Flying Taxi

Launch Strategy

Francis Odo

Developing an MVP Launch Strategy for Flying Taxi Service

Data Exploration

Pain Points

- Taxi is used for carrying a passenger to a short destination at the request of the passenger with no stop in-between

- Typically, city residents, frequent air-travellers, residents that are out late at night, residents that want to avoid traffic and parking inconveniences

- Traffic congestion leading to delays, Taxi-driver lateness, high cost of longer distance trip, Transportation infrastructure problems

- High or Increased emission, traffic congestion,Security measure level is inadequate(driver and passenger)

Hypothesize Flying Taxi Service

User will spend less time travelling(faster) with a much smoother and quieter experience. Reduced emission with more environmentally compliant craft.

The Air Taxi will bring organized and better structure to the Taxi industry, as well as, Air Traffic Control. Mandatory professional licencing for Taxi Pilots, Standardized scheduling and security for passengers. With more people traveling by air to shorter destinations, the road will be less congested, which will ultimately lead to reduced road infrastructure spending

Exploring Taxi Pickup and Drop-off Data

- There are 1048469 records (13 Features or Columns)
- Each record represnts a Taxi pick-up and drop-off service
- The primary key is the “id”, which indicates the service identification number
- Data is bound to Jan 1, 2016 to Jul 2, 2016 date range
- The geographical bounds extend beyound New York and New Jersey.
  Most data points are centralized in New York and New Jersey.
  There are Outliers(New hamshire, Pensylvania, Virginia, North Carolina)

Scope and Distribution of Dimensions

Average Duration - 962
Median Duration - 662
1st Std. Dev. Duration - 5,853
2nd Std. Dev. Duration - 2*(5,853)=11,706

Ave. Distance - 3.442
Median Distance - 2.095
1st Std. Dev. Distance - 4.382
2nd Std. Dev Distance - 2*(4.382)=8.764

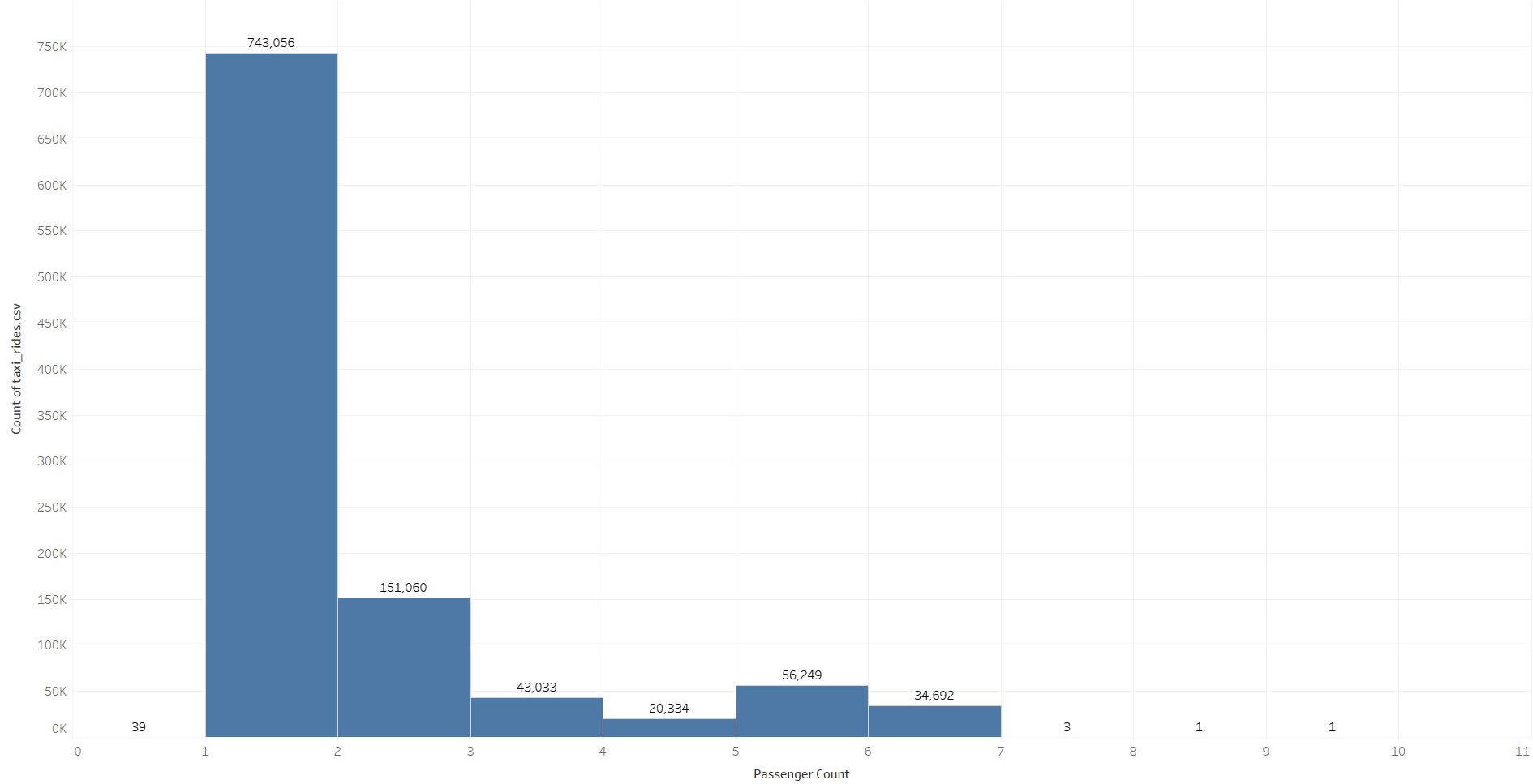
Ave. Passenger Count - 1.6644
Median Passenger Count - 1.0000
Std. Dev. Passenger Count - 1.3142
2nd Std. Dev Passenger Count - 2*(1.3142)=2.6284

