



# Rapido Data Analysis

*Uncovering insights from 50,000 ride bookings in Bangalore to optimize operations, enhance customer experience, and drive revenue growth.*



# Project Overview



## Data Scope

*50,000 ride records analyzed across 13 key variables including services, timing, pricing, and customer behavior.*



## Tech Stack

*Python for data cleaning, SQL for deep analysis, and Power BI for interactive dashboards.*



## Key Goals

*Identify trends in customer behavior, peak timings, operational efficiency, and driver performance.*

#140 column

\$1,241 \$2,007 \$39.00

Nide		Tuurday			Wride	
Ride inonans		\$6,000	\$7,050	\$7,175	\$6,778	\$0,175
Ride 2014	Narsbaction	20.007	9.00	8.0	25.07	5.00
Ride		—	—	—	—	\$0.000
Taxil 2014	Mode	\$5,000	\$5,010	\$5.00	\$1.00	\$0,500
Take (21214)	Newall	\$5,000	\$5,000	9.00	\$1.00	\$1,500
Tach (20771)	Conne foride illustation	\$1,000	—	—	15.00	\$2,600
Ride /2/2014	Monder	\$5,000	6.00	8.00	6.00	\$0,600
Tuch /2/2019	Mall Ciae	\$1,000	11.00	12.00	11.00	\$1,770
Tech /4/2011	Ridestime Ride	\$1,000	1100	115	11.00	\$1,500
Rash 2015	Metill Pair	—	—	—	—	—
Froum Ride		—	—	—	—	\$0,500
Ride 11/2014	Caver Day	\$1,000	1150	8.00	13.00	\$0,570
Rash 2012	Last Ring	50	77	75	1.00	\$5,000
Lash 29/2018	Wick Lefies	50	—	45	—	\$0,500
Taxit /2/10,100	Lask	\$1	27	—	—	\$0,000
Dam /219.340	Fall	15	47	—	—	\$2,500

# Dataset Structure

## Ride Details

- Vehicle type, date, time, and ride status
- Source and destination locations
- Duration and distance traveled
- Unique ride ID for tracking

## Financial Data

- Base ride charge and miscellaneous fees
- Total fare calculation
- Payment method preferences
- 5,036 missing values imputed using median/mode



