Uber |

Data Analytic Case Study

Group 10

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1 **Introduction**

Background of Uber & Global market

2 **Data Review and Diagram**

How Uber uses the data

3 **Problem Statement and Solution**

What Uber found and How they addressed it

4 **Benefit of Data Visualization**

What Uber gained within the data

5 **Future Prediction and Recommendation**

What is the next step for Uber

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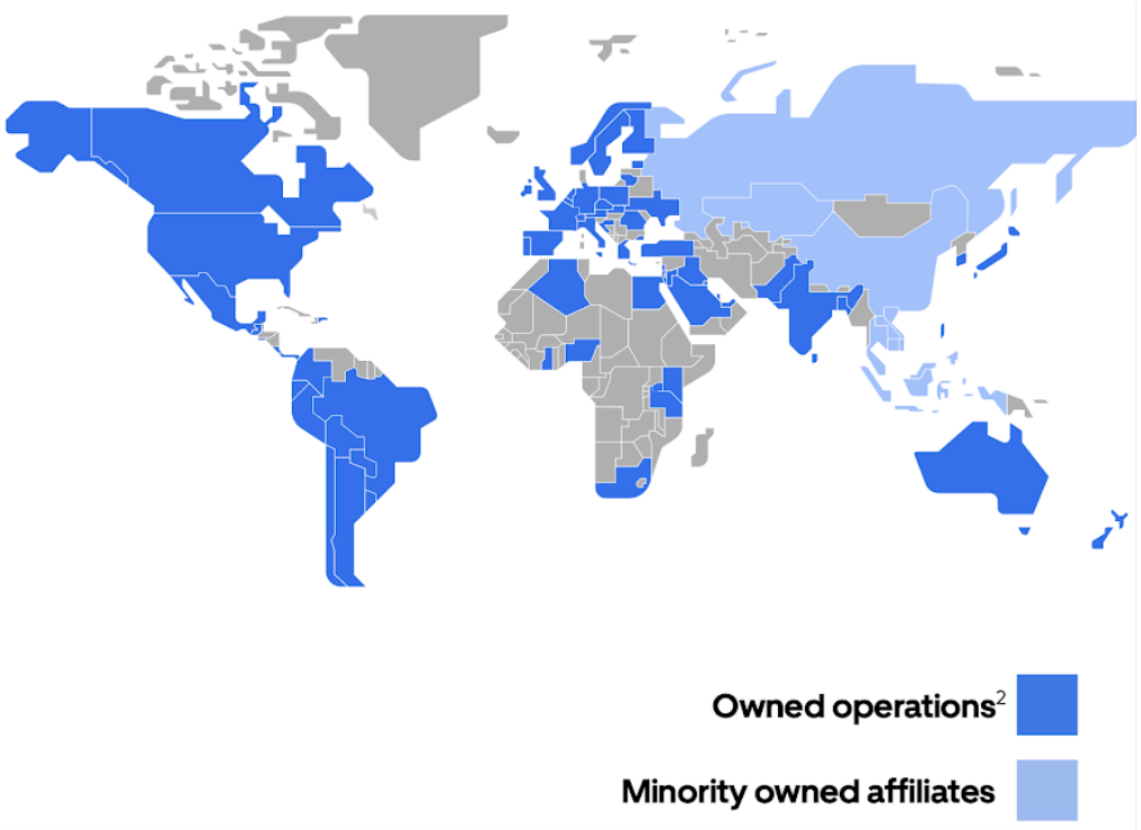
BACKGROUND

- Improvement to traditional taxi services
- Data-driven organisation
- One-click Cab booking
- Check driver’s ratings
- Exact estimated time of arrival
- Tracked rides (Information & Security)
- Seamless payment
- Excellent customer service

