Sebastian Gurgel | 26.10.2023

MetroCar Funnel Analysis

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Summary

This report provides a comprehensive analysis of Metrocar's customer funnel, aiming to optimize its performance.
The analysis covers various aspects, including platform usage, age demographics, surge pricing, and conversion rates at different funnel stages. Showing that enhancing the user experience and communication with the user from downloading the app all the way to the review stage is crucial for a better conversion in every funnel stage.
Key recommendations include addressing drop-off points, implementing platform-specific marketing strategies, targeting specific age groups, refining surge pricing strategies, and improving the review stage conversion process.

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Context

Metrocar operates on a platform that seamlessly connects riders with drivers through a sophisticated mobile application. Serving as a pivotal intermediary, Metrocar offers a user-centric interface, streamlining the ride-hailing process for both riders and drivers. This undertaking is dedicated to a comprehensive analysis of Metrocar's customer funnel, with the express purpose of refining and optimizing its performance. Driven by stakeholder inquiries, the investigation is focused on unearthing valuable insights to enhance specific facets of the customer journey. The overarching objective is to conduct a meticulous funnel analysis and address the pertinent business questions at hand.

Business questions

- What steps of the funnel should we research and improve? Are there any specific drop-off points preventing users from completing their first ride?
- 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?
- What age groups perform best at each stage of our funnel? Which age group(s) likely contain our target customers?
- 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?
- What part of our funnel has the lowest conversion rate? What can we do to improve this part of the funnel?

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Analysis

Getting the Data

Metrocar's data repository is housed within a relational database. Through the application of SQL queries, this data was meticulously extracted and integrated for the purpose of conducting in-depth analysis and visualization, facilitated by the utilization of a CSV file. The culmination of this process involved aggregating data in Tableau to conduct a comprehensive funnel analysis.

MetroCar’s Funnel

The conducted customer funnel for Metrocar includes the following stages:

1. App Download: A user downloads the Metrocar app from the App Store or Google Play Store.

2. Signup: The user creates an account in the Metrocar app, including their name, email, phone number, and payment information.

3. Request Ride: The user opens the app and requests a ride by entering their pickup location, destination, and ride capacity (2 to 6 riders).

4. Driver Acceptance: A nearby driver receives the ride request and accepts the ride.

5. Ride: The driver arrives at the pickup location, and the user gets in the car and rides to their destination.

6. Payment: After the ride, the user is charged automatically through the app, and a receipt is sent to their email.

7. Review: The user is prompted to rate their driver and leave a review of their ride experience.

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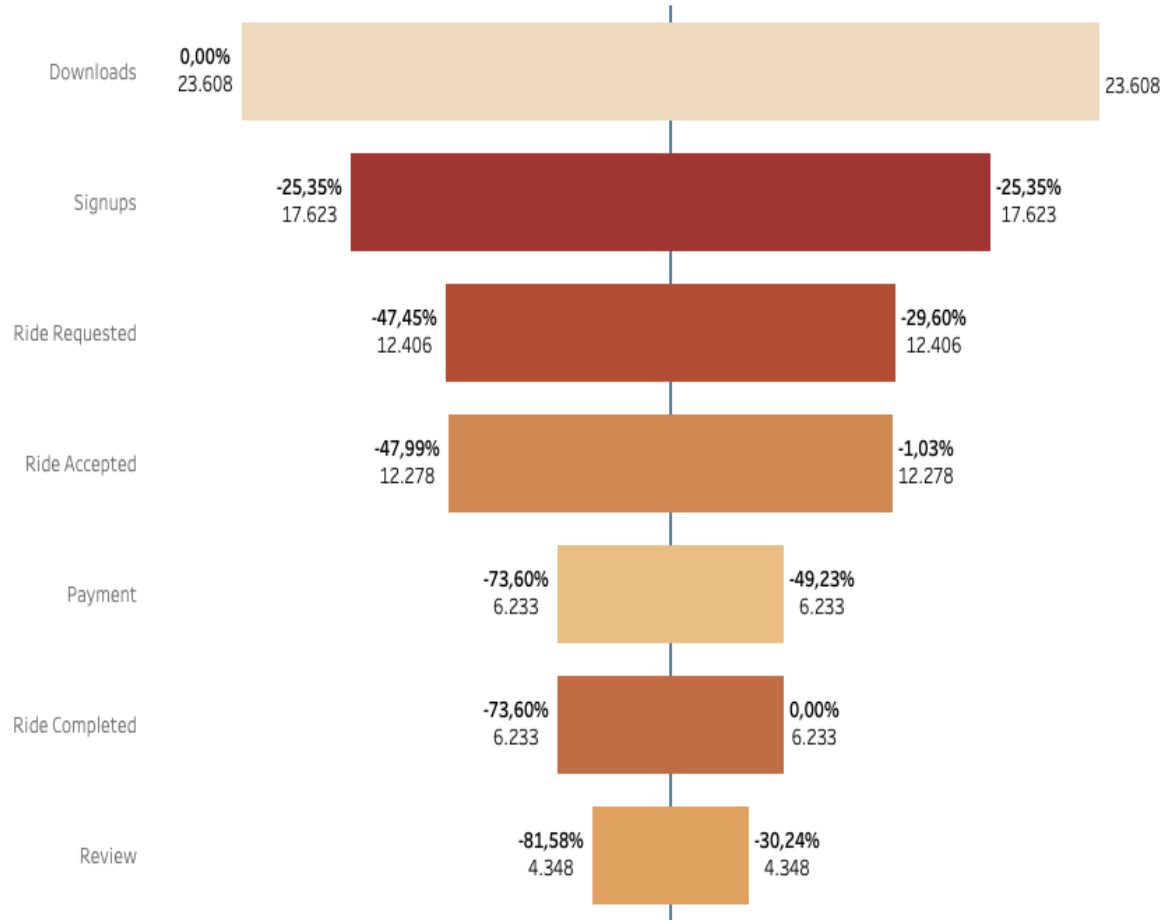
Key Metrics

