99 CHALLENGE – DATA ANALYST

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Explore the data and based on them; create a dashboard with the metrics you believe make sense to our executives. Keep in your mind those questions:

What kind of metric our CEO should look?

Net profit/growgh

Cancelled orders

Total of clients

Profit by driver

Profit by user

What kind of metric our CFO should look?

Net growth

Driver`s engagement and profit

What kind of metric our COO should look?

Trips vs time

Map of pickups

Cancelled orders

Driver`s engagement and profit

Dataset overview

The dataset analyzed is composed by two Data Frames – trips & orders – which details are given as follows:

Trips: 11,456,987 rows,

Orders: 15,000,000 rows

Duration outliers: 113,771 - dropped from data

Distance outliers: 344,555 - dropped from data

Timeframe: from *2014-03-01 00:00:00 to 2014-05-31 18:57:00*

Outputs:
- *strips_clean.csv – trips dataframe without outliers*
- *orders.csv - orders dataframe without outliers*
- *geo_output – a sample of clusters based on pick-up and dropoff locations.*

Business Analysis

Net profit/growth: This is a very important KPI as it informs the money flow in the company. In case of 99, even though it presents a linear ascendant growth, a larger timeframe is needed to be analyzed in order to calculate a more reliable growth.

Cancelled orders: The company also has a total of 23,6% of orders that were cancelled, which is an expressive almost one quarter of orders. This number can be improved! I suggest a deeper analysis with the operations team so we can understand and study possibilities to lower the rate of this indicator.

Total clients: The database analyzed has a total of 50,000 drivers and 4,447,417 passengers, which makes 52,91 % of the population of New York City for the year of 2014 (8,5 million people). As we can see, there still is a great potential of growth for the business in the following years, but innovation is needed in order to differentiate from concurrence and attract more customers.

Profit by customer: Facing an average net profit of $9.97 by trip, the company shows average net profits of $725,52 from each driver or $20,68 from each passenger using the service. Even though the amount of passengers is 89 times bigger the amount of drivers, each driver aggregate more relative value to the company than the passengers. I suggest a meeting with the marketing team to evaluate the values that are being spent in campaigns to bring new customers to our business. It's needed to run a deeper study to get the optimal point of operation.

Driver engagement: The company owns an average of 12,8 minutes per ride with each driver working an average of 15.39 hours/month making 73.36 rides on average. This turns into an average income of 369.6 monthly (tips included) – Based on an income of 16.99% of the total fare plus tips.

In overall, the 99 presents a solid business with a huge amount of customers in the city of New York. Although the company has presented cheerful numbers for the period analyzed, there are some points that call attention: The cancelation rate is near ¼ of the total amount of orders, this can overload the servers and is a considerable waste of time/money. As I suggested above, a deeper analysis is needed – comparing with other cities, analyzing the pickup/dropoff locations, checking who cancelled the order, the timeframe from order to cancelation and so forth. I would also get a better understand of how much value each new customer brings and study proper ways to balance attraction of drivers vs. passengers. 99 has also shown expressive revenue for the three months analyzed, but I would not draw conclusions for a too short timeframe like this.