Uber’s Global Footprint

#1 in every major region in which Uber operates

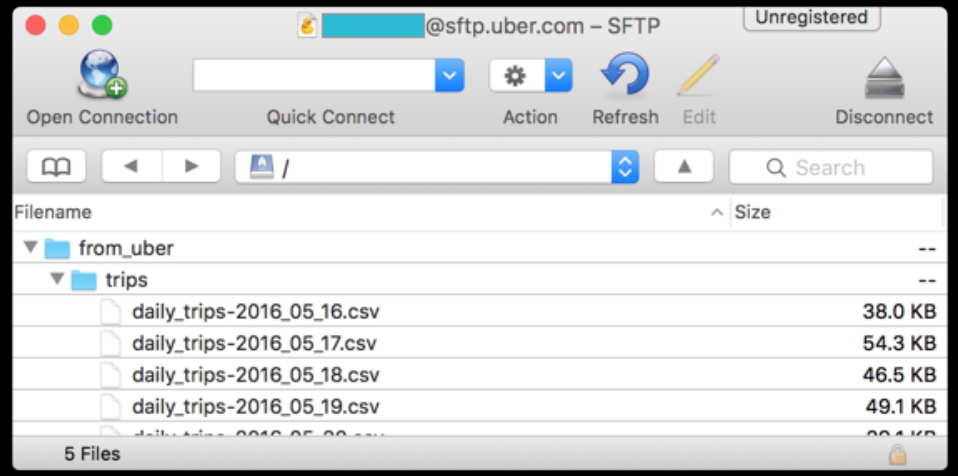


Region	Category Position
US & CA	>65%
Europe	>65%
MEA	>65%
India	>50%

Region	Category Position
Russia	~37% of Yandex Taxi
Southeast Asia	~19% of Grab
China	~15% of Didi

Dataset Review

- 24 hours of trip data can be pulled from Uber server via SFTP pull
- Transactional, Personal Information, Location and Time data is recorded
- Static and live
- Organization's data, machine generated, highest quality



	A	B	C	D	E	F	G	H
1	Company:	Your Company						
2	Administrator:							
3	Report Date:	2019-10-09 21:47:12.629915288 +0000 UTC m=+100614.106652173						
4								
5	Transactions							
6	Trip/Eats ID	Transaction Timesta	Request Dat	Request Tim	Request Dat	Request Tim	Drop-off Dat	Drop-off Ti
7	c3994b3d-78	9/9/19 21:46	9/9/19	8:40PM	9/10/19	6:40AM	9/9/19	9:45PM
8	1d630e11-84	9/9/19 21:46	9/9/19	9:25PM	9/10/19	7:25AM	9/9/19	9:46PM
9	c5ec4dcd-b0	9/9/19 22:03	9/9/19	9:20PM	9/10/19	7:20AM	9/9/19	10:03PM
10	15cd1a81-f9	9/9/19 22:12	9/9/19	9:34PM	9/10/19	7:34AM	9/9/19	10:11PM
11	bf0821b1-8b	9/9/19 22:16	9/9/19	9:36PM	9/10/19	7:36AM	9/9/19	10:16PM

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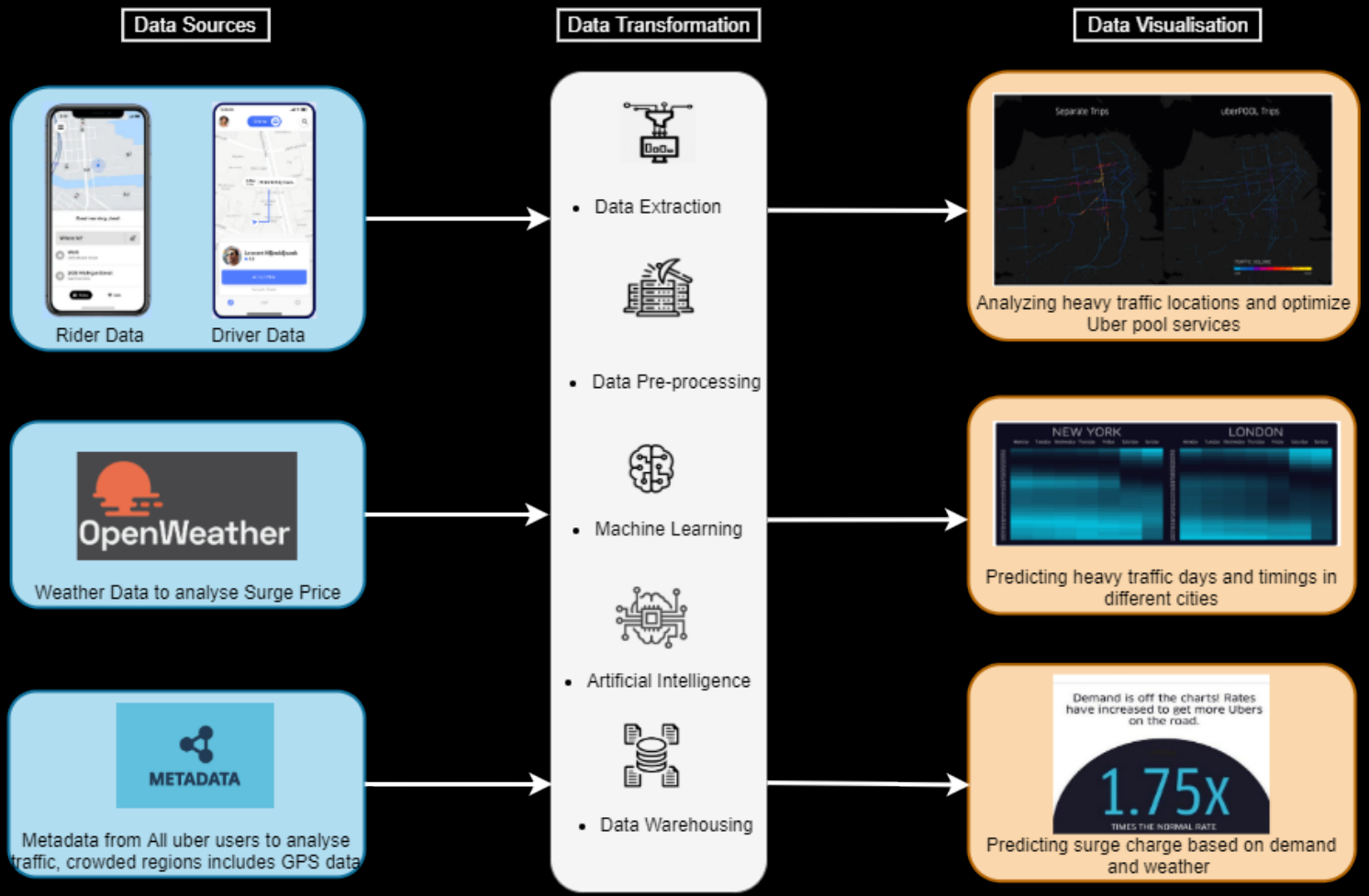
https://developer.uber.com/docs/businesses/data-automation/data-download#available-data