The pivotal metrics for this analysis revolve around two key indicators: the Difference Percentage to the initial step, denoted as "**Percentage of Top,**" and the Difference Percentage to the preceding step, referred to as "**Percentage of Previous.**"
These metrics are most effectively conveyed through the following visualization:

Drop off points

The data visualization illustrates a notable initial drop-off of **25.35%** from the App Downloads to Signups, followed by a further decline of **29.6%** from Signups to Ride Requests. At this juncture, Metrocar experiences a cumulative loss of **47.35%** of potential converting customers.



Of particular significance is the transition between Ride Requests and Ride Completions. This stage exhibits a drop-off of **50.26%**, attributed to a **49.23%** drop at the Payment stage

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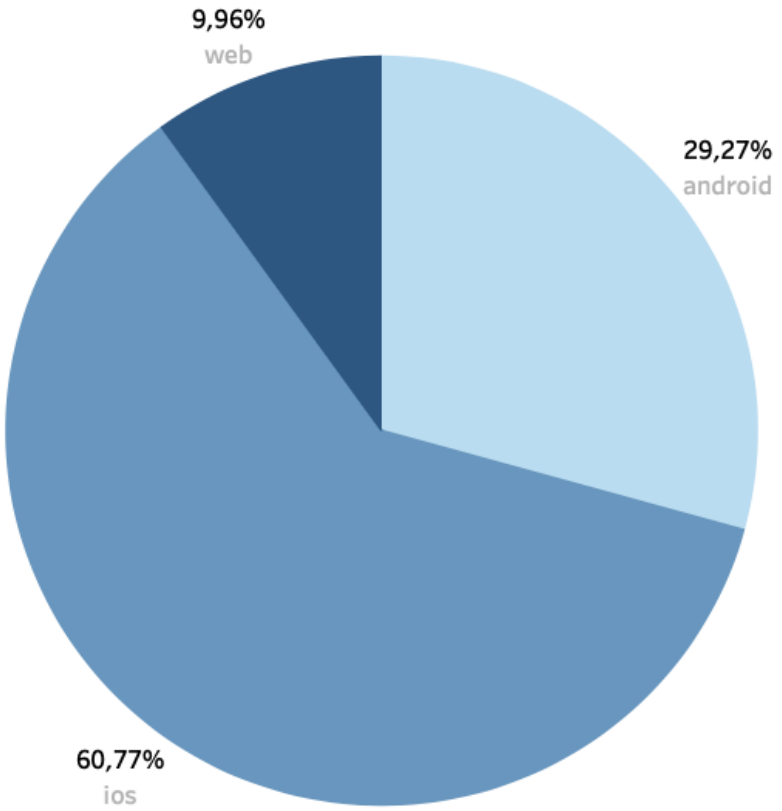
and a **1.03%** drop at the Ride Accepted stage. At this point, Metrocar encountered a substantial loss of **73.60%** of its converting customers.