Statistical Measures

Average duration-to-distance ratio - 6.02
Median duration-to-distance ratio - 4.55
1st Std. Dev. duration-to-distance ratio - 40.65
2nd Std. Dev duration-to-distance ratio - 81.30

Average Price - 23.70
Median Price - 18.30
1st Std. Dev Price - 51.04
2nd Std. Dev Price - 102.08

Histogram-Total Rides Grouped By Passenger Count



Questions - Analysis

For the initial MVP launch (& most likely GA), we have a finite amount of monetary resources to build Flyber pick-up / drop-off nodes. We'll need to be strategic on where we'll place them:

- Which neighborhoods/zip codes tends to experience a relatively higher density of pick-ups?
- Which neighborhoods/zip codes tends to experience a relatively higher density of drop-offs?
- Which neighborhoods/zip codes tends to have the highest duration-to-distance ratios, based on pick-up?
- Which neighborhoods/zip codes tends to have the highest duration-to-distance ratios, based on drop-off?
- For any of the neighborhoods identified, are there any potential areas within the neighborhood that are optimal for flying taxi pick-up / drop-off? What makes them suitable?

Tableau - Flying_Taxi_Project_1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Show Me

Data Analytics

taxi_rides

Search

Tables

- Dropoff Datetime
- Dropoff Latitude
- F13
- F14
- F15
- Id
- Passenger Count (bin)
- Pickup Datetime
- Pickup Latitude
- Pickup Longitude
- Price (bin)
- Store And Fwd Flag
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- *Measure Names*
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- Dropoff Longitude
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- duration-to-distance
- Passenger Count
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- *Latitude (generated)*
- *Longitude (generated)*
- *taxi_rides.csv (Count)*
- *Measure Values*

Pages

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Detail Tooltip

Pickup Latitude

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Columns: Longitude (generate..

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Pickup Neighborhood And Zip Codes

Data Source | Geographical Boundary | Duration | Distance | Passenger Count | Duration-to-Distance-Ratio | Histogram-Total Rides Grouped ... | Price | Dropoff Neigbhorhood And Zip ... | Pickup Neighborhood And Zip ...

