Drivers segments

Analysis of the data showed a bimodal distribution of the number of rides per driver

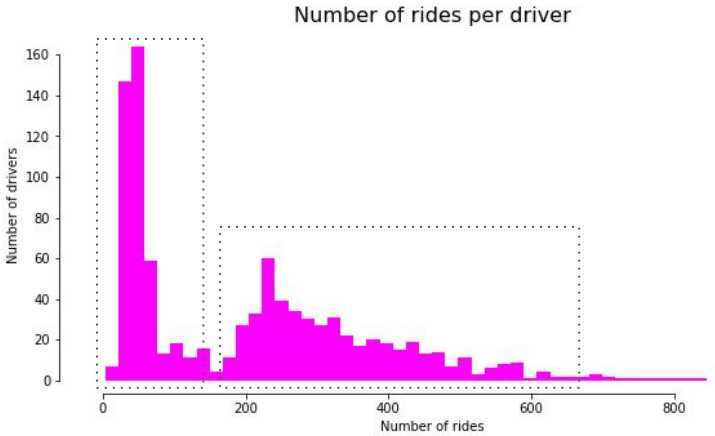
Two segments of drivers

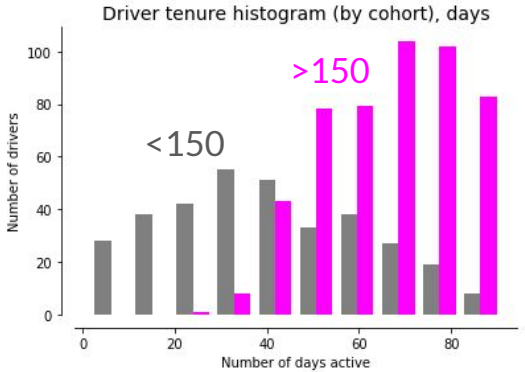
Drivers with total rides <150

- Active on average 40 days
- Make on average 53 rides

Drivers with total rides > 150

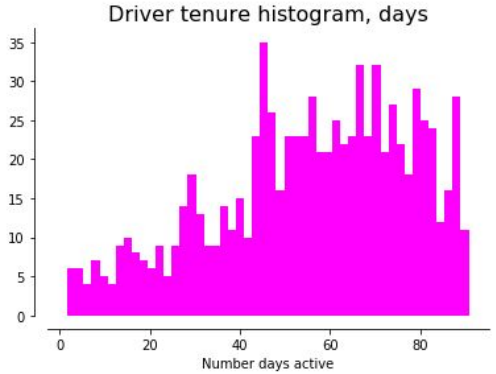
- Active on average 66 days
- Make on average 340 rides

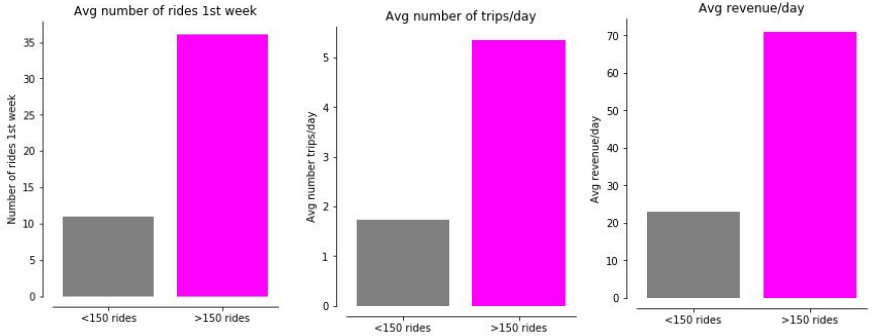




Driver segments

1. Drivers activity is available for 3 month period (limited data). Overall, the average of driver tenure is 55 days.
2. Two segments of drivers differ in several aspects:
    a. Average number of trips the driver makes in the first week after onboarding: 11 vs 36
    b. Average number of trips per day: 1.7 vs 5.4
    c. Average revenue per day: $23 vs $71