The solicitation of customer reviews holds paramount importance for any company. However, Metrocar observes a further drop-off of **30.24%** in this stage, resulting in only 18.42% of customers ultimately providing feedback, as compared to the total customer base.

What Platform is used?

The Metrocar platform predominantly caters to iOS users, comprising a majority share of **60.77%**. Android users constitute **29.27%** of the user base, while desktop usage remains relatively lower, accounting for only **9.96%** of the total user population.



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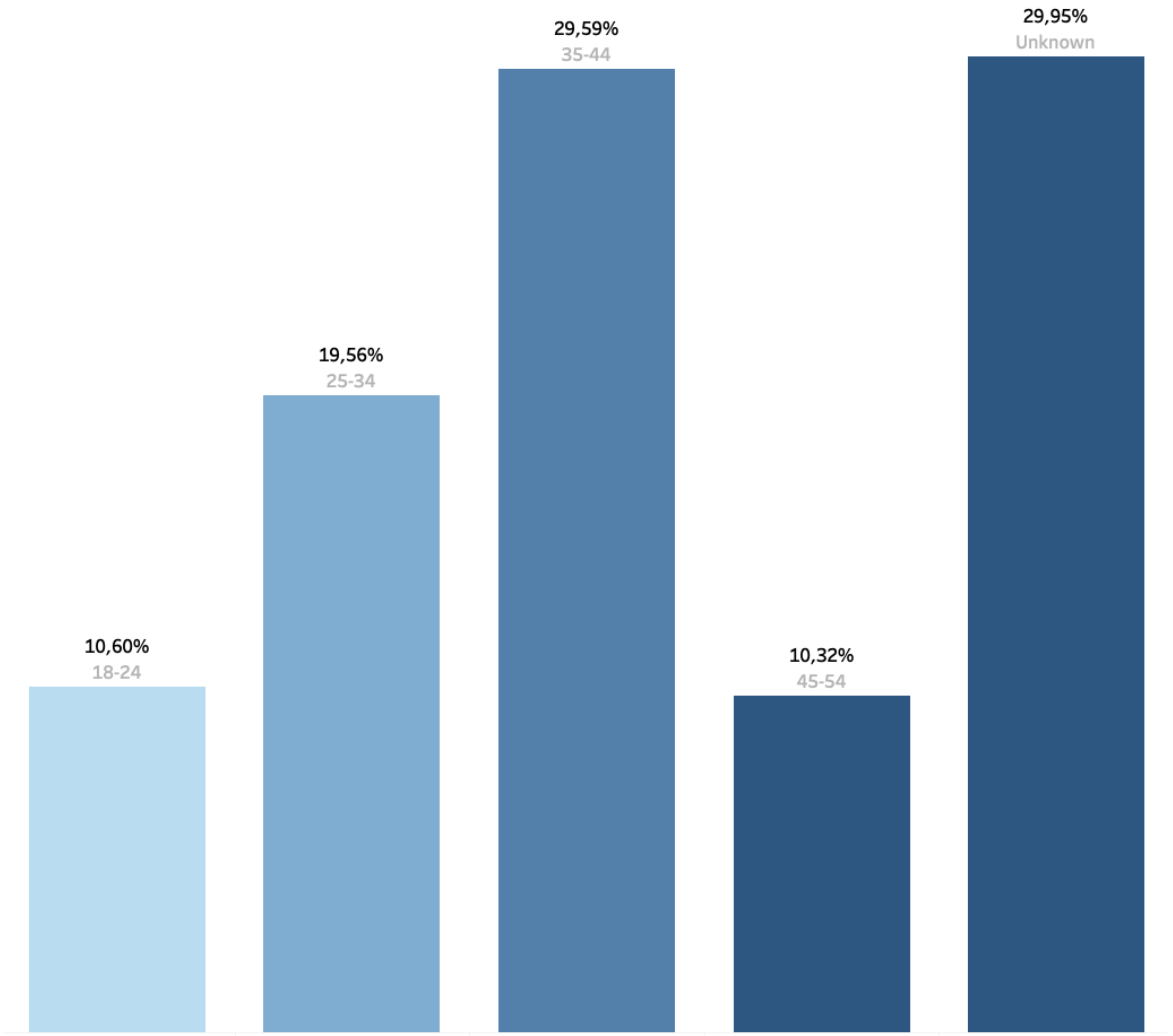
Customer Age Group

The primary customer demographic falls within the age range of 34 to 44 years, constituting the largest segment at **29.59%**. Individuals aged 25 to 34 account for a significant portion, representing **19.56%** of the user base.