Data Diagram



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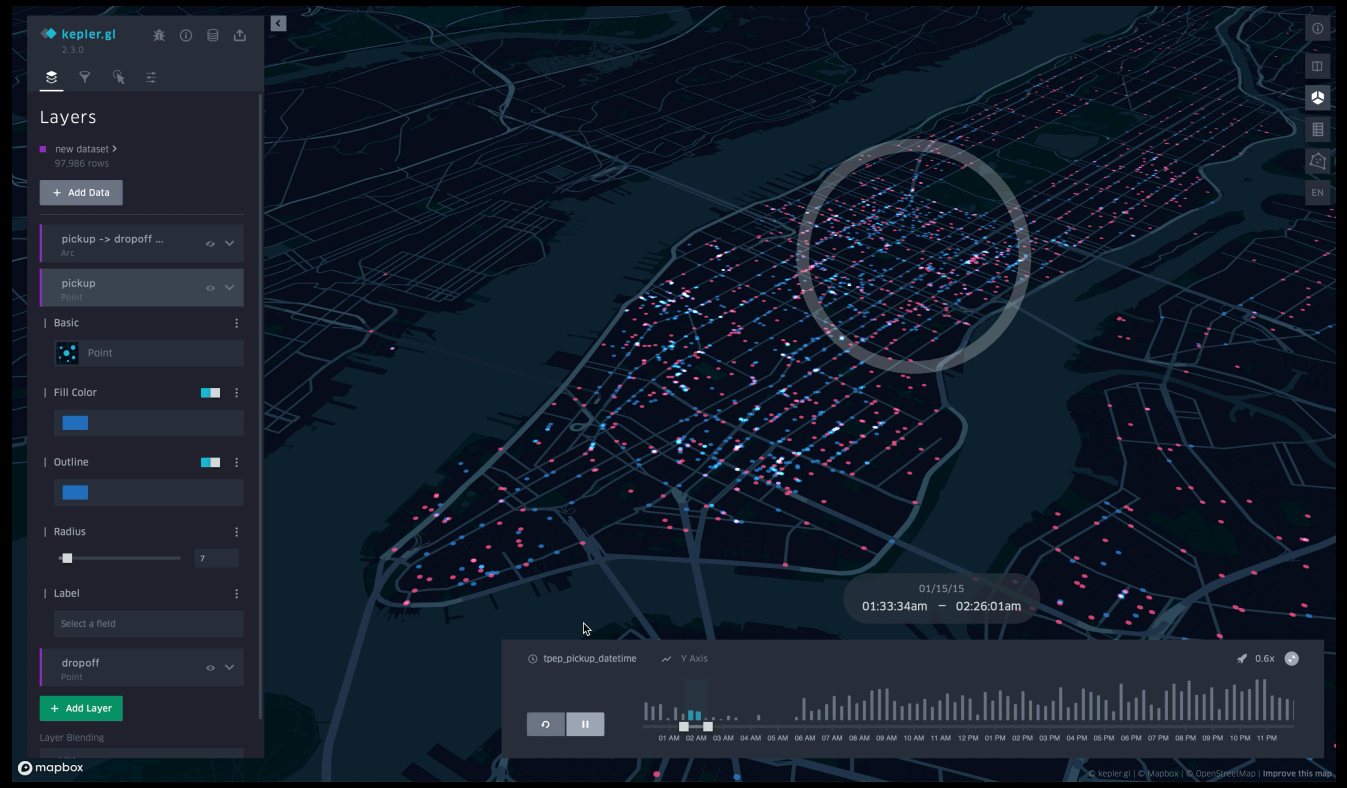
What is the Case?