0 marks 1 row by 1 column SUM of CNT(taxi_rides.csv): 1,048,468

5:53 PM

Tableau - Flying_Taxi_Project_1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Show Me

Data | Analytics

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Search

Tables

- Dropoff Datetime
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Pickup Neighborhood And Zip Codes

Data Source | Geographical Boundary | Duration | Distance | Passenger Count | Duration-to-Distance-Ratio | Histogram-Total Rides Grouped ... | Price | Dropoff Neigbhorhood And Zip ... | Pickup Neighborhood And Zip ... | Sheet 11 | Sheet 10

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1/25/2021

Tableau - Flying_Taxi_Project_1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Show Me

Map Layers

Background

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Map Layers

- Light Country/Region ...
- Country/Region Bord...
- Country/Region Names
- Light State/Province ...
- Light State/Province ...
- State/Province Borders
- State/Province Names
- County Borders
- County Names
- Zip Code Boundaries
- Zip Code Labels
- Area Code Boundaries
- Area Code Labels
- US Metro Boundaries ...
- US Metro Labels (CBS...
- Water Labels
- Cities
- Points of Interest

Data Layer

Layer: *No Data Layer*

Make Default Reset

Pages

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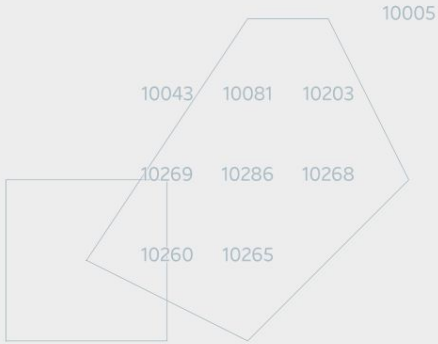
Columns: Longitude (generate..

Rows: Latitude (generated)

Dropoff Neigbhorhood And Zip Codes



© 2021 Mapbox © OpenStreetMap

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Data Source | Geographical Boundary | Duration | Distance | Passenger Count | Duration-to-Distance-Ratio | Histogram-Total Rides Grouped ... | Price | **Dropoff Neigbhorhood And Zip...** | Pickup Neighborhood And Zip C...

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5:02 PM
1/25/2021

Answers - Analysis

- The neighborhoods/zip codes that tends to experience a relatively higher density of pick-ups ⇒ 10043, 10203
- The neighborhoods/zip codes that tends to experience a relatively higher density of drop-offs ⇒ 10043, 10081
- The neighborhoods/zip codes that tends to have the highest duration-to-distance ratios, based on pick-up ⇒ 10260
- The neighborhoods/zip codes that tends to have the highest duration-to-distance ratios, based on drop-off ⇒ 10260
- Financial District will be suitable
  The reason being the fact that the data supports higher pickups and dropoffs.

Questions - Analysis

It may not make operational sense to have the service running 24/7, for now.

- What times throughout the day experience relatively higher volumes of ride pick-ups?

- What days throughout the week experience relatively higher volumes of ride pick-ups?

- Pinpoint any periods throughout the year that experience trend fluctuation or seasonality around ride pick-up volumes. This will help us in our post-launch analyses to determine if any spikes or dips were influenced by seasonality or through actual feature adoption/regression.

Tableau - Project_1_Flyber_Flying Taxi

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard Show Me

Data Analytics

taxi_rides

Search

Tables

- Dropoff Datetime
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- *Measure Names*
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- Dropoff Longitude
- Duration
- duration-to-distance
- Passenger Count
- Price
- *Latitude (generated)*
- *Longitude (generated)*
- *taxi_rides.csv (Count)*
- *Measure Values*

Pages

Filters

Marks

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Color Size Label Detail Tooltip

Columns: HOUR(Pickup Dat..

Rows: CNT(taxi_rides.csv)

Time

Hour of Pickup Datetime

Count of taxi_rides.csv

0 50 100 150 200 250 300 350 400 450

January 1, 2016 1 AM
January 1, 2016 3 AM
January 1, 2016 5 AM
January 1, 2016 7 AM
January 1, 2016 9 AM
January 1, 2016 11 A..
January 1, 2016 1 PM
January 1, 2016 3 PM
January 1, 2016 5 PM
January 1, 2016 7 PM
January 1, 2016 9 PM
January 1, 2016 11 P..
January 2, 2016 1 AM
January 2, 2016 3 AM
January 2, 2016 5 AM
January 2, 2016 7 AM
January 2, 2016 9 AM
January 2, 2016 11 A..
January 2, 2016 1 PM
January 2, 2016 3 PM
January 2, 2016 5 PM
January 2, 2016 7 PM
January 2, 2016 9 PM
January 2, 2016 11 P..
January 3, 2016 1 AM
January 3, 2016 3 AM
January 3, 2016 5 AM
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January 3, 2016 9 AM
January 3, 2016 11 A..
January 3, 2016 1 PM
January 3, 2016 3 PM
January 3, 2016 5 PM
January 3, 2016 7 PM

