Metrocar Funnel Analysis:

Enhancing Performance and User Engagement for Metrocar

Focal Point of Analysis:

In the pursuit of enhancing Metrocar's operational efficiency and overall performance, this analysis strategically delves into various facets. By closely examining user engagement, identifying critical drop-off points in the user journey, discerning optimal marketing priorities, fine-tuning age-based targeting, and proposing a nuanced price-surging approach, our objective within this report is to provide a comprehensive overview that informs targeted improvements for the ride-sharing platform.

Key Insights:

Drop-off Point Analysis: A significant drop-off point is identified during the transition from ride requests to completed rides, indicating a need for targeted intervention in this phase.

Platform Distribution: iOS emerges as the dominant platform, while Android and web platforms demonstrate comparable conversion rates, underscoring the importance of a balanced marketing allocation.

User Age Dynamics: Users aged 35-44 are identified as the most active demographic. However, the presence of incomplete age information presents an opportunity for valuable data completion.

Peak Hour Price Surging: Price surging during peak hours, specifically between 8-10 AM and 3:30-6 PM, emerges as a promising strategy to maximise revenue for Metrocar.

Recommendations:

Enhanced User Onboarding: Initiate improvements to the user onboarding processes to elevate overall user engagement and satisfaction.

Strategic Marketing Allocation: Prioritise marketing efforts on iOS, while strategically maintaining a robust presence on Android and web platforms.

Peak Hour Price Surging: Implement a price-surging strategy during peak hours, specifically between 8-10 AM and 3:30-6 PM, to optimise pricing strategies and maximise revenue.

Real-time Notifications: Introduce a real-time notification system to keep users informed and engaged throughout their Metrocar journey.

User Feedback Integration: Promote the collection of user feedback to gain valuable insights and promptly address any emerging issues.

Dedicated Funnel Group: Establish a dedicated funnel group for rides to meticulously investigate and enhance conversion rates, ensuring a streamlined user experience.

Incentivise Age Information Completion: Create incentives for users to complete their age information, enhancing the platform's targeting capabilities.

Targeted Promotions for Age Group: Direct marketing initiatives towards the 25-34 age group and tailor promotions based on age demographics to boost user engagement.

Possible Limitations:

- The recommendations presented are derived from preliminary findings and necessitate real-world testing for comprehensive validation.
- External factors, including market conditions and seasonal trends, may exert influence, potentially impacting the anticipated outcomes.

Conclusion:

Addressing these recommendations holds the potential to significantly elevate Metrocar's performance by boosting user satisfaction, refining the user journey, optimising marketing resource allocation, and tailoring services to diverse age groups. Grounded in data-driven strategies, these proposed enhancements aim to position Metrocar for increased success and competitiveness within the dynamic ride-sharing market.

Introduction

In this report on the analysis of Metrocar's ride-sharing platform I will discuss why it was undertaken and what we hoped to gain. The exploration focuses on five pivotal business objectives, each meticulously designed to unlock key insights and drive strategic enhancements:

Funnel Optimisation:

Delving into the user journey from Download and Signups to Rides Requested and Rides Completed, our objective is to identify drop-off points and calculate conversion rates for targeted improvements.

Drop-off Points:

Our mission is to pinpoint specific obstacles or disengagement points within the user journey, enabling the development of targeted strategies for enhancement.

Platform Prioritisation:

Determining the most promising platforms—Android, iOS, or web—will guide your marketing efforts and resource allocation for optimal effectiveness.

Age-Based Targeting:

Our analysis aims to discern the performance of different age groups at various stages, facilitating more precise and effective marketing initiatives.

Surge Pricing Strategy:

Exploring the adoption of surge pricing during peak demand hours, we will assess its potential as a revenue enhancement avenue.

This in-depth analysis serves as the foundation for data-driven strategies, ensuring user satisfaction, conversion rate optimisation, and a competitive edge in the dynamic ride-sharing market.

Methodology and Approach

Here we delve into the application of a funnel analysis technique within Metrocar, aimed at gaining insights into specific moments when users either engage or lose interest in the platform.