What is the problem and why we need a solution

- Pour into the city center during morning
- The demand for cars in the city center surges after get off work
- Mismatch between supply and demand



Dropoff Place Pickup Place

NYC Taxi Trips Data Visualization via kepler.gl
URL:https://kepler.gl/demo/nyctrips

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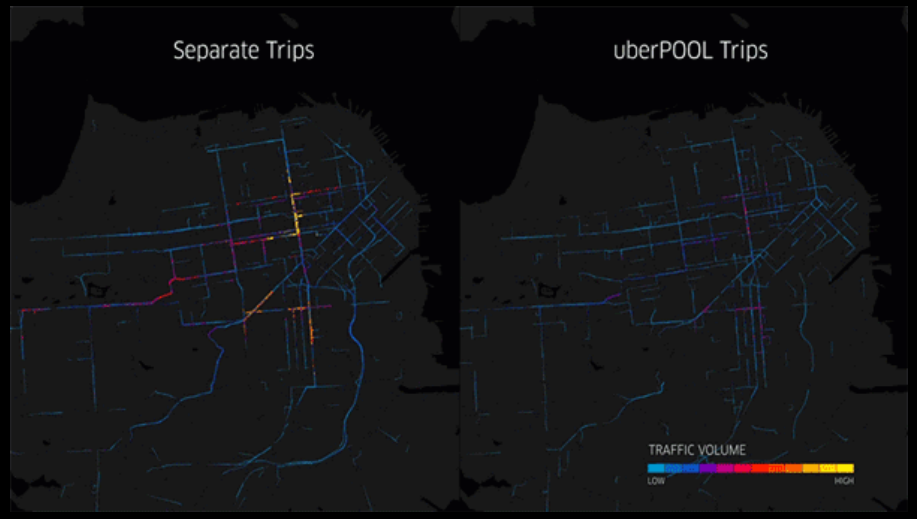
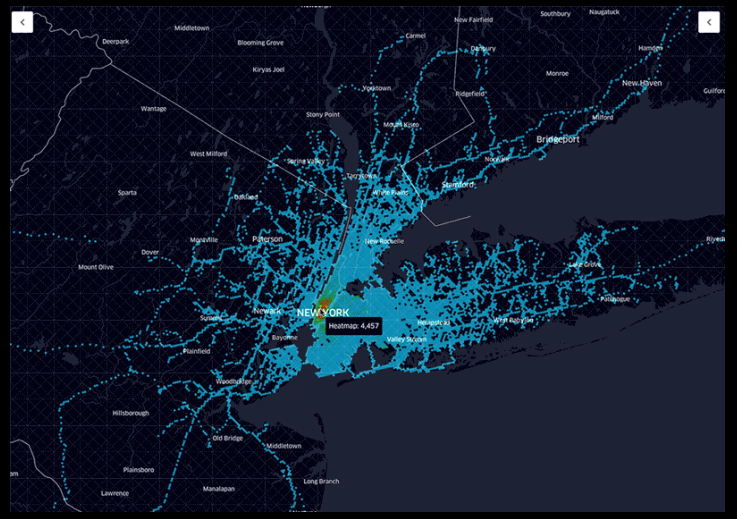
How Uber uses information in Visuals?

Uber Pool



- Inputting the data onto visual to discern the insights.

GeoSurge



- GPS data is retrieved and sent to the AI model in determining the Surge Charges.

