

Uber Ride Analytics 2024 - EDA Report

Observations from Visual EDA

1. Booking Status Distribution

Most rides are completed (~93k). Driver cancellations (~27k) exceed customer cancellations (~10.5k) by a wide margin, indicating operational challenges in ride acceptance. Incomplete rides are the smallest share (~9k).

2. Vehicle Type Usage

Auto (~37k), Go Mini (~29.8k), and Go Sedan (~27.1k) dominate demand. Uber XL (~4.4k) has the smallest share. Economy rides are the clear preference.

3. Correlation Heatmap

Very low correlations between Booking Value, Ride Distance, and ratings. Pricing appears influenced by factors like surge rates, vehicle type, and operational policies rather than distance alone.

4. Ride Distance vs Booking Value

Longer rides generally cost more, but significant variation exists for similar distances, likely due to surge pricing and fare policies. Outliers show high fares for short distances.

5. Ratings Distribution

Driver ratings cluster around 4.0-4.6, slightly lower than customer ratings. Indicates generally high satisfaction, but driver experience could be improved.

6. Pairplot - Key Metrics

Ratings have little visual relationship with fare or distance. Distance and booking value have a moderate visual link, though correlation is weak statistically.

7. Average Booking Value by Vehicle Type

Go Sedan (~Rs.512) and Premier Sedan (~Rs.509) have the highest average fares, but the range across all types is narrow (~Rs.503-Rs.512).

8. Cancellation Rates

Customer cancellation rate is ~7%, while driver cancellation rate is ~18%. Driver-side cancellations are a bigger concern.

9. Ratings Correlation

Correlations between ratings, fare, and distance are negligible, suggesting satisfaction depends on service quality factors.

Summary of Findings

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1. Operational Performance: High completion rate, but driver cancellations are notably high.
2. Demand Patterns: Economy rides dominate; premium vehicles see low demand.
3. Revenue Insights: Average fare is consistent across vehicle types; pricing influenced by surge/minimum fare policies.
4. Customer Experience: High ratings overall; satisfaction not strongly tied to fare or distance.
5. Improvement Areas: Reduce driver cancellations, balance driver supply in high-demand zones, improve premium category uptake.