Cab Data Analysis Report

July Edition

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Executive Summary

This report presents a comprehensive analysis of cab booking data for the month of July. It aims to uncover key patterns and insights around user behavior, booking timelines, cancellation trends, location-specific activity, and vehicle-type preferences.

The purpose of this analysis is to assist stakeholders in identifying operational gaps, improving service quality, and optimizing driver allocation and platform responsiveness. The insights are drawn from detailed visualizations built using Power BI, capturing both macro and micro trends across time, geography, and usage modes.

The report is structured into the following key sections:

- **Time-Based Booking Trends:** Identifying how booking and cancellation activity varies across different hours of the day.
- **Location Insights:** Evaluating which pickup points experience the highest cancellation rates and success ratios.
- **Cancellation & Vehicle Analysis:** Understanding the root causes of customer cancellations and how booking outcomes differ by vehicle type.

Each section is accompanied by visual evidence and narrative interpretation, followed by strategic recommendations for enhancing performance. All findings are derived from internal booking logs and visual analytics dashboards, ensuring both accuracy and actionability.

This analysis is designed to serve as a data-driven foundation for service enhancement and decision-making by the operations, product, and customer experience teams.

Executive Summary

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1 Time-Based Booking Trends

1.1 Booking Patterns and Customer Cancellations Across Hourly Slots

Introduction

Understanding when customers engage most actively with the cab service is pivotal for demand forecasting, operational readiness, and customer experience optimization. This section explores booking patterns across different time slots, alongside cancellation rates, with the aim of uncovering behavioral trends and service gaps that may influence ride fulfillment.

Visual Overview

The chart is rendered using a **stacked column and line chart combination**, offering both volume and trend comparison in a single view:

- **X-axis:** Segmented hourly time ranges (*e.g., 00:00–03:00, 03:00–06:00, etc.*)
- **Primary Y-axis (Yellow Bars):** Total ride bookings per time slot
- **Secondary Y-axis (Black Line):** Customer cancellations per time slot

This visualization style ensures clarity in identifying not only how much booking activity is happening during each period but also how cancellation behaviors fluctuate across the same window.

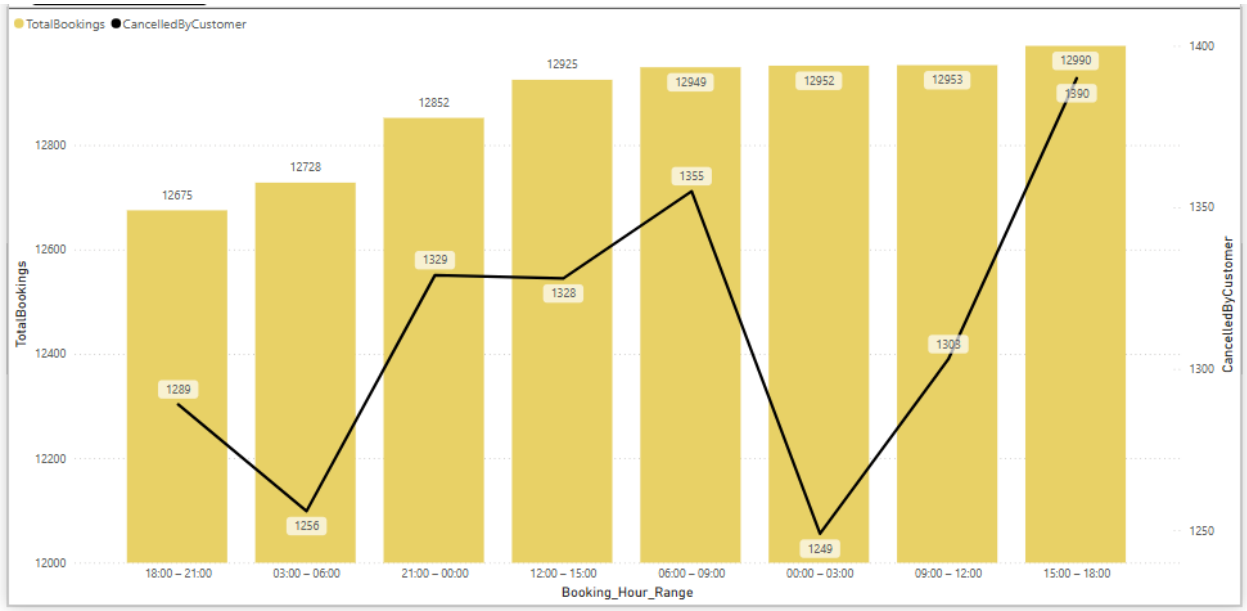

Figure 1: Booking Trends and Customer Cancellations Across Time Slots

Narrative Interpretation

1. Late Night Commitment (00:00–06:00): Despite being off-peak hours, this period records relatively low booking volume — the lowest among all slots. However, what stands out is the consistently **low cancellation rate**, implying that users booking during these hours are more decisive and dependent on the service. This could reflect essential travel like airport commutes or emergencies, where users exhibit higher booking commitment.