Data Transformation and Aggregation:

The initial dataset encompasses 23,608 unique users and 385,477 ride requests. To extract impactful insights, systematically aggregating and extracting data via PostgreSQL. In doing so I was able to extract user counts for each funnel step and aggregate by age and device type, simplifying raw data into manageable common tables for each step of the funnel.

Key Metrics Measured:

- Funnel Stage
- User_id (Distinct users)
- Platform (Android/iOS/Web)
- Age Range (18-24, 25-34, 35-44, 45-54, or Unknown)

Funnel Stages for Analysis:

The analysis is divided into across the funnel steps, utilising the metrics mentioned above to pinpoint critical user drop-off points. This approach provides a comprehensive understanding of each funnel stage, with multiple unique metrics designed to reveal user behaviour.

Each funnel stage offers distinct data insights, contributing to a more informed decision-making process by helping us identify and understand user behaviour effectively. For instance during my exploratory analysis I used the count of cancellations and the amount of USD spent across a monthly period to identify if there was any seasonal changes in consumer behaviour.

Insights from Analysis

I will expand upon the insights from our funnel analysis. I shall clarify my interpretation of the data and make recommendations via strategic points for the marketing team's attention. Additionally, we will pinpoint the most prominent drop-off point in our user journey.

Furthermore, an overview of issues pertaining to user ‘yes/no’ behaviour and potential anomalies, such as activities from users or drivers that do not culminate in registered payments. Addressing these concerns is important to enable the personalisation of our services and offers. Moreover, this analysis will serve as the point of reference for amending our identified issues and ensuring the accuracy and completeness of our records.

Funnel Groups

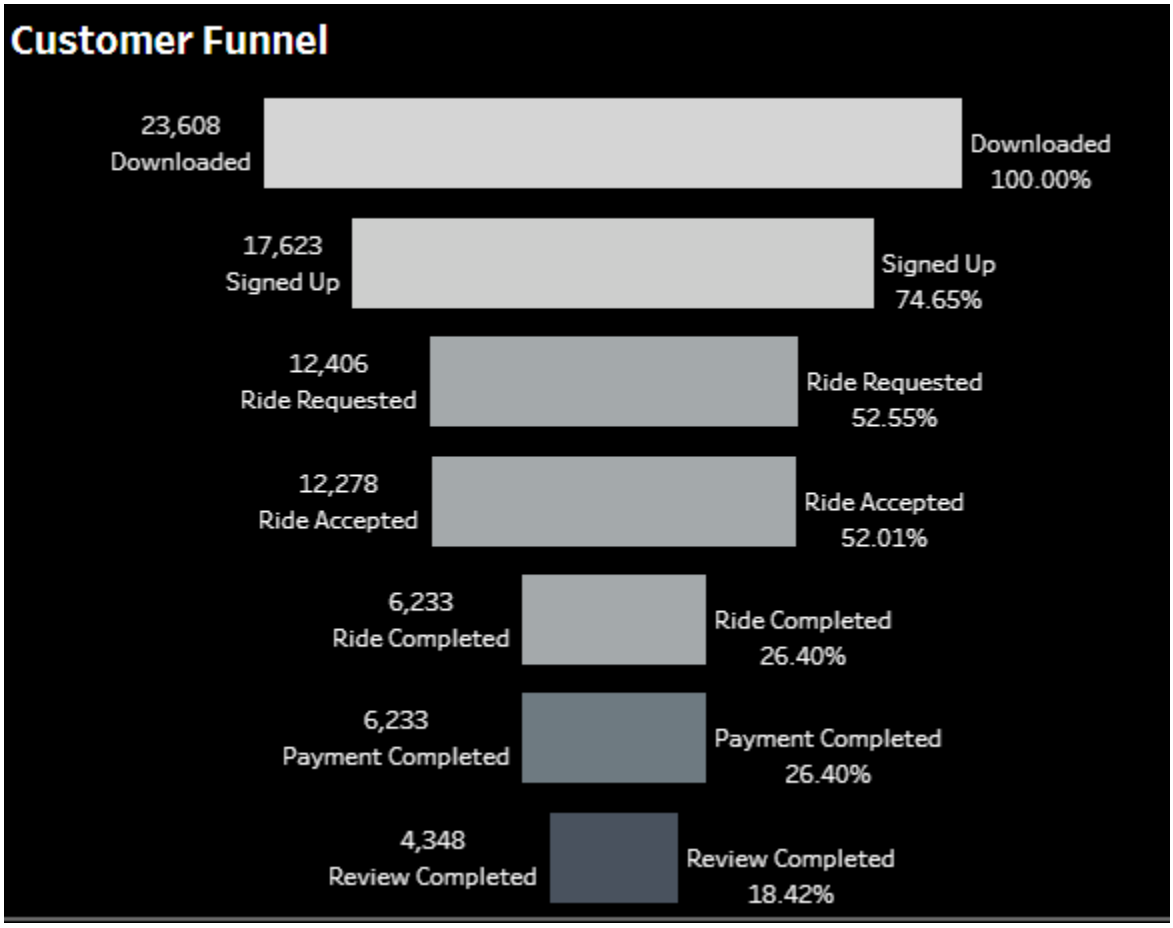
In this section, I introduce our funnel group aimed at affording a nuanced understanding of user interactions within our application. These visual representations serve to provide profound insights into the progression of users through key stages.