There is a level of uncertainty surrounding age, comprising **29.95%** of the demographic data.

In addition, both the age brackets of 18-24 and 45-54 each encompass approximately **10%** of the user population, demonstrating a lower distribution within these respective groups.



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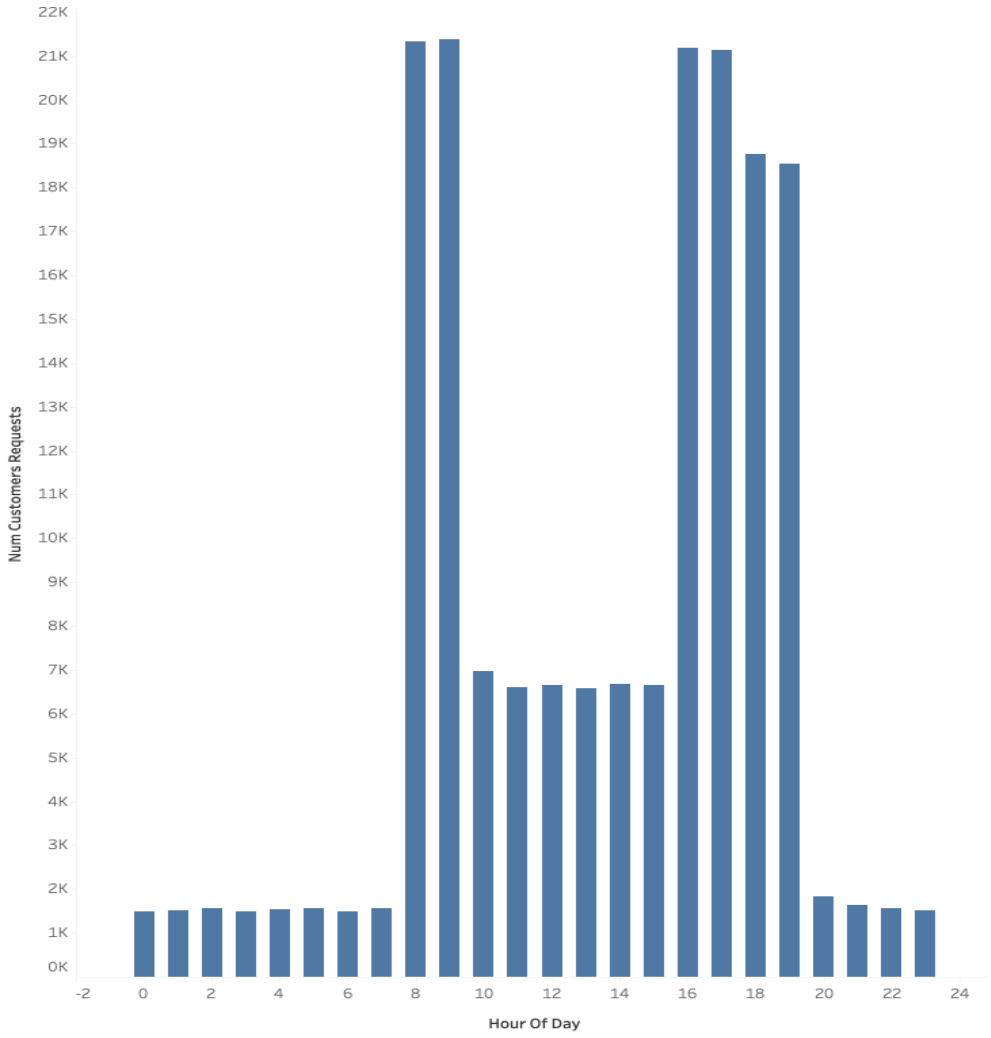
Surge Pricing by Daytime

Surge Pricing might be a good strategy to enhance customer experience since there are significant ride_request peaks between 8:00 and 10:00 and 16:00 and 20:00.



Lowest Conversion Rate

The final stage in the funnel, the Review stage, exhibits the lowest conversion rate. Customer reviews are a highly valuable asset for any company, providing critical insights and feedback. Regrettably, Metrocar experiences a drop-off of **30.24%** at this stage, resulting in only **18.42%** of all initial customers ultimately leaving a review.

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Recommendation

Based on the analysis provided above, here are some recommendations to answer the business questions for Metrocar:

Address Drop-off Points in the Funnel

To improve drop-off points in the funnel, Metrocar should focus on simplifying the sign-up process, possibly through social media logins. Additionally, emphasizing the app's benefits, offering incentives for completion, and providing real-time in-app support can enhance the user experience.
Implementing progress indicators and conducting A/B testing will further optimize the sign-up journey, while retargeting campaigns can re-engage users who downloaded the app but haven't yet signed up.