2. The Quiet Rush (06:00–12:00): Interestingly, while booking volume surges slightly during early office hours, customer cancellations begin to increase. This may point to a growing mismatch between user urgency (e.g., commuting to work) and service reliability — perhaps due to limited driver availability or delayed pickups. There's a potential need to reinforce driver supply in this window to curb friction.

3. The Critical Peak (15:00–18:00): This time slot emerges as a dual-edged sword — it witnesses the **highest number of bookings** (12,990) and simultaneously, the **highest cancellation rate** (1,390). The disparity indicates high intent but unmet expectations, possibly due to peak-hour delays, app congestion, or traffic-related uncertainties. This is a strong signal for the business to explore dynamic pricing, surge deployment, or real-time communication features.

4. Dwindling Evenings (18:00–21:00): Despite aligning with the evening return window, this period surprisingly registers one of the lowest booking counts. This could point to regional safety concerns, pricing dissatisfaction, or preference for alternate transport modes. Yet, cancellations remain moderately high, indicating demand does exist — but confidence in service delivery may be lacking.

5. Night Uncertainty (21:00–00:00): Bookings show a modest pickup again, but cancellations remain stubbornly high. This pattern implies possible user indecision, safety-related hesitations, or last-minute changes. The business could benefit from customer reassurance strategies, like driver verification visibility, ETA precision, or customer rewards for nighttime reliability.

Key Observations and Strategic Recommendations

- **Mismatch Alert:** Peak booking times align with peak cancellations. Operational optimization during 15:00–18:00 is essential.
- **Consistency Counts:** Stable slots (e.g., 09:00–12:00) show manageable cancellation trends — a benchmark for service quality.
- **Reinforcement Opportunity:** Strengthen driver availability and reduce response time especially between 06:00–09:00 and 15:00–18:00.
- **User Confidence Measures:** Introduce proactive ride confirmations, loyalty offers, or estimated wait-time guarantees during night hours to reduce last-minute drop-offs.

Conclusion

Time-of-day booking analysis provides a rich lens into user intent and behavioral response. While peak slots represent high business opportunity, they also demand operational finesse. This chart not only uncovers gaps but opens avenues for strategic service innovation, enhancing both customer satisfaction and operational throughput.

1.2 Daily Booking Status Variation

Introduction

Customer interactions vary significantly throughout the week. Understanding booking outcomes — especially cancellations versus successful rides — is essential to detect user behavior trends, platform reliability perception, and driver responsiveness patterns. This analysis uses a weekday-based view to capture the evolution of booking statuses across the week.

Visual Overview

The chart used is a **Ribbon Chart**, where each ribbon segment represents a different booking status over the days of the week:

- **X-axis:** Weekdays (Monday through Sunday)
- **Y-axis:** Count of booking status occurrences
- **Ribbons:**
  - **Green:** Successful bookings
  - **Yellow:** Cancellations by customers
  - **Red:** Cancellations by drivers

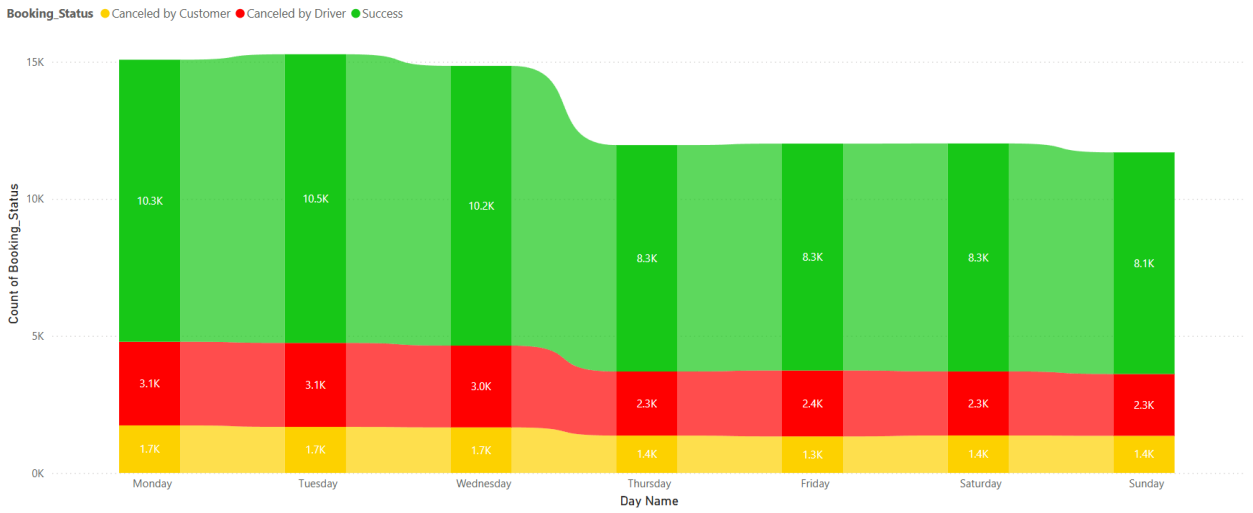

Figure 2: Daily Booking Status Variation (Ribbon Chart)

Narrative Interpretation

Monday to Wednesday – Stable Ride Outcomes: The early week period shows relatively stable successful ride counts with minor fluctuations. Monday starts strong with **10,290 successful bookings**, and slight increases and drops on Tuesday and Wednesday indicate consistent engagement. Cancellation rates remain somewhat flat, with both customer and driver cancellations showing little variation, suggesting a predictable early-week pattern.