Data Source | Geographical Boundary | Duration | Distance | Passenger Count | Duration-to-Distance-Ratio | Histogram-Total Rides Grouped ... | Price | Dropoff Neigbhorhood And Zip ... | Pickup Neighborhood And Zip C... | Sheet 11 | Time | Days

4358 marks 1 row by 4358 columns SUM of CNT(taxi_rides.csv): 1,048,468

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12:24 AM

Tableau - Project_1_Flyber_Flying Taxi

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

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Data | Analytics

taxi_rides

Search

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- Dropoff Datetime
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- Passenger Count
- Price
- *Latitude (generated)*
- *Longitude (generated)*
- *taxi_rides.csv (Count)*
- *Measure Values*

Pages

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WEEKDAY(Pick..

Columns: HOUR(Pickup Dat..

Rows: CNT(taxi_rides.csv)

Time

Pickup Datetime

Count of taxi_rides.csv

10K 9K 8K 7K 6K 5K 4K 3K 2K 1K 0K

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Frida Thursda Tuesda Sunda

Data Source | Geographical Boundary | Duration | Distance | Passenger Count | Duration-to-Distance-Ratio | Histogram-Total Rides Grouped ... | Price | Dropoff Neigbhorhood And Zip ... | Pickup Neighborhood And Zip C... | Sheet 11 | Time | Days

168 marks 1 row by 24 columns SUM of CNT(taxi_rides.csv): 1,048,468

Tableau - Project_1_Flyber_Flying Taxi

e Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard

Show Me

Data Analytics

taxi_rides

Search

Tables

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- Passenger Count
- Price
- *Latitude (generated)*
- *Longitude (generated)*
- *taxi_rides.csv (Count)*
- *Measure Values*

Pages

Filters

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Line

Color Size Label

Detail Tooltip Path

Columns: DAY(Pickup Datet..

Rows: CNT(taxi_rides.csv)

Fluctuation And Dips

Count of taxi_rides.csv

7000 6500 6000 5500 5000 4500 4000 3500 3000 2500 2000 1500 1000 500 0

Jan 1 Jan 11 Jan 21 Jan 31 Feb 10 Feb 20 Mar 1 Mar 11 Mar 21 Mar 31 Apr 10 Apr 20 Apr 30 May 10 May 20 May 30 Jun 9 Jun 19 Jun 29 Jul 9

Day of Pickup Datetime [2016]

Data Source | Boundary | Duration | Distance | Passenger Count | Duration-to-Distance-Ratio | Histogram-Total Rides Grouped ... | Price | Dropoff Neigbhorhood And Zip ... | Pickup Neighborhood And Zip C... | Fluctuation And Dips | Time | Days

marks 1 row by 1 column SUM of CNT(taxi_rides.csv): 1,048,468

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3:38 PM

Answers - Analysis

- The times throughout the day that experience relatively higher volumes of ride pick-ups are ⇒ 7.00 AM, 8.00 AM and 6.00 PM, 7.00 PM, 9.00 PM

- The days throughout the week that experience relatively higher volumes of ride pick-ups are ==⇒ Weds, Thursday, Friday and Saturday

- There is a dip (end of January, and early June)

  Moderate Fluctuations around (February thru May)

Questionaire - Gathering user feedback

Ensure the fields are parsed correctly, field headers are included in the first row of the CSV.
Question schema:

Q1 - What is your email?
Q2 - What gender do you identify as?
Q3 - What is your age?
Q4 - What is your annual income? (income bands)
Q5 - What neighborhood do you reside in?
Q6 - Do you currently use taxis? (Y/N)
Q7 - Do you currently use ridesharing services? (Y/N)
Q8 - Would you use a flying taxi service, if such a concept existed? (Y/N)
Q9 - If yes to Q8, how much would you be willing to pay per mile for such a service?
Q10 - If no to Q8, what is the reason?

Extracting Relevant Marketing Data

For our future product marketing efforts, we'll want to extract the following:

- Is there an inclination of better Flyber adoption based on gender, age, income level, or neighborhood of residence?
- What is the distribution of potential price per mile based on gender, age, income level, and neighborhood of residence?
- What is the different personas/segments of negative sentiment towards not using a flying taxi car service?