# Revenue Insights

₹8.5M

Total Revenue

*Generated across all  
vehicle types and  
payment methods*

42%

UPI Dominance

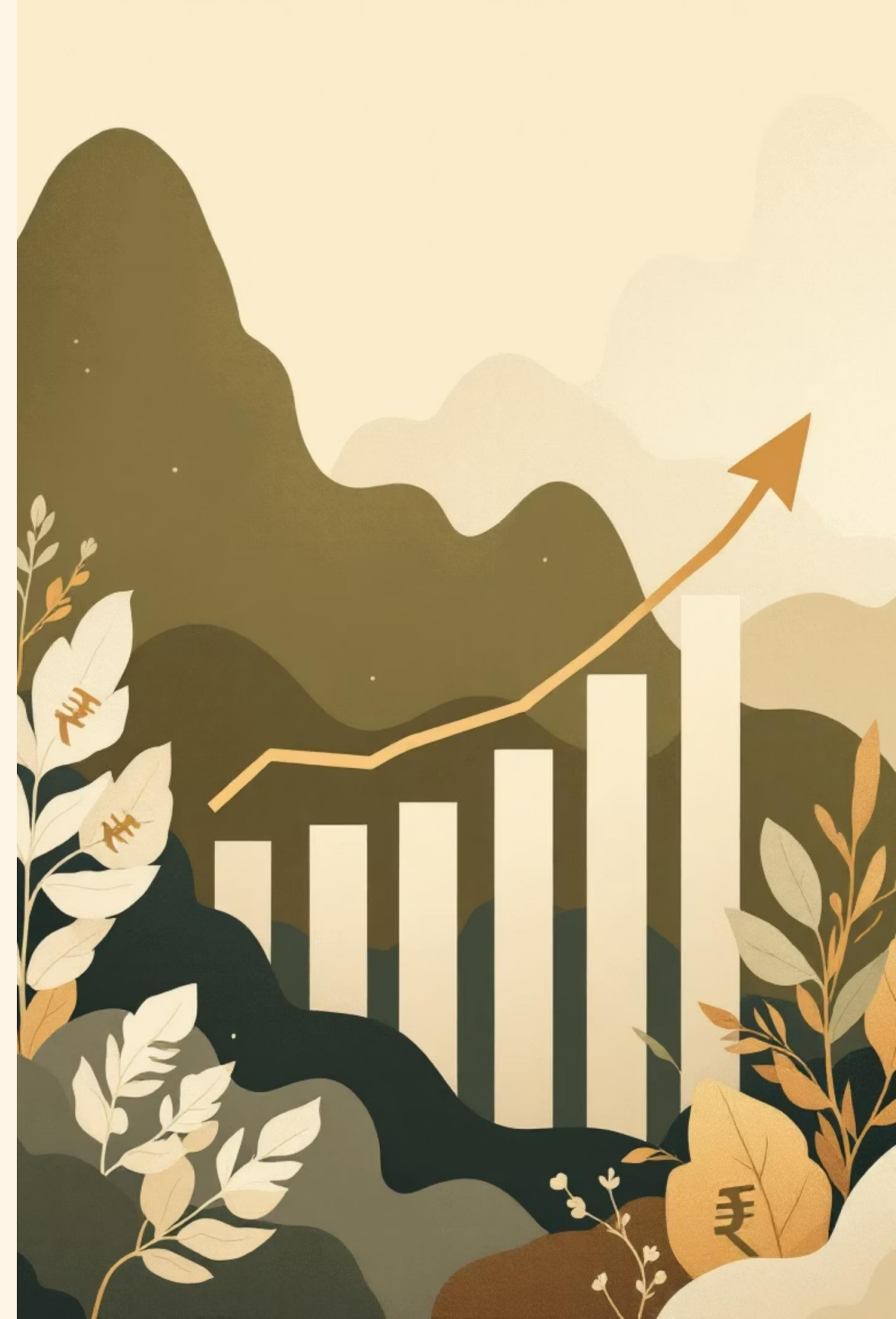
*Leading payment  
method by transaction  
volume*