Thursday Disruption – A Sudden Downturn: Thursday stands out as a **critical dip** across all metrics:

- Success rate drops sharply by 19.05% from Wednesday.
- Driver cancellations plummet by 21.68%, indicating possible fleet shortage or disengagement.
- Customer cancellations also decrease by 17.93%, which may be reactive to reduced ride availability or delays.

This could imply a systemic issue — such as driver absenteeism, regional disruption, or tech downtime — affecting service reliability on Thursdays.

Weekend Stabilization – Rebalancing Begins: From Friday onward, success rates start to stabilize again with minimal changes:

- Friday and Saturday hover around 8,300 successful rides.
- Minor positive/negative shifts in cancellations suggest weekend behavior is steady.

Customer and driver cancellation patterns remain relatively unchanged, highlighting weekend user expectations and habitual patterns.

Sunday Conclusion – Minor Drop, Moderate Stability: Sunday reflects a modest decline in success (-2.78%) and continued drop in cancellations. This consistency suggests Sunday behavior is habitual and service reliability remains acceptable.

Key Observations

- **Thursday is a red flag:** All statuses drop significantly, hinting at a platform- or driver-side issue.
- **Monday to Wednesday:** Stable demand with manageable cancellations — ideal for setting operational benchmarks.
- **Driver cancellation dips are correlated:** A drop in driver activity appears to impact overall service confidence and customer behavior.
- **Weekends are predictable:** Lower fluctuation and volume consistency imply users behave more routinely on weekends.

Recommendations

- Investigate Thursday disruptions — analyze root causes like driver attendance logs, app downtime, or regional issues.
- Use Monday-Wednesday as benchmark for performance tuning across other days.
- Enhance Thursday operational preparedness through early driver reminders, surge mechanisms, or ride incentives.

Conclusion

Weekly booking status analysis using a ribbon chart uncovers day-to-day platform dynamics. The most actionable insight — a service gap on Thursdays — emerges as an opportunity for targeted resolution. Consistency across weekends reinforces the trust built into the service, which should be extended to volatile mid-week periods.

2 Location Insights

2.1 Top Cancel-Prone Locations by Riders

Introduction

Pickup location plays a critical role in determining the likelihood of a successful ride. This chart identifies specific localities where riders (drivers) frequently cancel rides, shedding light on geographical service issues — such as traffic constraints, rider no-shows, or perceived inconvenience.

Visual Overview

The following chart is a **Stacked Bar Chart**, displaying booking status distribution per pickup location:

- **X-axis:** Pickup locations (Top 10)
- **Y-axis:** Count of cancel by riders
- **Legend:** Red segment represents cancellations by riders

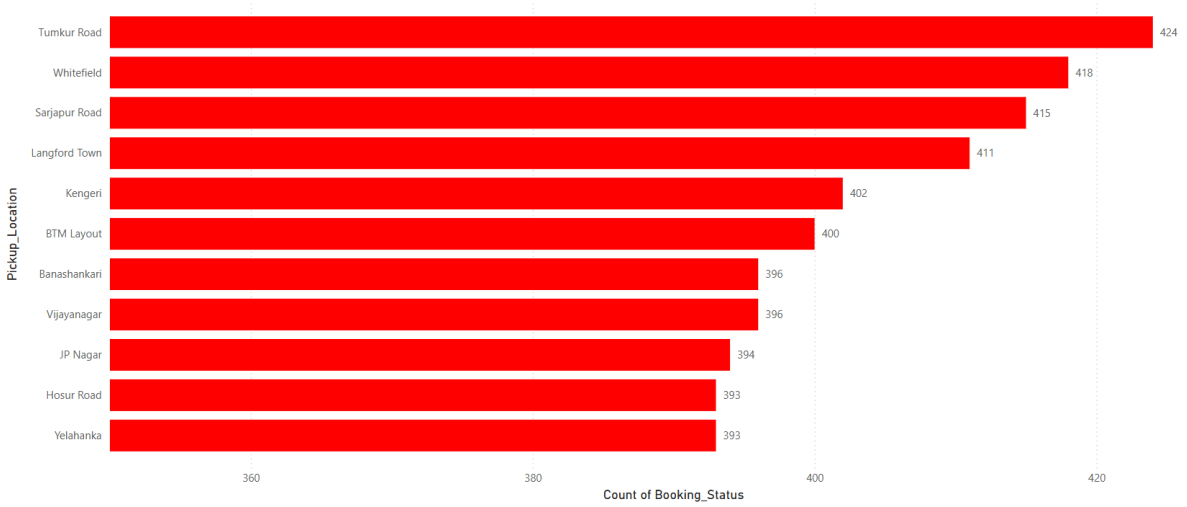

Figure 3: Top Cancel-Prone Locations by Riders

Narrative Interpretation

Top 3 Locations – High Cancellation Clusters:

- **Tumkur Road (424)**, **Whitefield (418)**, and **Sarjapur Road (415)** contribute nearly **20% each** to the total cancellations by riders.
- These areas likely experience logistical challenges such as distance-related hesitations, poor traffic flow, or high wait times for riders.

Bottom 3 Locations – Relatively Better Compliance:

- **Yelahanka, Hosur Road, and JP Nagar** each show slightly lower cancellation counts (393–394), accounting for around **19%** of total bookings.
- Though lower than the top 3, they still reflect room for improvement — particularly with awareness or incentives for reliable pickups.

Key Observations

- Rider cancellations are spatially concentrated — infrastructure bottlenecks or profitability gaps may be at play.
- The 1% delta between top and bottom locations highlights potential for targeted interventions rather than broad system changes.

Recommendations

- Analyze real-time feedback and GPS routing data for Tumkur Road and Whitefield.
- Introduce location-based bonuses for riders in high-cancel zones to boost service reliability.

2.2 Top Cancel-Prone Locations by Customers

Introduction

This section highlights the pickup areas where customers themselves tend to cancel rides more frequently. Such behaviors may stem from long wait times, lack of driver assignment, cost spikes, or personal indecision. Recognizing these hotspots enables the platform to strengthen customer confidence and reduce lost business.

Visual Overview

The chart below is a **Stacked Bar Chart** showcasing booking status counts across pickup locations:

- **X-axis:** Pickup locations (Top 10)
- **Y-axis:** Count of cancel by customers
- **Legend:** Yellow segment represents cancellations by customers

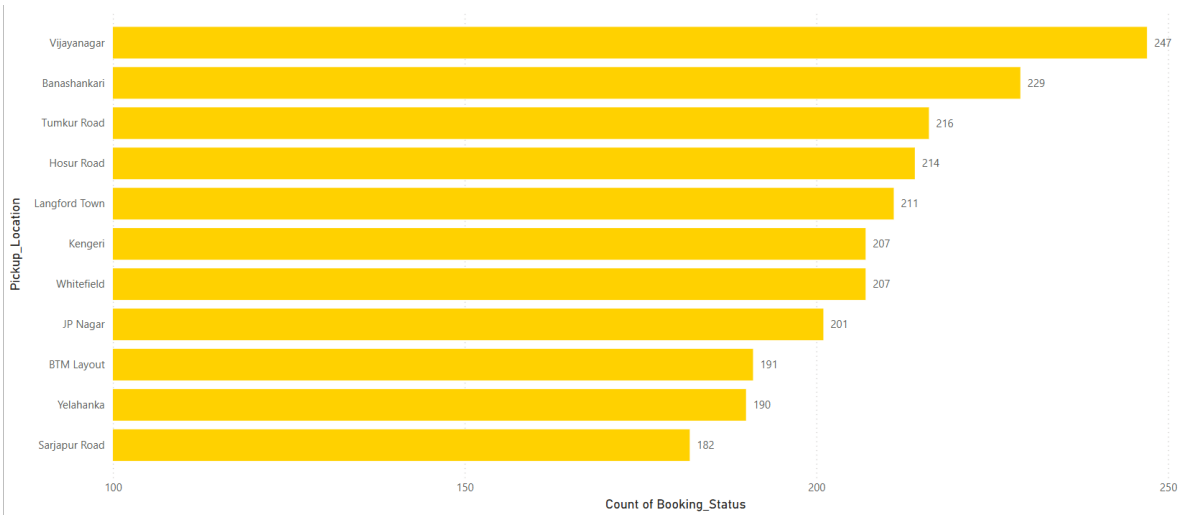

Figure 4: Top Cancel-Prone Locations by Customers

Narrative Interpretation

Top 3 Areas – Most Affected Zones:

- **Vijayanagar (247)**, **Banashankari (229)**, and **Tumkur Road (216)** top the list.
- Together, they contribute to **10–12% of total bookings** with customer-side cancellations.
- These cancellations may reflect weak last-mile connectivity, pricing fluctuations, or long ETA discouragements.

Bottom 3 – Relatively Reliable Zones:

- **BTM Layout (191)**, **Yelahanka (190)**, and **Sarjapur Road (182)** reflect relatively lower cancellation levels (**9% of bookings**).
- These areas may benefit from favorable routing conditions or better driver availability.

Key Observations

- Customer-side cancellations are more behaviorally diverse than rider-side ones.
- Presence of Tumkur Road in both top charts indicates a dual-side friction zone — needing joint resolution efforts.