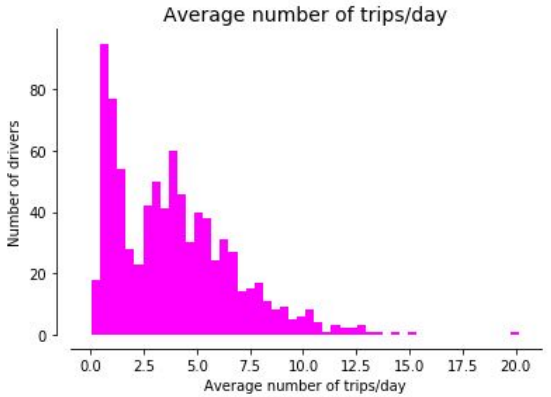


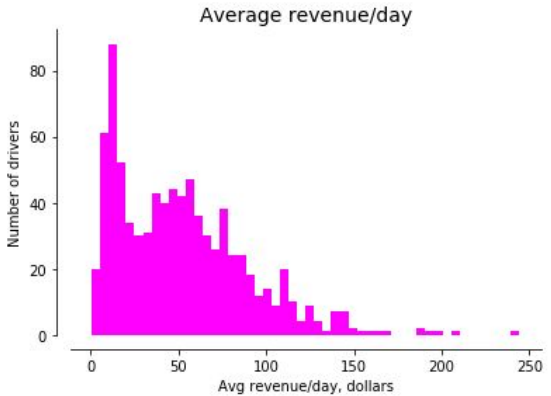


Driver segments

Two segments can be seen in the histograms of the average number of trips per day per driver and their average revenue per day.

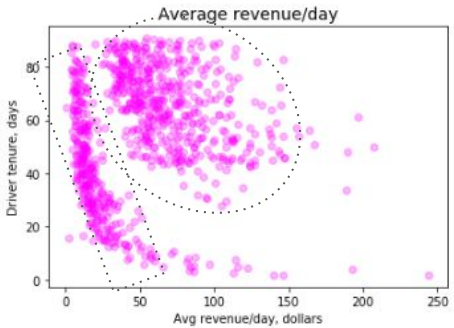
40% of drivers make less than 150 of rides, 30% make less than 50 rides.

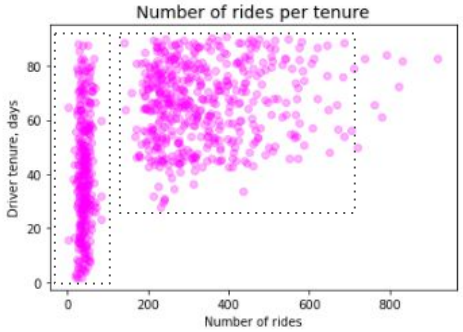


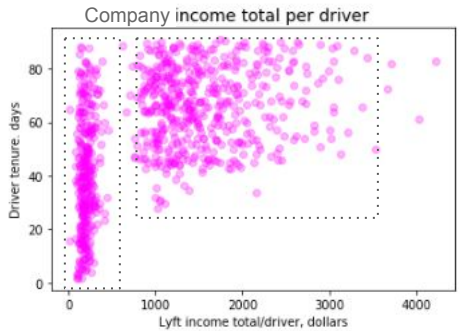


Driver segments

Scatter plots also show clear segmentation of the drivers







Reasons for segments

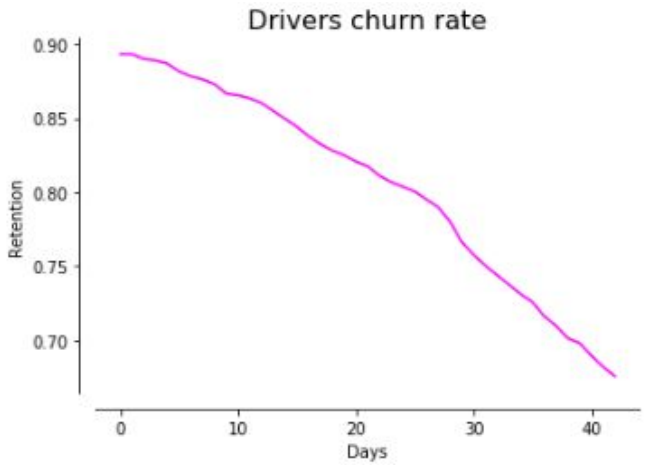
There are many possible reasons why there is a segmentation in the drivers behaviour (number of rides over the tenure). It is probably due to a combination of reasons such as:

1. Drivers are incentivized to make a specific number of rides to get a bonus, thus they lose the motivation after the goal is reached.
2. Drivers try the service and realize it's not something they like doing.
3. Drivers get low ratings or complaints and get disconnected.
4. Drivers sign-up to do a part-time job while they have a gap between jobs.

Need more data to find out the reason why drivers don't stay and the ways to predict it!

Driver churn

1. 42 day-driver tenure was used since the minimum amount of time ALL the drivers in the data set were tracked is 42 days (Last onboarding day: 05/15, Last drop of date: 06/27). Main concern here is a limited data (3 month period)!
2. Driver churn rate is ~32% over 42 days (after 42 days, only 68% of the onboarded drivers are active)
3. 10% of the onboarded drivers don't make any trips.



Driver's Lifetime Value calculation

(i.e. the value of a driver to the Company over the entire projected lifetime of a driver).

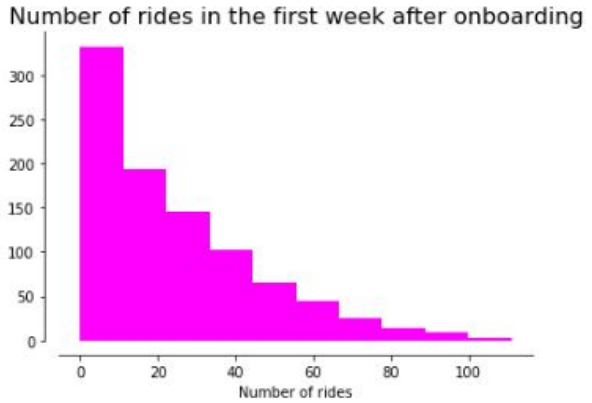
1. Driver value over 42 days ~**$591** (Average Company Income per driver over 42 days)
2. **Assumption!** Churn rate is constant (**0.52% per day**) and doesn't change in the future.
3. Total driver tenure is 173 days (assuming the linear relationship between churn rate/driver tenure)
4. **Driver's Lifetime Value is $1374.**
5. **Average projected lifetime (APL) of a driver is 173 days.**
6. Next steps: identify DLV and APL for the two segments of the drivers.

What are the main factors that affect a driver's lifetime value?

1. Driver tenure time
2. Average number of trips the driver make per day
3. Average ride fare
4. Churn rate

Predictive indicators for driver churn:

1. Number of trips they make the first week
2. Driver profile (age, channel for sign-up, car, etc)



Problems with data

1. Short time frame to identify DLV we need more than 90 days.
2. Not enough variables: need more information about driver (type of the car they drive, type of channel the signed-up, full-time/part-time driver, age, etc) to segment them correctly.

Business recommendations

1. Get more data so we can identify the segment of the drivers ahead of time and target the hiring more precisely towards the drivers who will make more than 150 trips.
2. Spend more effort recruiting drivers with high DLV.
3. Improve retention rate by improving drivers experience and by identifying the root cause for the high churn rate (~32% over 42 days).
4. Collect data on drivers rating and complaints, could be a great indicator of the churn rate, the DLV, and the segment the driver belong to.
5. Motivate the driver to make more trips the first week, since it seems to be important for the churn.
6. In general, track the driver behavior/pattern and contact them to address the issues/concerns before the driver churns. Good idea would be to interview the churned drivers directly to find the reason for the churn. Great idea is to flag the driver who became not active and target a personal incentive (discount, bonus) to motivate him/her.
7. Address 10% of drivers who onboard but don't make any trips, incentivize them to try the service.