₹170

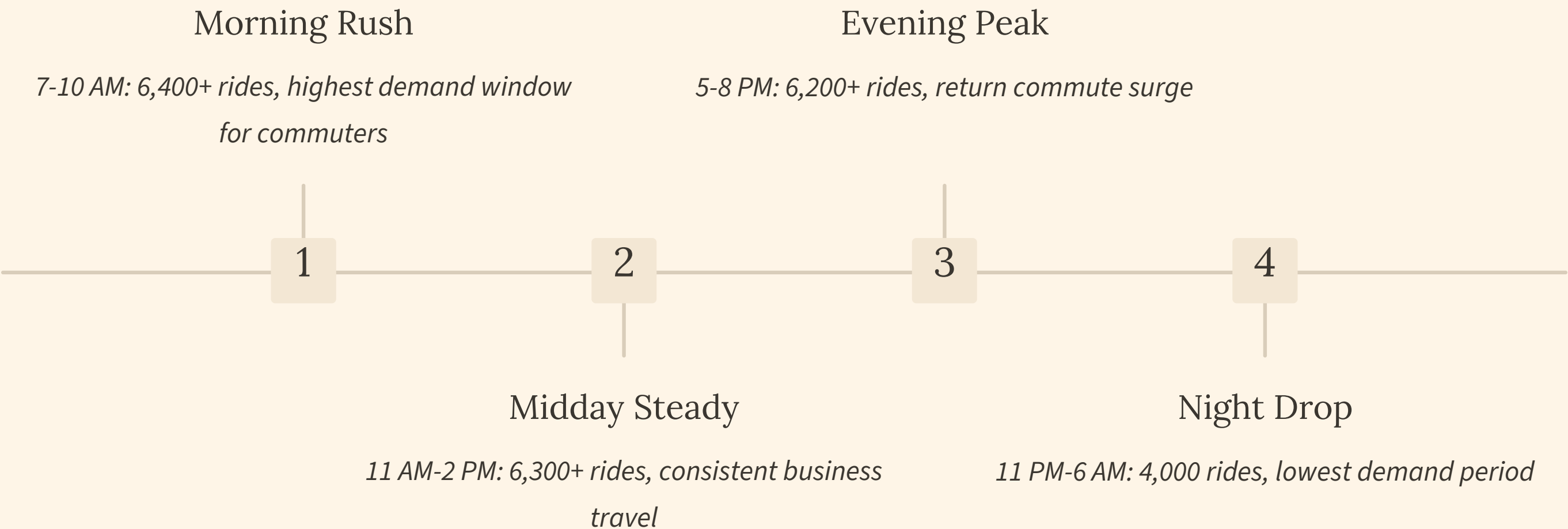
Average Fare

*Per completed ride  
across all services*

*Auto rides generate highest revenue per trip, while bike rides dominate in volume. Cash payments still represent 28% of transactions, indicating opportunity for digital adoption.*



# Peak Demand Patterns



Hour 9 AM leads with 2,185 rides. Friday shows highest weekly volume with completed rides peaking mid-week.

# Route Performance

## Top Revenue Routes

*Koramangala → Electronic City generates ₹145,000 in total fares, leading all routes. Whitefield → MG Road and HSR Layout → Indiranagar follow closely.*

*High-value rides (>₹1,000) concentrate on airport routes and tech park corridors, representing premium service opportunities.*

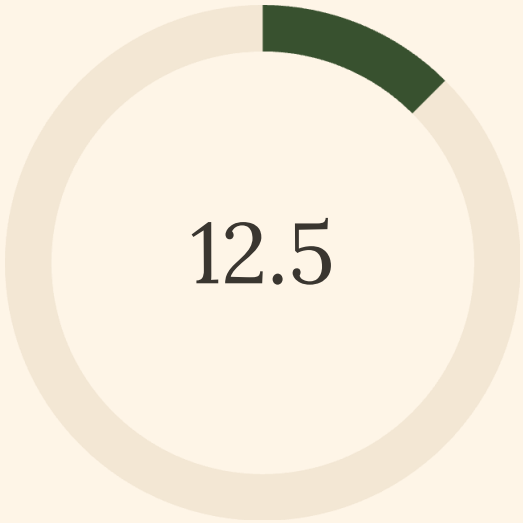
*Evening office-hour trips (5 PM–8 PM) contribute the highest revenue on tech-park routes such as HSR → Electronic City and Whitefield → Manyata Tech Park.*

*Traffic-heavy routes such as Whitefield → MG Road show 20–30% longer ride durations during peak hours, reducing driver turnover.*

*Fast-moving corridors like HSR → Koramangala enable drivers to complete more trips per hour.*

*Routes like Whitefield → Koramangala show repeated delays due to predictable congestion; optimizing route suggestions can reduce ride duration by 10–15%.*

*Fast-moving corridors like HSR → Koramangala enable drivers to complete more trips per hour.*



Average distance (km)



Average duration (min)