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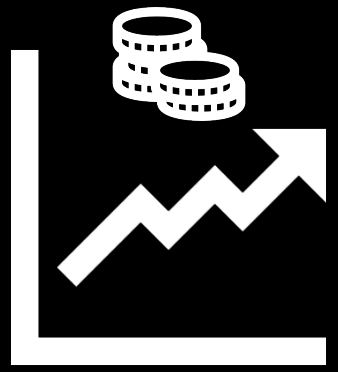
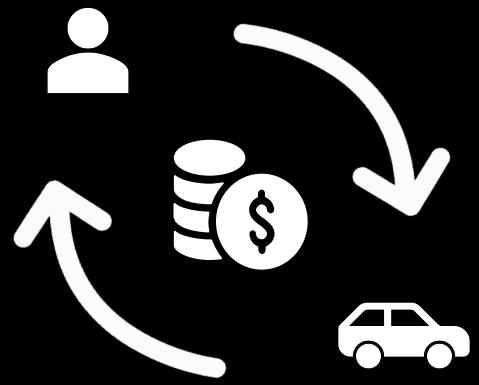
The reason behind



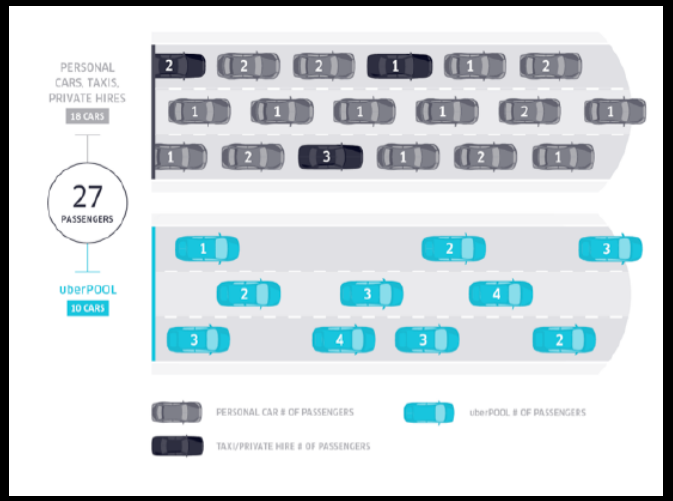
Maximizing profit

Dynamic pricing maximizes how much consumers are willing to pay



Rebalancing marketplace

The supply and demand on the market in specific period were rebalanced over time



Tuning the network

It's able to get more people into fewer cars and cut the congestion in the current city transportation

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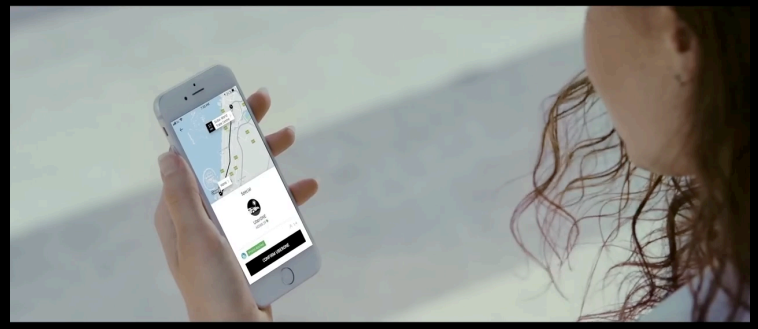
UBER: THE TRANSPORTATION VIRUS [Internet]. Slideshare.net. 2016 [cited 15 July 2020]. Available from: https://www.slideshare.net/faberNovel/uber-the-transportation-virus

Service Comparison

uberPOOL



- Good for users : Affordable price
- Good for drivers : Less waiting for a next request
- Good for environment : Cut down the pollution

- Less demand
- Long waiting time for drivers
- Black is replaced to Premier/Comfort/XL
- Newly introduced Uber Pet

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How does Uber benefit from its analytics system?

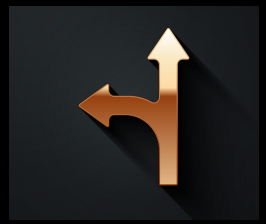
Safety and Insurance
Reduce safety incidents

Customer satisfaction
Reduce waiting hours for riders by finding driver-partners in crowded pick-up areas.

Risk Analytics
Improve account security and integrity

Marketing
Marketing professionals to aggregate data to plan a campaign

Surge pricing
Predictive modelling in real-time based on traffic patterns, supply and demand.



Rides data
To improve and automate all aspects of Uber's core ridesharing products.

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Uber vs Competition?