User Funnel Group:

The User Funnel Group elucidates the numerical count of users at each stage of the process and meticulously tracks their conversion rates as they transition from one step to the next. The graphical representation on Tableau proves invaluable for identifying potential disengagement points among users and optimising these pivotal junctures in the user journey.

Note: To facilitate a more immersive experience, I recommend using the Tableau Dashboard linked in the ReadMe file.

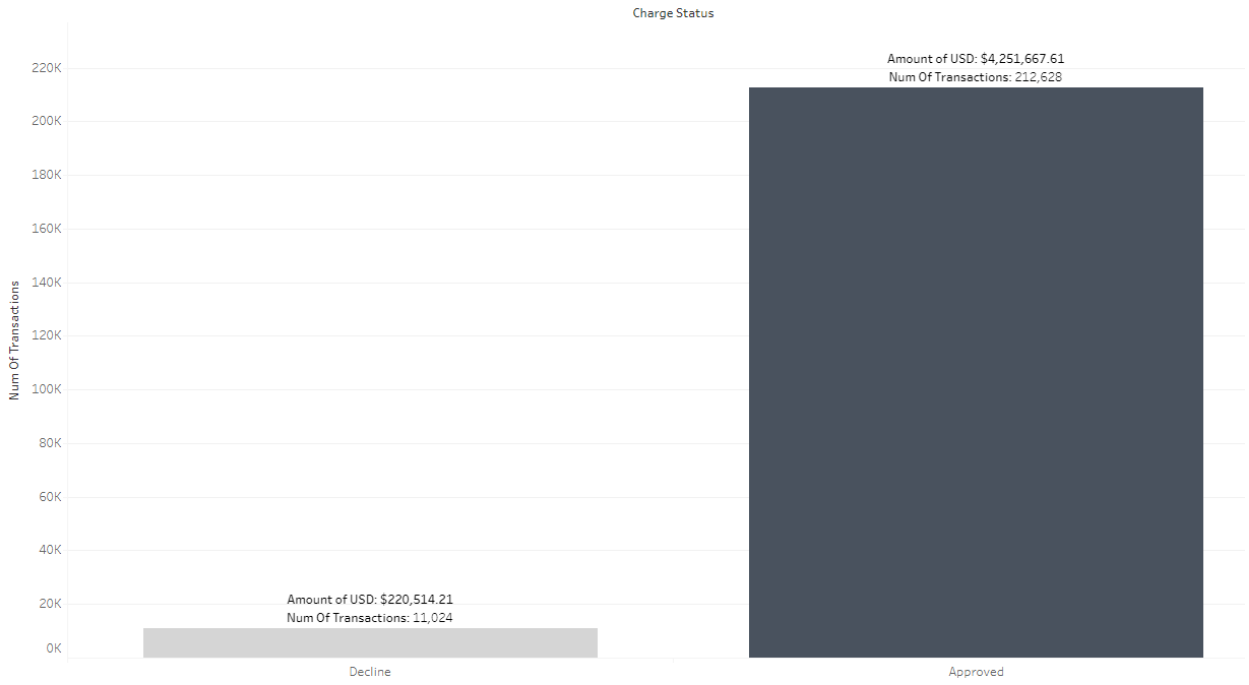
Key Drop Of Points



Overview of our drop of statistics:

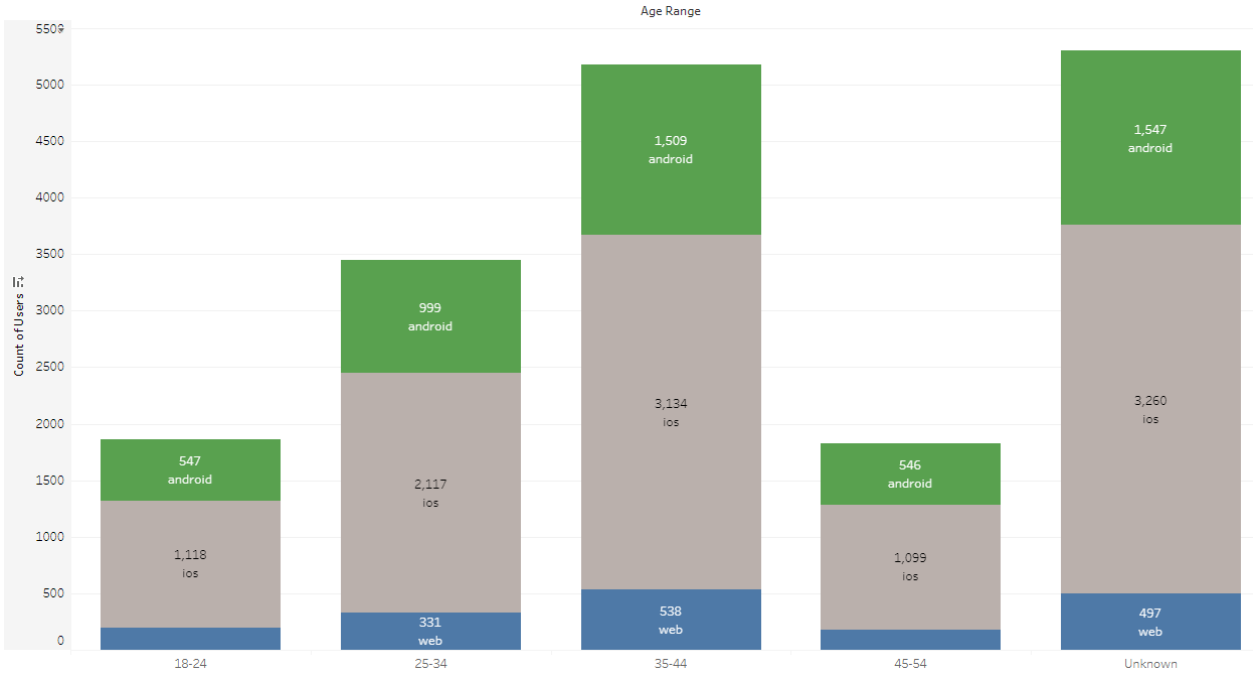
- We lost 25.35% of our Total Users from the previous step, Download to the Signed Up step.
- Then we lost 29.60% of our users from those who had signed up but never requested a ride(Maybe the app is not user friendly?)
- We then lost 128 users who had requested a ride but never had one accepted. Did we not have enough drivers to facilitate this?
- We then lose 49.23% of our users from the previous step having their ride accepted but never completed. This could be due to an error in the app or that they had their initial ride accepted and then cancelled while subsequently not being able to find another ride.
- We lose 30.24% of our users from the previous step, who made it to Payment Completed but never left a review. This can be detrimental to our business as without having this feedback we miss out on understanding our customers behaviours further.
- 18.42% of Users make it from downloading our app, to completing a ride and paying for it then leaving a review.