Recommendations

- Introduce app nudges, ETA transparency, and dynamic fare visibility in high-cancel regions.
- Cross-reference cancellation logs with customer feedback to isolate common pain points.

Conclusion

Pickup location is a critical determinant of ride success. By identifying both rider- and customer-side cancellation zones, this page builds a dual-perspective view of spatial inefficiencies. These insights can drive better routing, pricing, and customer support strategies to uplift platform trust and booking conversion rates.

2.3 Booking Outcomes by Pickup Location

Introduction

This ribbon chart provides a composite view of the final booking status distribution across the top 10 pickup locations. It distinguishes between successful rides and various cancellation types to uncover operational gaps, customer pain points, and location-specific bottlenecks.

Visual Overview

The chart is a **Ribbon Chart** composed of the following:

- **X-axis:** Pickup Locations (Top 10 by total bookings)
- **Y-axis:** Count of bookings
- **Legend:**
  - Yellow: Canceled by Customer
  - Red: Canceled by Rider
  - Black: Driver Not Found
  - Green: Successful Rides

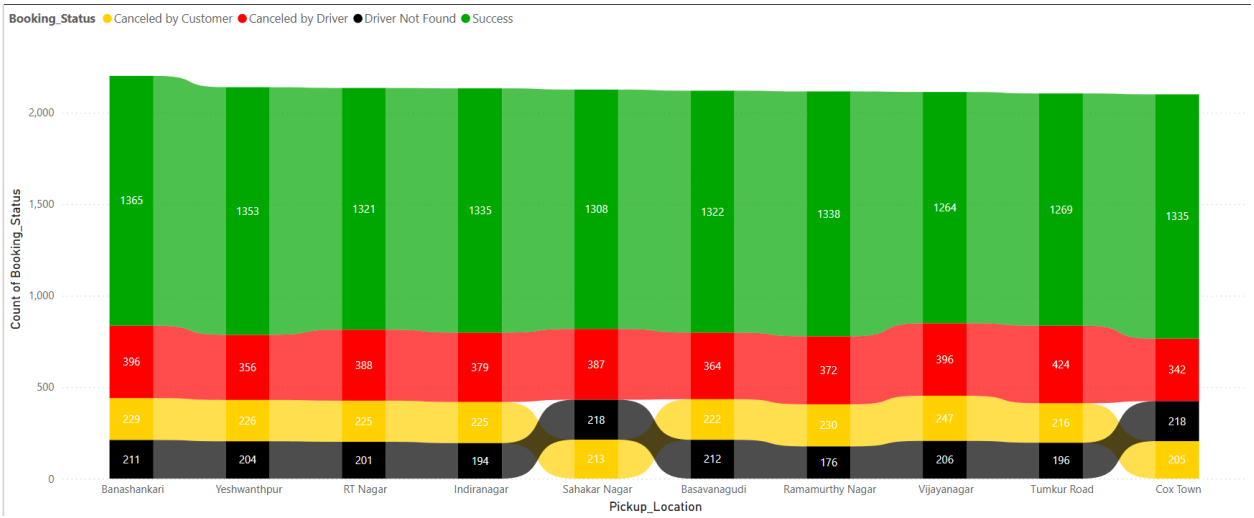

Figure 5: Booking Outcomes by Pickup Location

Narrative Interpretation

1. Success Rate Analysis

- **Top success zones:** Banashankari (1,365), Yeshwanthpur (1,353), Indiranagar (1,335), and Cox Town (1,335).
- These areas show strong ride completion, with success making up **more than 62% of total bookings**.
- **Vijayanagar and Tumkur Road** show the lowest success counts at 1,264 and 1,269 respectively, making up only 59–60% — indicating relatively poorer fulfillment rates.

2. Cancellations by Drivers (Red Segment)

- **Tumkur Road (424)** and **Vijayanagar (396)** top the list for rider-side cancellations — reinforcing earlier insights from Chart 1.
- **Lowest rider cancellations:** Cox Town (342) and Ramamurthy Nagar (372) — still notable, but slightly better.

3. Cancellations by Customers (Yellow Segment)

- **Highest:** Vijayanagar (247) and Ramamurthy Nagar (230)
- **Lowest:** Cox Town (205) and Sahakar Nagar (213)
- **Observation:** Sahakar Nagar shows a sharp drop in customer cancellations (213), possibly due to improved service or less indecision.

4. Driver Not Found Cases (Black Segment)

- **Highest:** Sahakar Nagar (218) and Cox Town (218) — a sudden spike in driver unavailability.
- **Lowest:** Ramamurthy Nagar (176), indicating better driver match rate or timing efficiency.
- This inverse trend (customer cancellations down, driver not found up) in Sahakar Nagar and Cox Town may point to **app glitches**, driver assignment errors, or timing mismatches.