- Uber is available in 470 cities across 70 countries – competing with local transportation.
- Lyft vs Uber: Uber has more than 3 million active drivers, while Lyft has about 1.4 million with Uber's growth being bigger and more diverse revenue stream in comparison to Lyft data.
- Uber generated $16.5 billion in gross bookings during 2019 and is worth 85% of S&P 500 companies.
- Adapted to local specifiers like payment methods, types of vehicles and extra services like SOS button.
- First universal taxi service.

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Uber Lives or Dies by DATA!

- The more data they collect, the bigger innovation can be derived
- Uber is collecting data for every trip even when driver has no passengers

INFORMATION VISUALISATION

- An important technique in analyzing data
- Great for explaining & informing data
- Provide evidence and persuade
- Help to determine what and how to do

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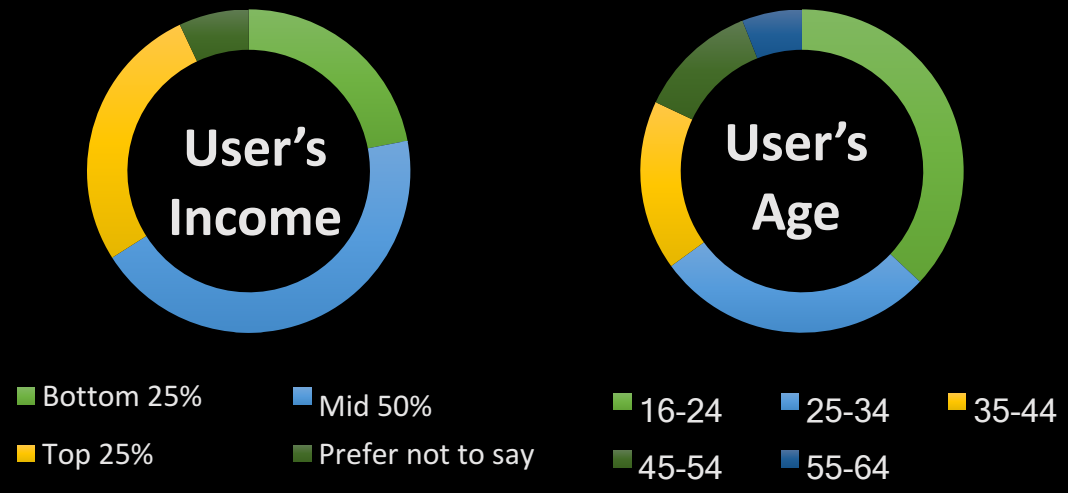
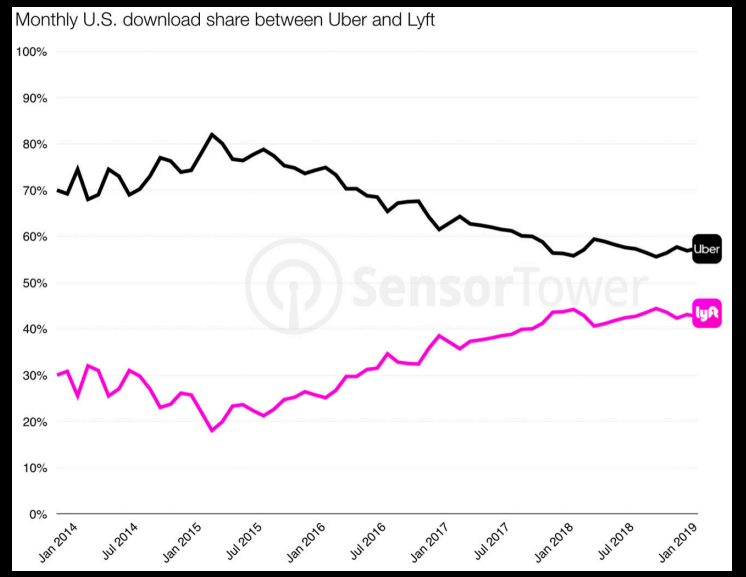
Future Prediction





Median monthly income

Lyft & Uber drivers

$210

$155

Target Analysis

" Offer better options for users "

- Lyft is right on the heels of Uber in terms of app installs
- Many of Uber drivers are not satisfied with their earning
- Need to keep drivers happy to attract more drivers

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https://blog.globalwebindex.com/chart-of-the-day/uber-demographics/
https://sensortower.com/blog/the-state-of-uber-and-lyft-q1-2019
https://www.earnest.com/blog/sharing-economy-income-data/

Recommendation

- Suggest another option in order to meet users' demand
- Have market competitiveness
- Get a chance to break into new markets

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