Amount of Missed Revenue



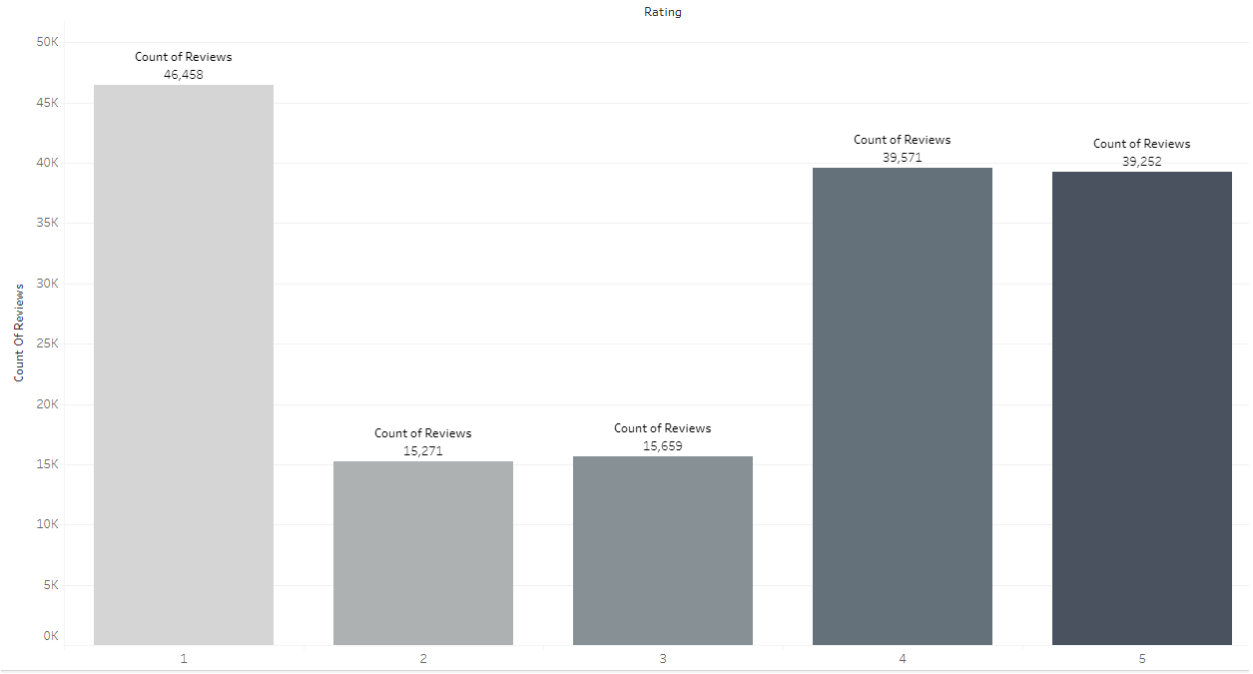
One issue we found was that 11,024 transactions did not go through. This resulted in $220,514.21 of missed revenue for the business. This could be due to a multitude of reasons, whether that is a technical fault in the app, declined cards or cancelled transactions. Despite this, it raises serious financial concerns and should be a priority to fix. If this continues it will continue to be a drain on Metrocar’s finances.

Age Group Distribution and Missing Data:



The graph above shows our largest age group are users falling within the 35-44 years old age group on all platforms. A noteworthy observation pertains to the considerable quantity of users who have refrained from disclosing their age, surpassing the count within the 35-44 years old category. This absence of data might indicate pivotal information that eludes us, particularly as these users have chosen not to divulge their age.

Review Scores:



The ratings for the drivers/rides averages a score of 3.06, this alone is not an awful score but when we view the counts for each rating level a problem arises. The most prominent is a 1 which is the lowest rating a user can give.

Recommendations

Funnel Analysis:

User Engagement:

User Onboarding: Enhance the user onboarding process to guide new users effectively through the platform. Provide clear and concise instructions on how to request a ride, make payments, and resolve common issues.

Real-time Notifications: Implement real-time notifications to keep users informed about the status of their rides. Alerts for ride acceptance, driver arrival, and payment processing can improve user engagement.

Feedback Mechanism: Encourage users to provide feedback after each ride. Create a seamless in-app feedback mechanism that allows users to share their experiences, rate drivers, and suggest improvements.