Numeric Summary Table

Location	Success	Cancel (Customer)	Cancel (Driver)	Driver Not Found
Banashankari	1365	229	396	211
Yeshwanthpur	1353	226	356	204
RT Nagar	1321	225	388	201
Indiranagar	1335	225	379	194
Sahakar Nagar	1308	**213↓**	387	**218↑**
Basavanagudi	1322	222	364	212
Ramamurthy Nagar	1338	230	372	**176↓**
Vijayanagar	**1264↓**	**247↑**	396	206
Tumkur Road	1269	216	**424↑**	196
Cox Town	1335	**205↓**	342	**218↑**

Key Observations

- **Dual friction zones:** Tumkur Road and Vijayanagar rank poorly across multiple failure metrics.
- **Emerging anomalies:** Sahakar Nagar and Cox Town show a shift from customer-initiated cancellations to "driver not found" cases — hinting at evolving bottlenecks in supply.
- **Steady performers:** Banashankari and Yeshwanthpur maintain high success with balanced cancellation metrics — likely areas of strong app-driver coordination.

Recommendations

- Investigate real-time assignment gaps in Sahakar Nagar and Cox Town — validate app logic and ping frequency to drivers.
- Consider incentives or priority routing for drivers around Tumkur Road and Vijayanagar to reverse the cancellation tide.
- Maintain current efficiency models in Banashankari and Yeshwanthpur as benchmarks for replication.

Conclusion

This chart delivers a granular, multidimensional view of pickup location performance. By evaluating four booking outcomes simultaneously, it reveals both consistent performers and hidden vulnerabilities. Targeted improvements based on these insights can significantly raise the ride fulfillment ratio across key hotspots.

3 Cancellation Reasons & Vehicle Insights

3.1 Top Reasons for Customer Ride Cancellation

Introduction

Customer ride cancellations offer direct insight into pain points, service gaps, and behavioral patterns that can degrade customer satisfaction and loyalty. This chart analyzes the most cited reasons for cancellations, filtered exclusively for rides marked with the "Canceled by Customer" status.

Visual Overview

This is a **Stacked Bar Chart** depicting:

- **X-axis:** Cancellation Reasons (as mentioned by customers)
- **Y-axis:** Count of Booking IDs (representing number of cancellations)

- **Filter Applied:** Only includes bookings where the status is "Canceled by Customer"

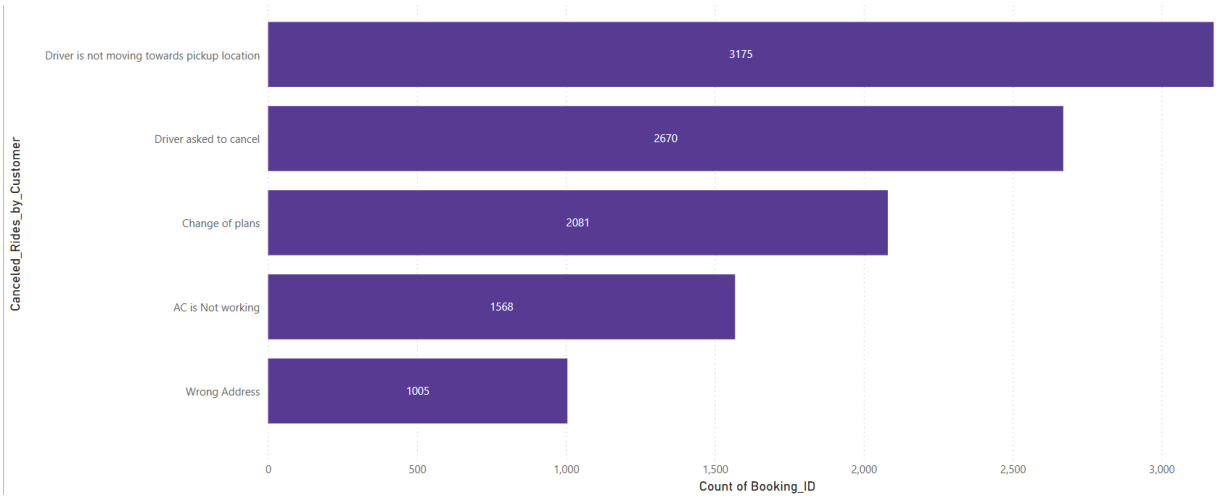

Figure 6: Top Reasons for Customer Ride Cancellation

Narrative Interpretation

1. Driver Not Approaching Pickup (3,175 cancellations) This is the most common reason for ride cancellations, contributing nearly **30% of all customer cancellations**. It suggests a disconnect between app ETA visibility and actual driver behavior, leading to passenger frustration and ride abandonment.

2. Driver Asked to Cancel (2,670 cancellations) Another major driver-side issue, this accounts for over **25% of cancellations**. It likely stems from drivers selectively accepting bookings based on location or payment mode, which creates poor passenger experience and erodes trust in the platform.

3. Change of Plans (2,081 cancellations) This is the top customer-initiated reason (nearly **20%**), indicating spontaneous changes in need, scheduling, or decision. While less addressable operationally, nudging features like "Schedule Later" or rescheduling flexibility might help retain such users.

