Funnel Analysis of Metrocar

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Summary

This report aims to analyze the customer funnel of Metrocar to identify areas for improvement and optimization. Insights from the customer funnel data will be used to provide recommendations to the Metrocar's stakeholders and management.

Context

Similar to Uber/Lyft, Metrocar business is based on a ride-sharing platform that connects riders with drivers through a mobile application. It acts as an intermediary between riders and drivers via an easy to use user interface (UI) to facilitate the ride-hailing service that brings the two parties together.

Our job is to analyze data collected internally based on the customer funnel model. The various stages from app download to payment and review are the targets of our analysis efforts. At every stage of the funnel, we will analyze the metrics like conversion rate and drop-off in order to identify areas of improvement or processes that can be optimized. Then, we will provide recommendations to the stakeholders of Metrocar based on the analysis results and insights generated.

Results

We use tools like SQL, Tableau, and Google Sheets to help with our analytic works performed against Metrocar datasets. The following findings summarized our analysis.

1) What steps of the funnel should we research and improve? Are there any specific drop-off points preventing users from completing their first ride?

funnel_step	funnel_name	value	pct_top_conversion_rate	pct_top_drop_off	pct_prev_conversion_rate	pct_prev_drop_off
0	downloads	23608	1	0.00	(NULL)	(NULL)
1	signups	17623	0.7464842426296171	0.25	0.7464842426296171	0.25
2	ride_requested	12406	0.5254998305659099	0.47	0.7039664075356069	0.30
3	ride_accepted	12278	0.5200779396814639	0.48	0.9896824117362566	0.01
4	ride_completed	6233	0.26402067095899695	0.74	0.5076559700276918	0.49
5	ride_payment	6233	0.26402067095899695	0.74	1	0.00
6	review_count	4348	0.18417485598102337	0.82	0.6975774105567143	0.30

From the funnel above, we should further research these steps for the underlying reasons of the low conversion rates: ride_completed (26.4%), review_count (18.4%).

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3	ride_accepted	12278	0.5200779396814639	0.48	0.9896824117362566	0.01
4	ride_cancelled	6045	0.256057268722467	0.74	0.4923440299723082	0.51
5	ride_completed	6233	0.26402067095899695	0.74	1.031100082712986	-0.03
6	review_count	4348	0.18417485598102337	0.82	0.6975774105567143	0.30

On the other hand, we need to look at the ride_cancelled step of the funnel. It has a big drop-off (51%) from the ride_accepted (by the driver) step. A further study is warranted.

2) Metrocar currently supports 3 different platforms: ios, android, and web. To recommend where to focus our marketing budget for the upcoming year, what insights can we make based on the platform?

Platform	Android	iOS	Web
Number of Users	6,935	14,290	2,383
Ride Requested	52.18%	52.83%	51.91%

Ride Completed	26.39%	26.54%	25.64%

The data shows the iOS platform has two times the number of users in comparison with the next android platform. So Metrocar should focus its efforts and marketing resources on the iOS platform.

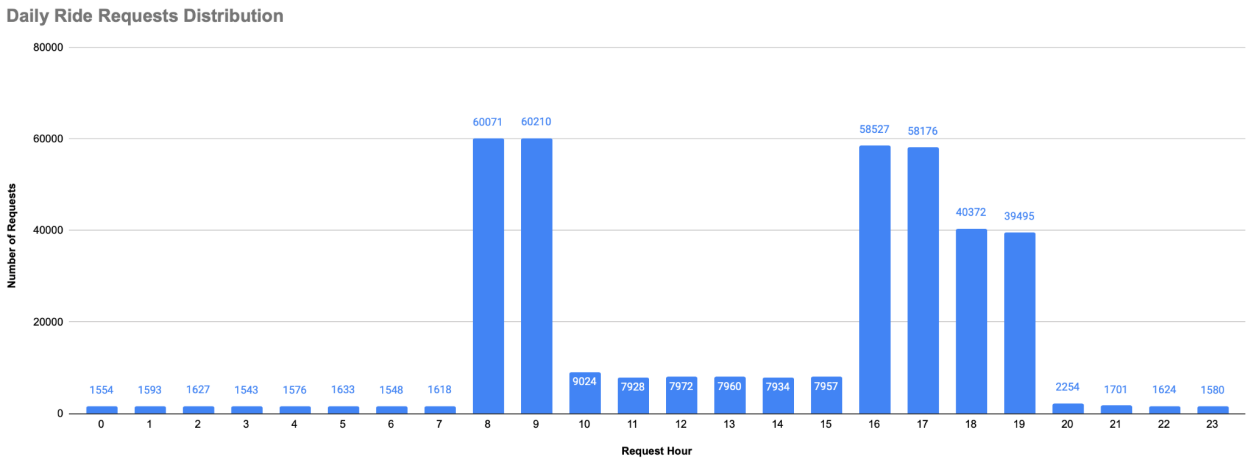
Meanwhile, the insight we gathered across all platforms is the funnel metrics are pretty consistent with no big variations. For instance, the two sampled metrics above show there is only +/- 1% differences between platforms.