User Rewards: Develop a rewards system for users who consistently complete feedback after their rides, so we can better understand our user base. Offer incentives such as discounts or loyalty points to encourage participation.

Platform Emphasis: Allocate more resources and marketing budget to the iOS platform, which has the highest user base. However, do not neglect Android and web platforms, as they exhibit similar conversion rates.

Data Anomalies:

Real-time Data Validation: Implement real-time data validation for payments and ride completion. Ensure that payment transactions are accurately recorded, any anomalies are immediately flagged for investigation.

Transaction Tracking: Create a tracking system that follows each ride's transaction status. If a ride is marked as completed but no payment is recorded, the system should automatically initiate a verification process.

Price-Surging Strategy:

Optimal Time Frames: Implement a price-surging strategy during peak hours, particularly from 8-10 AM and 3:30-6 PM daily. The data supports this approach as it aligns with a substantial increase in ride requests during these time periods.

User Demographics:

Age-Based Targeting: Leverage age demographics to inform marketing strategies. Users aged 35-44 years old are the most active across all platforms. However, consider the significant number of users who have not provided their age, which could provide valuable information.

Secondary Age Group: The 25-34 age group is the second-largest in terms of users and represents a relevant target audience. Implement discounts and engagement activities to cater to this demographic.

Data Completion Reward: Incentivise users to complete their age and profile information by offering a one-time reward or discount. This encourages users to provide more detailed information, which can be valuable for personalised marketing and services.

Personalized Promotions: Use the completed data to tailor promotions and offers to specific age groups. For example, create age-specific discounts or offers to appeal to different demographics.

In-App Progress Tracker: Implement an in-app progress tracker that shows users how much information they've completed. Users can see their profile's completeness and the associated rewards they can unlock by filling in missing details.

User Reward Programs:

Loyalty Programs: Create a loyalty program that rewards users who complete a certain number of rides. Offer discounts, cashback, or exclusive benefits for users who reach specific milestones, such as 10 rides or more.

Personalised Offers: Use data from the user's previous rides to provide personalised offers and promotions. Offer discounts for their most commonly visited locations or during times when they usually request rides.

Referral Programs: Encourage users to refer friends and family to the platform. Reward both the referrer and the referee with discounts or credits.

Subscription Plans: Introduce subscription plans that offer benefits like discounted rides, priority access to drivers, and fixed rates for frequent users.

Advanced Features: Consider introducing advanced features that are only available to users with a certain number of rides. Features could include custom route planning or pre booking during peak hours without surge pricing.

Surprise and Delight: Occasionally surprise loyal users with unexpected perks, such as free rides, upgraded vehicles, or exclusive access to events.

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Backend Improvements:

Driver & User Monitoring: Implement a structured system for monitoring user behaviour through their chats and ratings. Allow drivers to rate users to report problematic users, enhancing driver safety and user accountability.

Anonymous Reporting: Create a feature that allows users to report problematic behaviour by other users or drivers while maintaining anonymity.

Feedback Mechanism for Cancellations: Create an option for users to provide detailed feedback when they cancel a ride.

Incentives and Promotions: Implement a range of incentives and promotions to encourage users to complete their rides. Diversify payment methods and enhance user experience.

Review-Based Incentives: Introduce review-based incentives for both users and drivers. Users who consistently provide detailed and constructive reviews can earn credits or discounts. Drivers who receive positive reviews should also receive additional benefits.

Data-Driven Offers: Use the review data to tailor promotions. An example could be to offer users discounts based on the feedback they've provided. This demonstrates that you value their input and encourages them to continue sharing.

Performance Bonuses: Consider performance-based bonuses for drivers who maintain high ratings. These bonuses can serve as extra motivation to provide exceptional service.

Safety Measures: Communicate safety features, including driver background checks and user verification processes.

Marketing and Awareness: Run targeted marketing campaigns and explore partnerships to expand your user base.

Database Enhancements for Reviews:

Add User Feedback Fields: Expand the reviews database by adding fields that capture specific feedback categories. For example, include fields for "driver behaviour," "cleanliness,"

"timeliness," etc. This structured data can be used for in-depth analysis and targeted improvements.