4. AC is Not Working (1,568 cancellations) With **15% share**, this suggests users are specifically booking AC-enabled vehicles and canceling if the expectation isn't met. It reflects increasing demand for service quality rather than just ride availability. Transparent vehicle condition tagging or post-booking vehicle detail display may help.

5. Wrong Address (1,005 cancellations) Nearly **10%** of customer cancellations are due to incorrect pickup locations, likely caused by map pinning errors, GPS mismatches, or manual address entry confusion. App improvements in geolocation accuracy and confirmation prompts could significantly reduce this.

Numeric Breakdown

Cancellation Reason	Count of Booking IDs	Share of Total (%)
Driver is not moving towards pickup location	3,175	30.2%
Driver asked to cancel	2,670	25.4%
Change of plans	2,081	19.8%
AC is Not working	1,568	14.9%
Wrong Address	1,005	9.6%
Total	**10,499**	100%

Key Observations

- **Over 55% of customer cancellations** stem from driver behavior (not moving toward pickup or asking customer to cancel).
- **AC-related issues** are surprisingly significant, underscoring quality expectations even in short urban rides.
- **"Wrong Address" errors** indicate opportunity for app-level UX improvements or smarter pin detection.

Recommendations

- Implement a **driver accountability metric** to track those who frequently cause cancellations.
- Launch a **"Report Vehicle Condition"** option tied to driver profiles to crowdsource vehicle maintenance checks.
- Introduce an **address confirmation prompt** before booking to reduce geolocation errors.
- Offer a **rescheduling suggestion popup** for users who select "Change of Plans" to reduce total drop-off rate.

Conclusion

Customer cancellations offer a clear voice into operational weaknesses. By addressing driver-side issues and UX pain points like vehicle conditions and address errors, the platform can drastically reduce cancellation rates, enhance trust, and improve ride fulfillment ratio.

3.2 Booking Outcomes by Vehicle Type

Introduction

Vehicle type plays a critical role in determining ride outcomes, affecting everything from customer expectations to driver behavior. This chart evaluates how different vehicle categories perform in terms of booking success and cancellation outcomes, providing operational insight into vehicle-level service consistency.

Visual Overview

The visualization is a **Ribbon Chart** showcasing:

- **X-axis:** Vehicle Types (sorted by total booking volume)
- **Y-axis:** Count of bookings per status
- **Legend:**
  - Green: Successful Rides
  - Red: Canceled by Customer
  - Yellow: Canceled by Rider
  - Gray: Driver Not Found

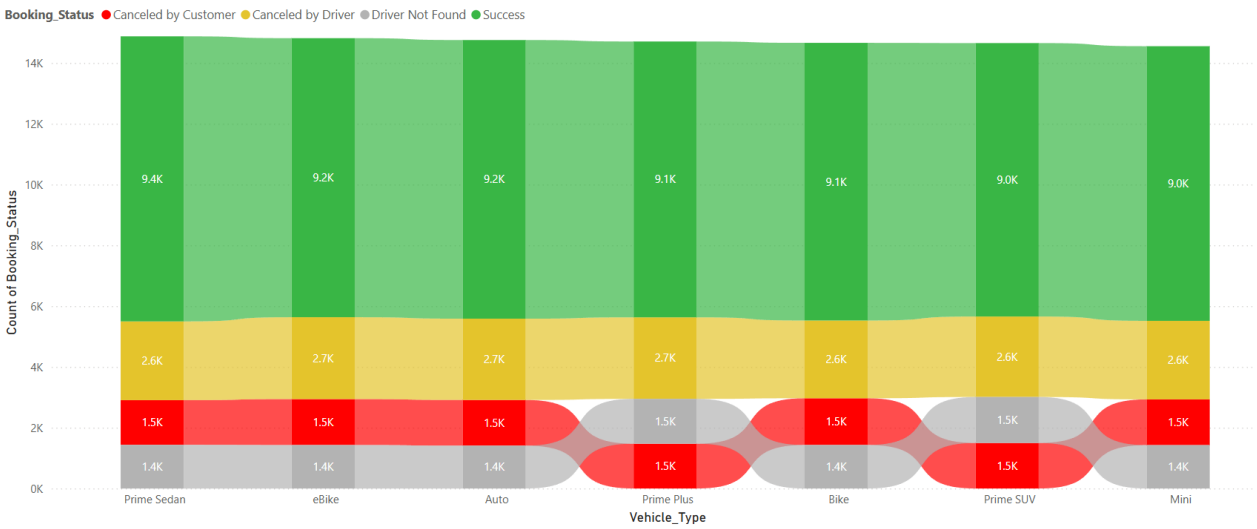

Figure 7: Booking Outcomes by Vehicle Type

Narrative Interpretation

Top 3 Booking Volume Segments:

- **1. Prime Sedan (14,877 bookings):** Holds the highest success count (9,379). Notably, it maintains a lower "Driver Not Found" rate (1,437), reflecting a relatively stable fulfillment pattern. Cancellations by customer are also among the lowest.
- **2. eBike (14,816 bookings):** Slightly behind Prime Sedan but shows a small dip in success rate (9,180). It has higher values in all failure categories, suggesting reliability concerns, particularly around driver communication or rider expectations.
- **3. Auto (14,755 bookings):** Nearly matches eBike in bookings and outcomes. Success count (9,167) is competitive, and cancellation patterns are uniform, indicating stable but unoptimized delivery.

