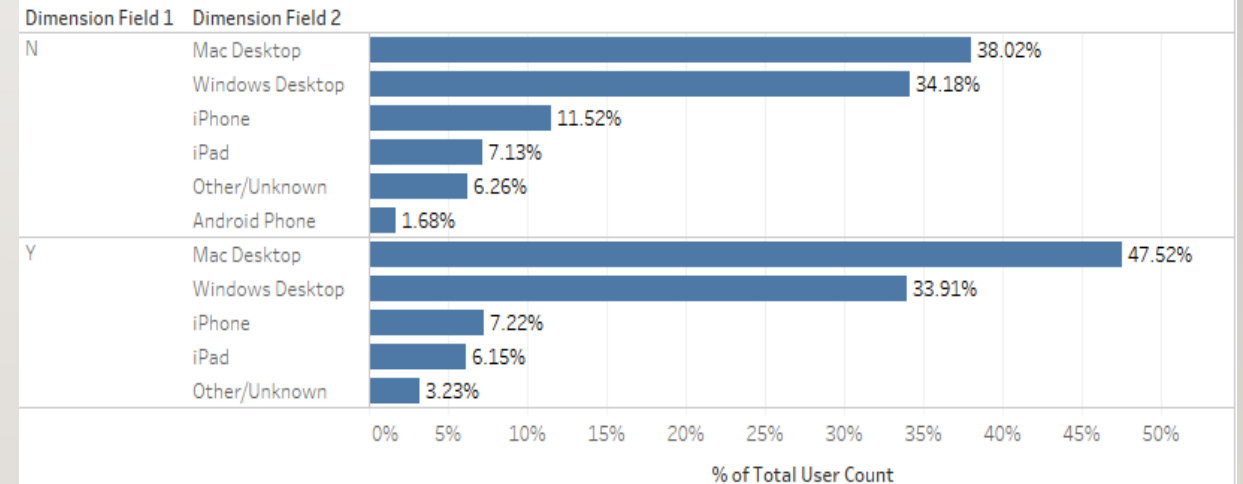
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Correlation Exploration (Dimension Field):  
Trip Booking Flag & Signup App