Platform-specific Marketing Strategy

Metrocar should prioritize iOS development due to its majority user base. For Android users, targeted marketing campaigns can highlight features specific to their platform. It's crucial to maintain a consistent user experience across iOS and Android, instilling trust in all users. While desktop usage is lower, optimizing the web interface ensures a seamless experience for those who prefer it.

Targeting Age Groups

Given that the age group of 25 to 44 represents the largest user segment, tailor marketing and user experience strategies to cater to the preferences and needs of this demographic. Consider conducting surveys or user studies to gain deeper insights.

Surge Pricing Strategy

Metrocar should employ dynamic pricing algorithms to ensure that fares reflect real-time demand, optimizing pricing during peak hours. Transparency is a priority for Metrocar, as surge pricing is clearly communicated to users before they confirm their ride request, building trust and preventing surprises. In addition to algorithmic adjustments, timely notifications about surge pricing are sent to users, offering them the choice to wait or explore alternative transportation options.

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Improve Review Stage Conversion

Reviews hold immense importance for a company like Metrocar. They serve as authentic testimonials, building trust and credibility among potential customers.

By incentivizing reviews, Metrocar actively encourages user engagement, creating a sense of reciprocity. Timely reminders after a ride prompt users while their experience is fresh, providing current and accurate feedback for timely improvements.

Additionally, seeking feedback on post-ride experiences shows a commitment to user preferences, resulting in a more customer-centric service. Responding to reviews fosters a positive relationship, demonstrating active listening and valuing user opinions.

Gamification elements, like rewards, motivate user participation, creating a sense of accomplishment.

Overall, reviews contribute to Metrocar's reputation, credibility, and serve as a direct channel for understanding and meeting customer expectations, supporting continuous improvement and building a loyal customer base.

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APPENDIX

[Tableau Link]

[Vimeo Präsentation]

Question 1-10

1. **How many times was the app downloaded?**

   select count(app_download_key)
   from app_downloads
   23608

2. **How many users signed up on the app?**

   select count(distinct session_id)
   from signups
   17623

3. **How many rides were requested through the app?**

   SELECT count(ride_id)
   from ride_requests
   385477

4. **How many rides were requested and completed through the app?**

   SELECT count(dropoff_ts)
   FROM ride_requests
   223652

5. **How many rides were requested and how many unique users requested a ride?**

   SELECT count(ride_id), count(distinct user_id)
   FROM ride_requests
   385477/12406

6. **What is the average time of a ride from pick up to drop off?**

   SELECT AVG(pickup_ts-dropoff_ts) as avg_time_diff
   FROM ride_requests
   where pickup_ts is not null
   00:52:37

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7. **How many rides were accepted by a driver?**

```
SELECT count(accept_ts) as accepted_rides
FROM ride_requests
```

248379

8. **How many rides did we successfully collect payments and how much was collected?**

```
SELECT
count(charge_status) as success_payments,
sum(purchase_amount_usd) as payments
FROM transactions
where charge_status = 'Approved'
```

212628/4251667,61

9. **How many ride requests happened on each platform?**

```
SELECT platform, count(request_ts)
FROM app_downloads ad
left join signups s on ad.app_download_key=s.session_id
left join ride_requests rr on s.user_id=rr.user_id
GROUP BY platform
```

ios 234693

web 38467

android 112317

10. **What is the drop-off from users signing up to users requesting a ride?**

WITH user_dropoff AS (

```
SELECT
COUNT(DISTINCT s.user_id) AS user_signup,
COUNT(DISTINCT rr.user_id) AS user_requesting_ride
FROM app_downloads ad
LEFT JOIN signups s ON ad.app_download_key = s.session_id
LEFT JOIN ride_requests rr ON s.user_id = rr.user_id
)
SELECT
```

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(user_signup - user_requesting_ride) AS drop_off_count,

((user_signup - user_requesting_ride) / user_signup::float) * 100 AS drop_off_percentage