Tableau - User_Research_Project_1 [Recovered]

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Entire View | Show Me

Data | Analytics

user-research

Search

Tables

- Abc Q1-Your Email
- Abc Q10-If no to Q8-Reason
- Abc Q2-Gender
- Abc Q4-Annual Income(Income ...
- Abc Q5-Your Neighborhood
- Abc Q6-Do you currently use Ta...
- Abc Q7-Do you currently use rid...
- Abc Q8-Would you use Flying Ta...
- Abc *Measure Names*
- # Q9-If yes to Q8 How much?
- # Q3-Age
- # *user-research.csv (Count)*
- # *Measure Values*

Pages

Filters

Marks

Automatic

Color | Size | Label | Detail | Tooltip

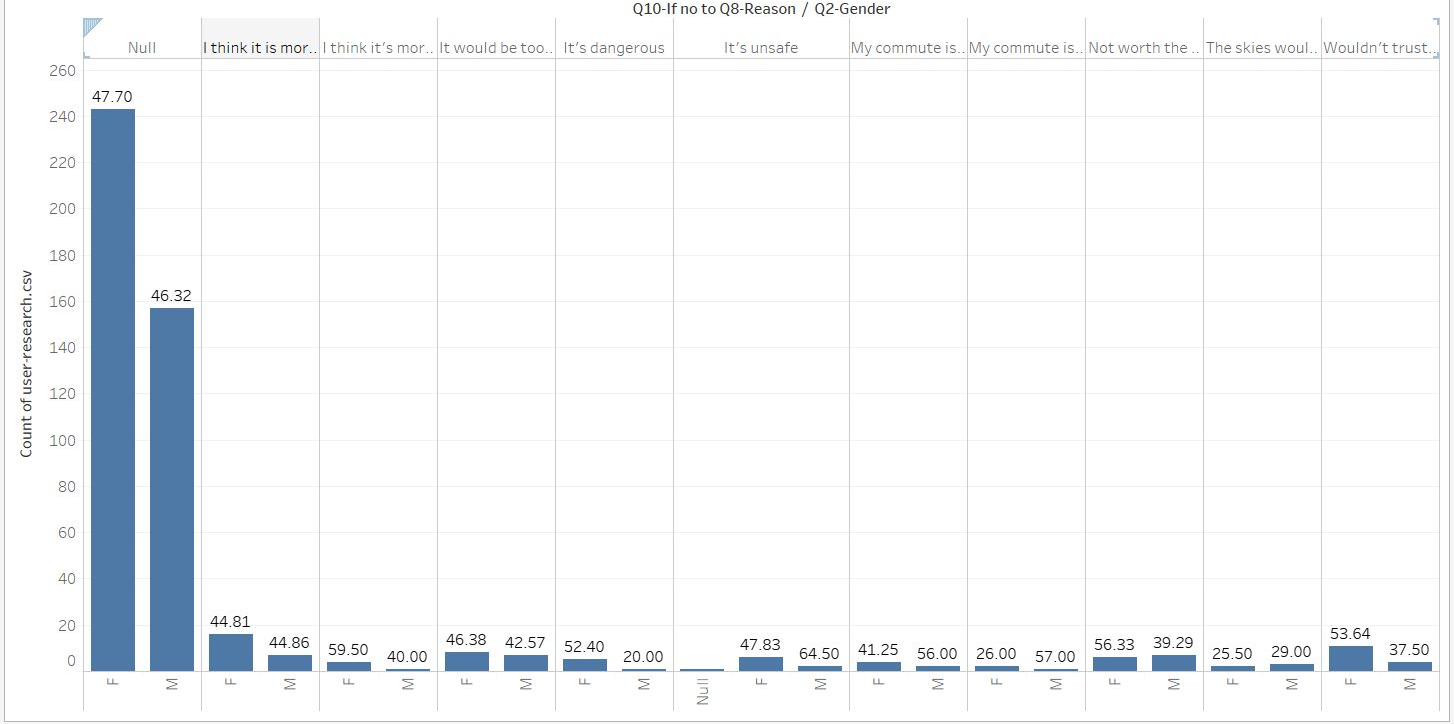
AVG(Q3-Age)

Columns: Q10-If no to Q8-Rea.. | Q2-Gender

Rows: CNT(user-research...