Prime Plus (14,707 bookings): Despite slightly fewer bookings, this category shows a noteworthy pattern:

- **Highest "Driver Not Found" rate** (1,475), surpassing all others.
- One of the **lowest "Canceled by Customer" rates** (1,474), indicating customer preference and trust.
- Implies backend fulfillment or driver availability issues are preventing realization of its strong customer base.

Prime SUV (14,655 bookings): Similar trend to Prime Plus:

- High "Driver Not Found" (1,513 — the highest of all vehicle types).
- Low "Customer Cancellation" (1,498), which again reflects brand confidence.
- Points toward logistical fulfillment gaps for premium services during demand peaks.

Mini (14,552 bookings): While slightly behind others, its **success count (9,036)** is fairly strong. However:

- "Canceled by Driver" remains slightly elevated, hinting at driver-side rejection in budget categories.
- "Driver Not Found" (1,427) is mid-range, suggesting average dispatch reliability.

Numeric Summary

Vehicle Type	Total Bookings	Success	Cust. Cancel	Driver Cancel	Not Found
Prime Sedan	14,877	9,379	1,470	2,591	1,437
eBike	14,816	9,180	1,512	2,694	1,430
Auto	14,755	9,167	1,503	2,675	1,410
Prime Plus	14,707	9,075	1,474	2,683	**1,475**
Bike	14,662	9,134	1,537	2,559	1,432
Prime SUV	14,655	8,996	1,498	2,648	**1,513**
Mini	14,552	9,036	1,505	2,584	1,427
Total	103,024	64,967	10,499	18,434	10,624

Key Insights

- **Prime Sedan leads** in success and overall balance — ideal vehicle model for scaling reliable operations.
- **Prime Plus and Prime SUV underperform in fulfillment**, especially due to high "Driver Not Found" rates despite strong customer commitment.
- **Customer cancellations are lowest in premium categories**, highlighting trust in service — a valuable brand signal.
- **Driver cancellations** remain uniformly high across all categories (18% of total), suggesting the need for re-evaluation of driver incentives or route filters.
- **Bike and Auto models** have slightly better "Driver Found" rates than premium vehicles, indicating better supply chain density in high-mobility segments.

Strategic Recommendations

- Reconfigure dispatch algorithms for premium segments (Prime Plus, SUV) to reduce "Driver Not Found" losses.
- Incentivize driver reliability in high-volume segments using dynamic bonuses for peak-time fulfillment.
- Maintain and promote the operational playbook of Prime Sedan — replicate its success model across segments.
- Conduct vehicle-type specific diagnostics to identify app interface or communication flaws affecting bike and auto fulfillment.

Conclusion

Vehicle-level booking outcome analysis exposes nuanced performance gaps masked by aggregate data. While customer trust is strong across premium models, execution falters at the fulfillment stage. A mix of driver-side training, route mapping optimization, and real-time incentive structures can unlock greater efficiency and satisfaction in vehicle-based ride delivery.

Summary Overview

Page 1: Daily Booking Status Trends

This section highlights how booking outcomes vary across the week. While most days show steady success, mid-week dips and inconsistent cancellation patterns indicate potential operational or behavioral issues.

Key Gaps Identified:

- Mid-week drop in successful rides suggests driver availability issues.
- Sudden spikes in cancellations by drivers may reflect app misuse or disengagement.

Page 2: Location-Based Cancellation Hotspots

This section identifies high-cancellation zones. Locations like Tumkur Road and Vijayanagar exhibit frequent booking failures, likely due to congestion, low driver supply, or route inefficiencies.

Key Gaps Identified:

- Specific pickup zones consistently trigger driver or customer cancellations.
- Regional reliability issues may require route adjustments or incentive models.

Page 3: Cancellation Causes & Vehicle Performance

This section reveals that most customer cancellations stem from driver behavior, while vehicle-wise, premium segments like SUVs often face driver unavailability.

Key Gaps Identified:

- Drivers prompting cancellations highlight a training and policy gap.
- SUVs and Prime Plus types face frequent "Driver Not Found" outcomes.
- Simpler vehicles like autos and bikes show better reliability.

Conclusion

The report reveals that while core booking operations function well overall, recurring issues tied to location-specific logistics, driver behavior, and vehicle availability must be addressed. Tackling these gaps can lead to improved customer satisfaction and greater operational stability.

Date: June 13, 2025

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**This report is confidential and intended solely for internal operational review.*