Sentiment Analysis: Implement sentiment analysis for review text to automatically classify feedback as positive, neutral, or negative. This can help identify recurring issues and prioritise areas for improvement.

User and Driver Identifiers: Ensure that reviews are linked to the correct user and driver profiles. This enhances transparency and enables the platform to address specific issues more effectively.

Implement A/B Testing for Major Changes:

A/B testing, also known as split testing, is a method for comparing two versions of a web page or application to determine which performs better. It's a valuable tool to assess the impact of changes and to gradually roll out significant adjustments while minimising disruptions and ensuring user and driver buy-in.

Why A/B Testing?

Gradual Transition: A/B testing allows changes to be rolled out to a subset of users while keeping the current version active for others. This ensures a gradual transition and minimises the risk of sudden, disruptive changes.

Data-Driven Decision Making: A/B testing provides quantitative insights into how users and drivers react to specific changes. It helps in understanding user behaviour and preferences, which is vital for informed decision-making.

Risk Mitigation: By testing changes on a smaller scale first, it's possible to identify and address issues or unintended consequences before a full-scale implementation. This mitigates the risk of major disruptions.

User and Driver Feedback: A/B testing can be combined with user feedback collection to gather qualitative insights into user and driver sentiments about the changes.

Implementation Steps:

Identify the Changes: Clearly define the changes you intend to make, whether it's related to user onboarding, real-time notifications, incentives, or any other aspect.

Segmentation: Segment users and drivers into groups, where one group experiences the changes (Group A) while the other group continues with the existing system (Group B).

Measure and Analyse: Gather data on user and driver behaviour, user satisfaction, conversion rates, and other relevant metrics for both groups.

Iterate: Based on the data and feedback from the A/B test, iterate and refine the changes. You can make adjustments and test again if necessary.

Full Rollout: Once you are confident in the changes and have optimised them through A/B testing, implement them across the entire user and driver base.

Change Management Considerations:

Communication: Keep users and drivers informed about the A/B testing process and the changes being tested. Clear communication helps manage expectations and reduce uncertainty.

Feedback Collection: Encourage users and drivers to provide feedback during the A/B testing phase. Their input can be valuable for making adjustments.

User Training: If changes significantly impact the user experience, provide training materials or resources to help users adapt.

Monitoring and Support: Continuously monitor user and driver reactions during the A/B testing. Be prepared to provide support and address issues promptly.

Data Privacy: Ensure that any data collected during A/B testing is handled in compliance with privacy regulations.

A/B testing can be a powerful change management tool, enabling a data-driven and user-centric approach to implementing significant changes. It ensures that changes are well-received, and any challenges are identified and addressed in a controlled manner, ultimately leading to a smoother transition and better user and driver acceptance.

These comprehensive recommendations encompass key areas for improvement, ensuring user satisfaction, retention, and safety while driving platform growth and success.

Conclusion

In this comprehensive analysis focused on passenger/user interactions, we've identified critical areas for improvement in the user journey. Visual representations of User Funnel Groups highlight the need to refine onboarding, introduce real-time notifications, and establish a seamless feedback mechanism. Attention to platform emphasis, particularly on iOS, and addressing data anomalies like payment irregularities is crucial for enhancing accuracy.

Adopting a pricing strategy during peak hours (8 - 10 AM and 3:30 - 6 PM) is recommended. Demographic insights, specifically targeting the active 35 - 44 age group and ensure we capture every users age, present opportunities.

User satisfaction, with a combined average rating for completed rides at 3.06, indicates room for improvement. Establishing a continuous feedback loop and incorporating key performance indicators based on user ratings can enhance the user experience.

Implementing user reward programs, including loyalty initiatives, personalised offers, referral programs, and advanced features, can foster engagement.

Safety measures, such as user verification processes, targeted marketing campaigns, and database enhancements for sentiment analysis and specific feedback categories, are essential.

In conclusion, these recommendations offer a holistic approach to enhance user satisfaction, improve retention, and ensure a secure environment. Addressing these key areas positions us for growth and success, aligning with both technical and non-technical perspectives, from the analytics team perspective.