3) What age groups perform best at each stage of our funnel? Which age group(s) likely contain our target customers?

Age Range	18-24	25-34	35-44	45-54
Downloads	1,865 100%	3,447 100%	5,181 100%	1,826 100%
Signups	1,865 100%	3,447 100%	5,181 100%	1,826 100%
Ride Requested	69.71%	70.35%	70.68%	70.37%
Ride Accepted	69.12%	69.42%	70.03%	69.39%
Ride Completed	35.9%	35.6%	35.92%	34.50%
Payment	35.9%	35.6%	35.92%	34.50%
Review	25.26%	24.43%	25.71%	24.81%

Taking conversion rate as the measure for comparison, age groups 25-34 and 35-44 are two groups performed better than the rest, albeit with small differences between age ranges. The numbers showing for each stage of the funnel for these two groups are better. In addition, these two groups should be our target customers by the numbers alone: the combined totals for these two groups are 2.3 times bigger than the next two groups added together.

4) Surge pricing is the practice of increasing the price of goods or services when there is the greatest demand for them. If we want to adopt a price-surging strategy, what does the distribution of ride requests look like throughout the day?



Link to [Ride Requests Distribution]

The above chart shows there are four hours of highest demands of ride requests on a daily basis: 8 am, 9 am, 4 pm, and 5 pm. Additionally, 6 pm and 7 pm can also be included since their volumes are still much bigger than the other hours. If a price-surging strategy is to be adopted, we should focus to implement this strategy on these hours with the highest demands.

5) What part of our funnel has the lowest conversion rate? What can we do to improve this part of the funnel?

The review step has the lowest conversion rate (18.42%) in comparison with other stages of the funnel. One way to encourage riders to leave reviews after their rides is to adopt a points system: Everytime a customer leaves review after a ride, Metrocar rewards this rider with certain points credit to his/her account. The accumulated points can be used for future rides or other activities that can further incentivize riders to use the app.

Recommendation

Metrocar should concentrate the company's marketing resources and investment in the top two platforms: Android and iOS. These two platforms account for 90% of the traffic. They offer the highest potential investment returns.

We should introduce some measures to discourage riders from canceling their requests at the last minute. Our funnel analysis indicates that a high percentage of cancellation (51%) happened after the driver had accepted a ride request. This percentage is significant because drivers could miss out or decline other requests after they had accepted those requests that do not generate any revenue in the end.

Another trend that merit our attention for further action is these targeted age ranges: 25-34 and 35-44. The combined size of both groups is much bigger than (2.3 times) than the rest combined. We should invest our market research resources and technology efforts on their spending habits and social media behaviors. The payoff would be the insights concluded from those analysis that could help Metrocar to craft strategies that draw in higher traffic.

Metrocar should apply surge pricing strategy on the periods of highest demands, especially these hours: 8 am, 9 am, 4 pm, and 5 pm. The combined hours account for 61% of the total traffic. By the principle of supply and demand, these periods bring in the largest shares of revenue. In addition, Metrocar should adopt strategy to encourage more drivers to accept ride requests during these hours. Having more Metrocar drivers on the roads during these times likely grabbing more market shares from its competitors.

References

Scripts to generate the data in the Results section SQL

Link to Dashboard Metrocar Story

Google Sheets to generate Daily Ride Requests Distribution