FROM user_dropoff

drop_off_count 5217

drop_off_percentage 29.06%

Funnel Code

```
-- Step 1: Create a temporary table with user details including app downloads, signups, and ride requests.
with user_details AS (
    SELECT
        app_download_key,
        signups.user_id,
        platform,
        age_range,
        ride_id,
        date(download_ts) AS download_date
    FROM
        app_downloads
    LEFT JOIN
        signups ON app_downloads.app_download_key = signups.session_id
    LEFT JOIN
        ride_requests ON ride_requests.user_id = signups.user_id
),

-- Step 2: Count the number of downloads for each combination of platform, age range, and download date.
downloads AS (
    SELECT
        0 as funnel_step,
        'download' as funnel_name,
        platform,
        age_range,
        download_date,
        COUNT (DISTINCT app_download_key) as users_count,
        0 as count_rides
    FROM
        user_details
    GROUP BY
        platform, age_range, download_date
),
```

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```
-- Step 3: Count the number of signups for each combination of platform, age range, and download date.
signup AS (
    SELECT
        1 as funnel_step,
        'signup' as funnel_name,
        user_details.platform,
        user_details.age_range,
        user_details.download_date,
        COUNT (DISTINCT signups.user_id) as users_count,
        0 as count_rides
    FROM
        signups
    JOIN
        user_details USING (user_id)
    WHERE
        signup_ts is not null
    GROUP BY
        user_details.platform, user_details.age_range, user_details.download_date
),

-- Step 4: Count the number of ride requests for each combination of platform, age range, and download date.
requested AS (
    SELECT
        2 as funnel_step,
        'ride_requested' as funnel_name,
        user_details.platform,
        user_details.age_range,
        user_details.download_date,
        COUNT (DISTINCT user_id) as users_count,
        COUNT (DISTINCT ride_requests.ride_id) as count_rides
    FROM
        ride_requests
    JOIN
        user_details USING (user_id)
    WHERE
        request_ts is not null
    GROUP BY
        user_details.platform, user_details.age_range, user_details.download_date
),

-- Step 5: Count the number of ride acceptances for each combination of platform, age range, and download date.
accepted AS (
    SELECT
        3 as funnel_step,
        'ride_accepted' as funnel_name,
        user_details.platform,
        user_details.age_range,
```

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```
        user_details.download_date,
        COUNT (DISTINCT user_id) as users_count,
        COUNT (DISTINCT ride_requests.ride_id) as count_rides
    FROM
        ride_requests
    JOIN
        user_details USING (user_id)
    WHERE
        accept_ts is not null
    GROUP BY
        user_details.platform, user_details.age_range, user_details.download_date
),

-- Step 6: Count the number of completed rides for each combination of platform, age range, and download date.
completed AS (
    SELECT
        4 as funnel_step,
        'ride_completed' as funnel_name,
        user_details.platform,
        user_details.age_range,
        user_details.download_date,
        COUNT (DISTINCT user_id) as users_count,
        COUNT (DISTINCT ride_requests.ride_id) as count_rides
    FROM
        ride_requests
    JOIN
        user_details USING (user_id)
    WHERE
        dropoff_ts is not null
    GROUP BY
        user_details.platform, user_details.age_range, user_details.download_date
),

-- Step 7: Count the number of payments for each combination of platform, age range, and download date.
payment AS (
    SELECT
        5 as funnel_step,
        'payment' as funnel_name,
        user_details.platform,
        user_details.age_range,
        user_details.download_date,
        COUNT (DISTINCT user_id) AS users_count,
        COUNT (DISTINCT transactions.ride_id) as count_rides
    FROM
        transactions
    JOIN
        user_details USING (ride_id)
    WHERE
```

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```
        charge_status = 'Approved'
    GROUP BY
        user_details.platform, user_details.age_range, user_details.download_date
),

-- Step 8: Count the number of reviews for each combination of platform, age range, and download date.
reviews AS (
    SELECT
        6 as funnel_step,
        'review' as funnel_name,
        user_details.platform,
        user_details.age_range,
        user_details.download_date,
        COUNT (DISTINCT reviews.user_id) as users_count,
        COUNT (DISTINCT reviews.ride_id) as count_rides
    FROM
        reviews
    JOIN
        user_details USING (ride_id)
    GROUP BY
        user_details.platform, user_details.age_range, user_details.download_date
)

-- Step 9: Combine the results from all the temporary tables using UNION.
SELECT *
FROM downloads
UNION
SELECT *
FROM signup
UNION
SELECT *
FROM requested
UNION
SELECT *
FROM accepted
UNION
SELECT *
FROM completed
UNION
SELECT *
FROM payment
UNION
SELECT *
FROM reviews

-- Step 10: Order the results by funnel step, platform, age range, and download date.
ORDER BY funnel_step, platform, age_range, download_date;
```