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

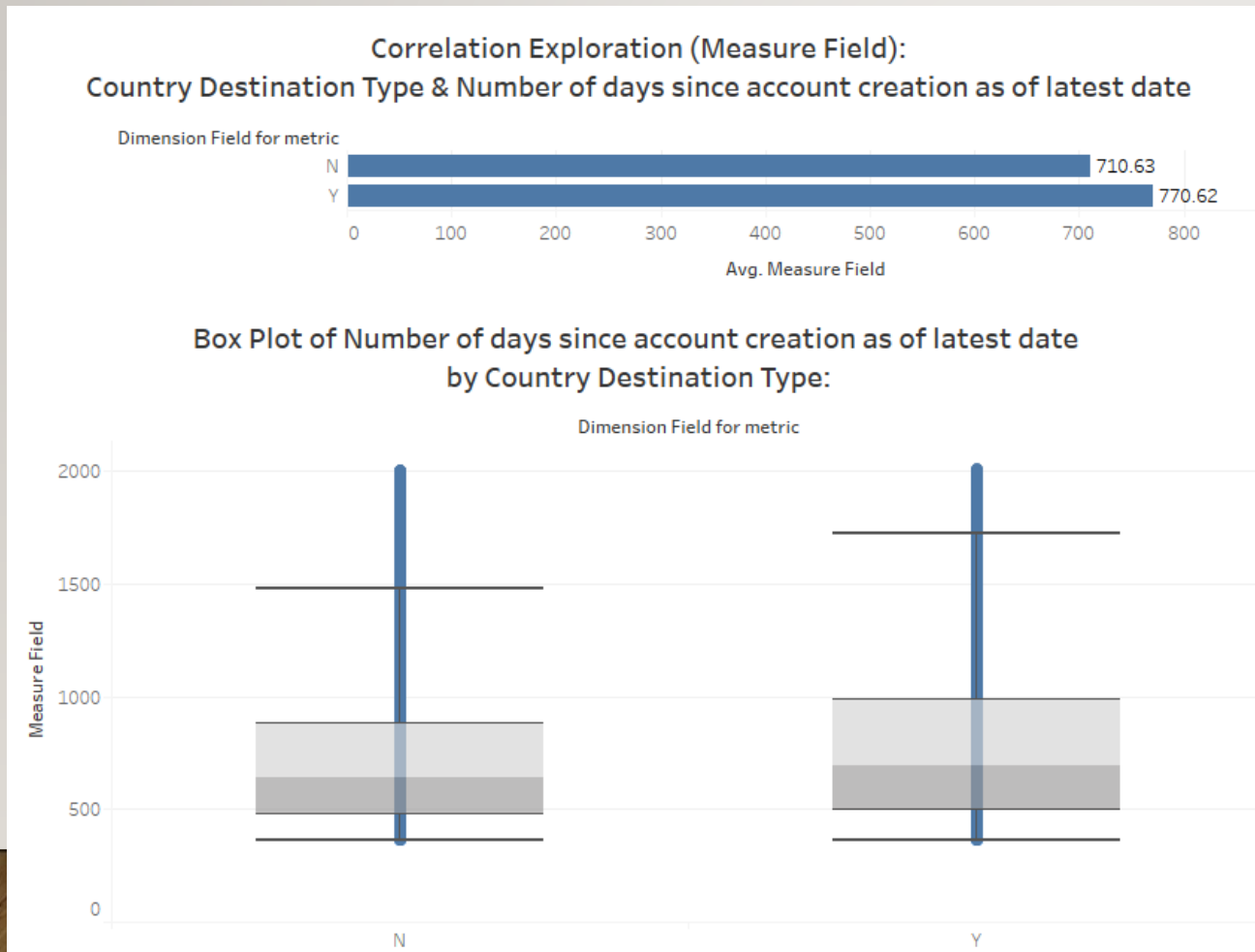


- Users coming from Web are more likely to make a booking.
- Users signing up using Mac are more likely to make a booking.

# 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 ?



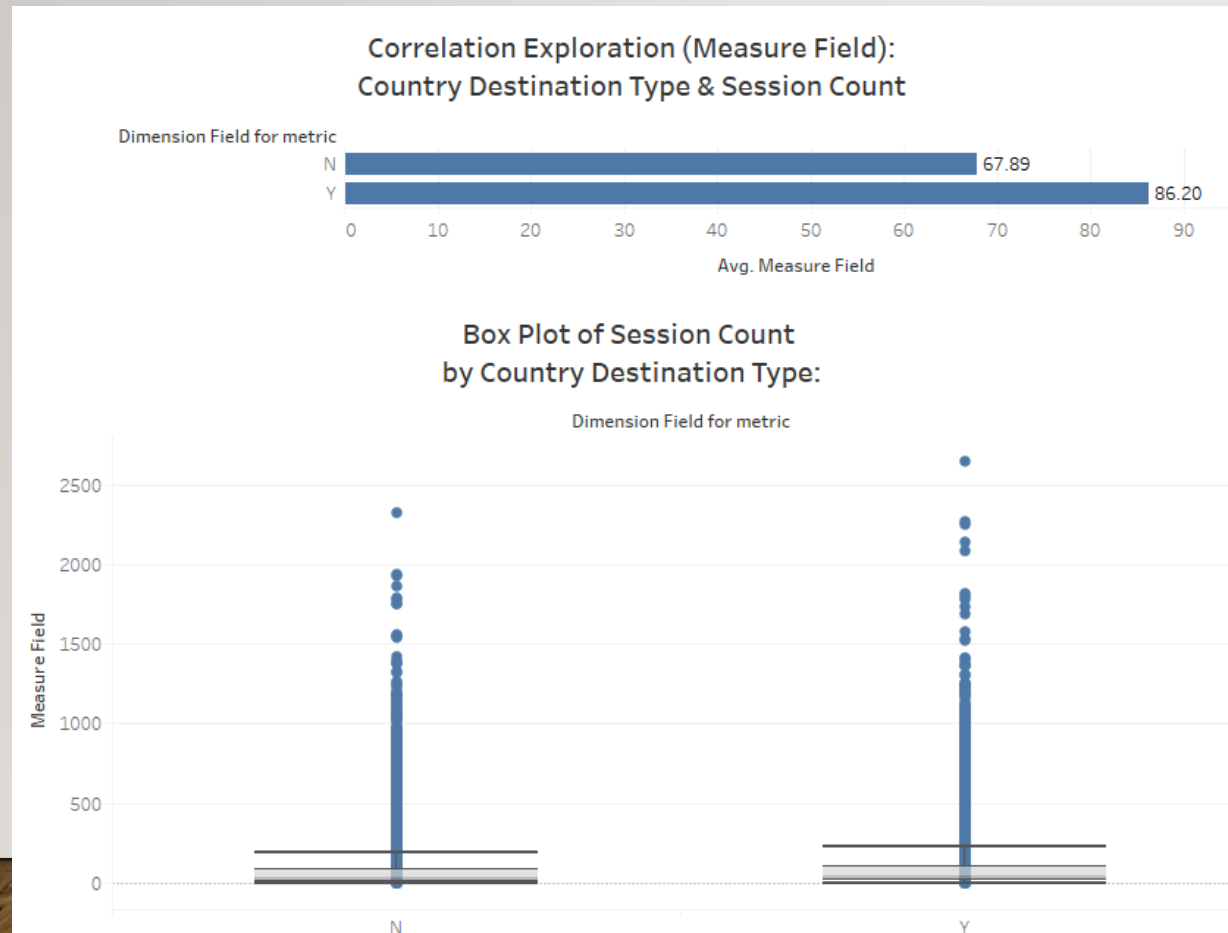
- Users that have made a booking have longer account age on average than users that have not made a booking as of 7/1/2015.

# 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 ?

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- 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.