Persona

Q10-If no to Q8-Reason / Q2-Gender



Data Source | Gender and Age | Ave Age Income And Gender | Sheet 3 | Sheet 4 | Persona

23 marks | 1 row by 23 columns | SUM of CNT(user-research.csv): 500

Type here to search

10:58 PM
1/26/2021

Tableau - User_Research_Project_1 [Recovered]

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard

Show Me

Data Analytics

user-research

Search

Tables

- Q1-Your Email
- Q10-If no to Q8-Reason
- Q2-Gender
- Q4-Annual Income(Income ...
- Q5-Your Neighborhood
- Q6-Do you currently use Ta...
- Q7-Do you currently use rid...
- Q8-Would you use Flying Ta...
- *Measure Names*
- Q9-If yes to Q8 How much?
- Q3-Age
- *user-research.csv (Count)*
- *Measure Values*

Pages

Filters

Q8-Would you use Fl..

Marks

Bar

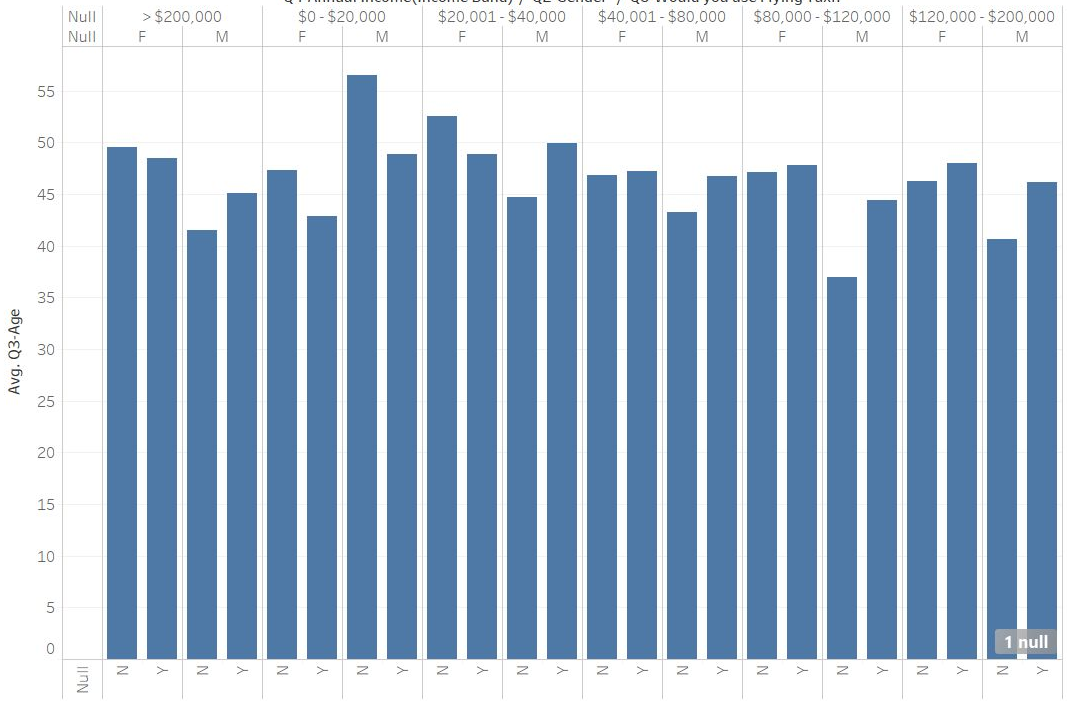
Color Size Label Detail Tooltip

Columns: Q4-Annual Income(I.. | Q2-Gender | Q8-Would you use Fl..

Rows: AVG(Q3-Age)

Ave Age Income And Gender

Q4-Annual Income(Income Band) / Q2-Gender / Q8-Would you use Flying Taxi?



For **stacked bars** try

1 or more Dimensions

1 or more Measures

Data Source | Gender and Age | Ave Age Income And Gender | Sheet 3

24 marks | 1 row by 25 columns | SUM of AVG(Q3-Age): 1,118.00

Type here to search

10:14 PM
1/26/2021

Tableau - User_Research_Project_1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard | Show Me

Data | Analytics

user-research

Search

Tables

- Q1-Your Email
- Q10-If no to Q8-Reason
- Q2-Gender
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- *user-research.csv (Count)*
- *Measure Values*

