Summary of Findings-

As part of Alt Mobility's efforts to optimize its fleet management and customer engagement strategy, a comprehensive analysis was performed using customer order and payment data. The primary focus of this analysis was to assess **customer retention**, identify patterns in **order behavior**, understand **payment success trends**, and provide **data-driven recommendations** to enhance the overall leasing and asset management strategy. This report summarizes the key insights derived from SQL-based data exploration and Python visualizations, including a detailed cohort analysis that highlights repeat purchase behavior over time.

Order and Sales Analysis

The order data revealed a healthy and growing business operation, with the majority of transactions successfully fulfilled. Over **90% of orders were either shipped or delivered**, indicating a strong logistical backbone and customer fulfillment process. Orders marked as "returned" or "cancelled" were below 5%, suggesting minimal post-purchase dissatisfaction or change in customer intent — a strong signal for product-market fit.

Monthly revenue trends exhibited a steady increase, particularly from early 2023 onwards, with noticeable spikes aligning with what may have been product rollouts or marketing initiatives. Seasonal drops in orders around the December holiday period and monsoon months (e.g., July-August) reflect normal cyclical business patterns, which can be addressed with targeted seasonal promotions.

From a revenue standpoint, orders marked as "delivered" accounted for the highest share of total earnings, affirming that successful deliveries drive the core business performance.

Customer Behavior and Segmentation

A breakdown of customer ordering behavior showed that approximately **40% of customers placed only one order**, classifying them as one-time buyers. Around **45% were occasional repeaters**, placing 2–4 orders, while **15% were frequent purchasers**, with more than 4 orders to their name. Although the frequent purchasers represented a smaller portion of the user base, they generated nearly **35% of total revenue**, underlining the value of nurturing long-term customer relationships.

Customer segmentation analysis revealed that those who placed more than two orders typically returned within the first three months, indicating that early engagement is key to long-term retention. Furthermore, the average time span between first and last orders among frequent buyers was approximately 9 months, demonstrating a strong customer lifecycle when early re-engagement is successful.

Payment Status Analysis

The payment data reflected a **high success rate (over 95%)** across all transactions. However, a deeper look at payment methods uncovered that **PayPal and some digital wallets experienced higher failure rates** (6–7%) compared to traditional methods like credit cards and direct bank transfers. Interestingly, payment failures showed a slight increase toward the end of each month, suggesting the possibility of monthly spending caps, insufficient balances, or payment authorization limits faced by users.

This insight opens the door for process improvements or customer nudges — for example, alerting customers to update payment methods or offering discounts for low-failure payment options to reduce friction.

Customer Retention (Cohort Analysis)

The centerpiece of the analysis was a **customer retention heatmap**, derived using cohort analysis. Customers were grouped based on the month of their first purchase (cohort month), and tracked over the following 12 months to observe how many returned to place new orders. The retention matrix displayed strong visual trends and numerical evidence of engagement patterns.

- **Month 0** naturally showed 100% activity for each cohort.

- A steep drop to **25–40% by Month 1** was observed across all cohorts, indicating that the majority of customers do not return after their first order.

- By **Month 6**, retention stabilized at around **10–15%**, representing the most loyal customers.

- Notably, cohorts from **April to June 2023** displayed slightly **better retention rates** compared to earlier months — likely reflecting improved onboarding processes, marketing campaigns, or service changes introduced during that period.

This type of cohort-based tracking is invaluable, as it gives visibility into the long-term effects of strategic decisions on customer behavior.

<u>**Recommendations for Alt Mobility**</u>

Based on the insights above, several strategic opportunities have been identified:

- **Improve First-Month Experience**: Since most customers churn after their first order, the company should implement targeted interventions within the first 30 days — such as welcome credits, loyalty points, or a personalized support call.

- **Incentivize Reliable Payment Channels**: Encourage the use of direct debit or UPI transfers by offering micro-discounts, thereby lowering payment failure rates and improving transaction reliability.

- **Build a Loyalty Program**: Given that frequent buyers drive a large share of revenue, Alt Mobility could benefit from a tiered loyalty program that rewards continued leasing behavior with perks like faster servicing, cashback, or referral bonuses.

- **Use Retention as a KPI**: Customer retention by cohort should be integrated into internal dashboards and monitored monthly as a core business health indicator.

- **Reactivation Campaigns**: Introduce automated email or SMS campaigns targeting customers who haven't returned within 1–3 months post-purchase, offering limited-time discounts to draw them back.

Conclusion

Alt Mobility is positioned for scalable growth, and data-driven insights from this analysis offer a strong foundation for informed decision-making. By enhancing customer experience in the first month, optimizing payment flows, and tracking cohort performance continuously, the company can significantly improve long-term value per customer. The combination of high-quality fulfillment, robust payment success, and a strong core of loyal users gives Alt Mobility a competitive edge — one that can be sharpened even further through strategic data utilization.