Pages

Filters

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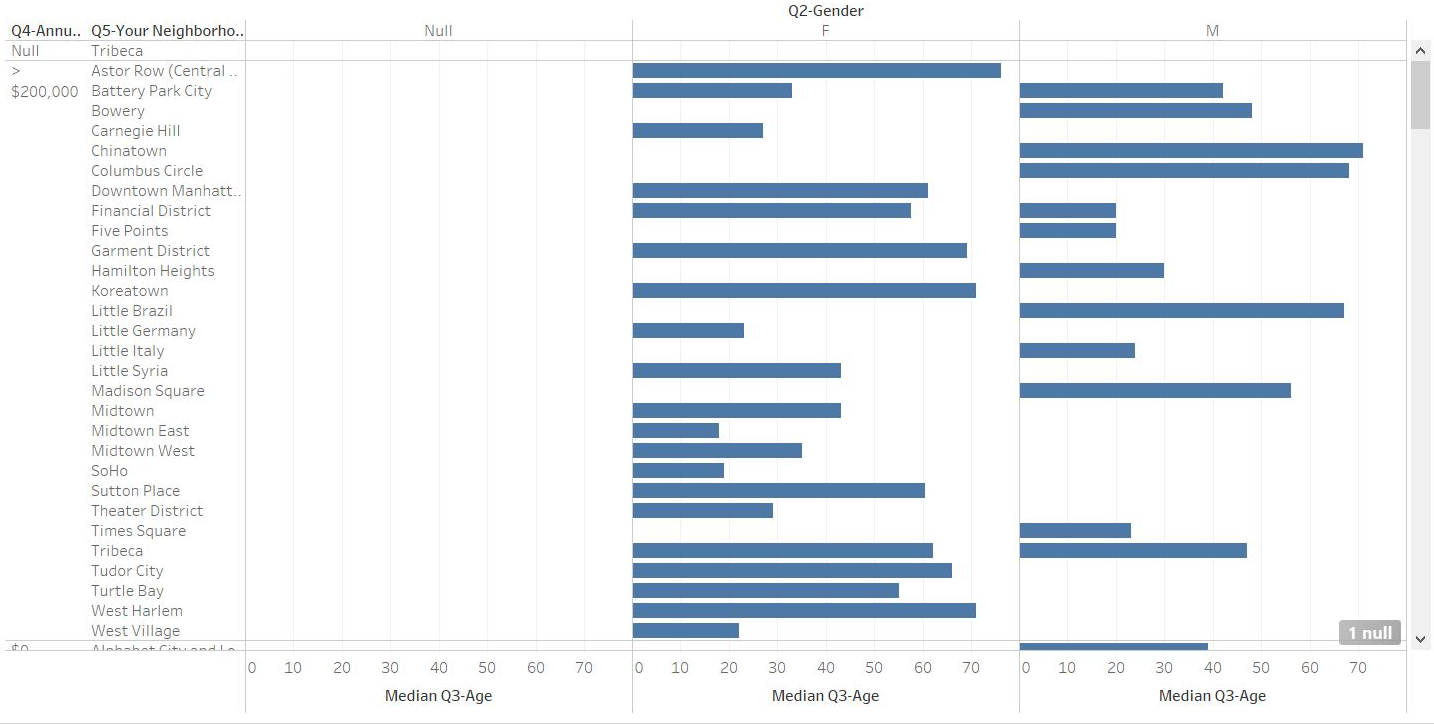
Color | Size | Label | Detail | Tooltip

Columns: Q2-Gender | MEDIAN(Q3-Age)

Rows: Q4-Annual Income(I.. | Q5-Your Neighborho..

Potential Price Per Mile based on Gender



Data Source | Gender and Age | Ave Age Income And Gender | Sheet 3 | Sheet 4 | Personas | Potential Price Per Mile based ...

343 marks | 268 rows by 3 columns | SUM of MEDIAN(Q3-Age): 16,051.00

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12:23 AM
1/27/2021

Answer Slide

- Yes.
  More Female than Male willing to take a Flying Taxi
  More Ave Age 42 and above are willing to take a Flying Taxi
  $40 to >$200,000 income category consistently willing to take Flying Taxi
  $0 t0 $20,000 income category less willing to take Flying Taxi

- Based on Annual Income, Median Price = $20
- Range $12 to $35

- Female Ave Age 44.81 to 53.64 are more likely to have negative sentiments towards using a Flying Taxi (scared, considered unsafe/too expensive)