# Ride Completion Analysis



## Completed Rides

*82% success rate across all vehicle types with consistent performance*



## Cancellations

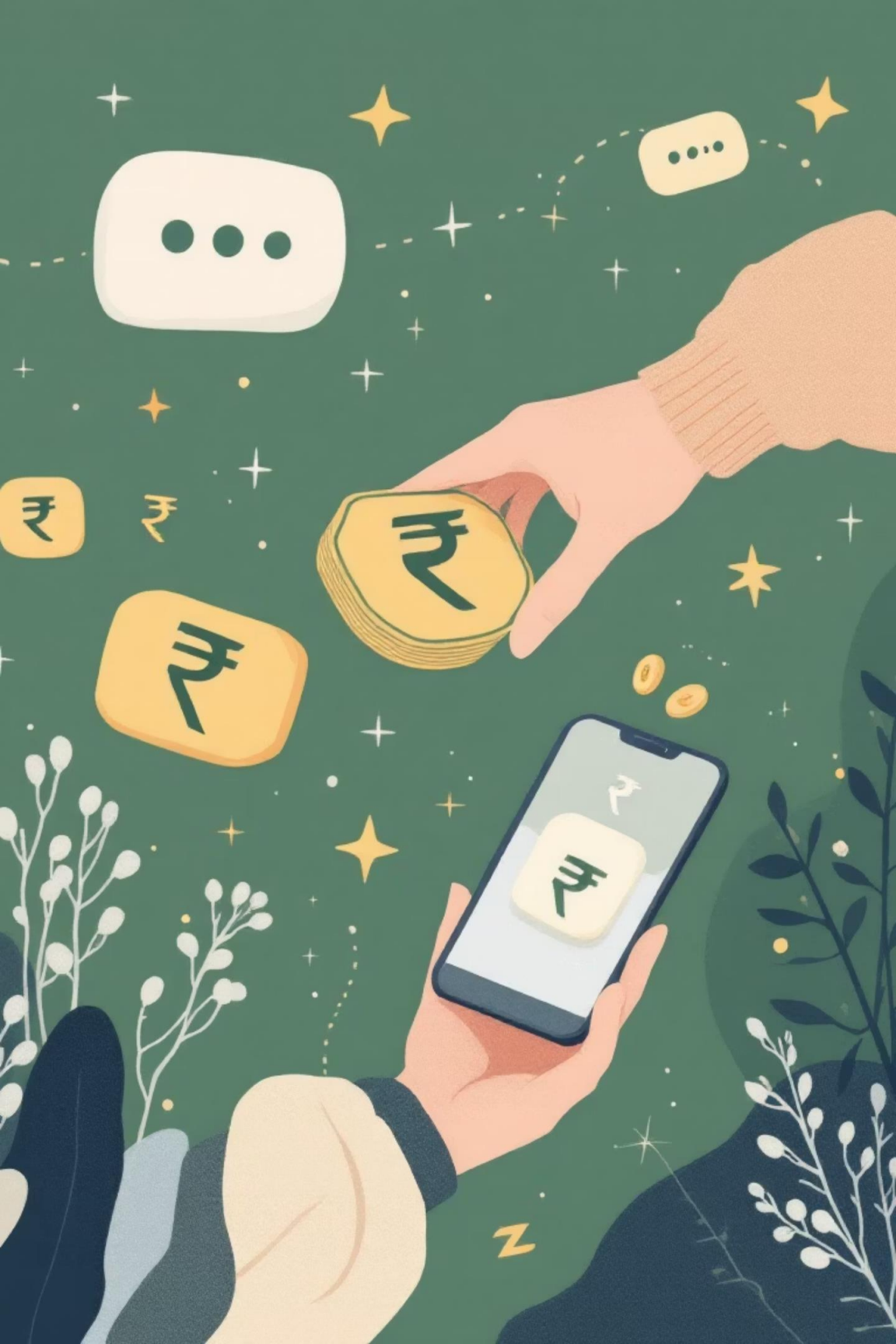
*12% customer cancellations, 4% driver cancellations, 2% no-shows*



## Failure Patterns

*Auto rides show 18% failure rate vs. 15% for bikes, indicating allocation challenges*

*Peak hours see higher cancellation rates due to driver unavailability. Specific hotspots require targeted driver incentives.*



# Pricing Efficiency

## Fare Structure

- ₹13.50 per km for auto rides
- ₹8.20 per km for bike rides
- ₹6.10 per minute average across services

*Extra charges contribute ₹1.2M in additional revenue, averaging ₹24 per ride with charges.*

## Payment Distribution

- UPI: 42% of transactions
- Cash: 28% of transactions
- Wallet: 18% of transactions
- Card: 12% of transactions



# Strategic Recommendations



## Optimize Peak Hours

*Increase driver supply 7-10 AM and 5-8 PM through incentives. Enable automated reminders 30 minutes before rush periods.*



## Dynamic Pricing

*Introduce off-peak discounts during low-demand hours. Promote combo rides and rewards for frequent riders.*



## Digital Adoption

*Promote UPI/Wallet with cashback offers. Provide fast refund assurance to increase digital payment adoption from 70% to 85%.*



## Route Optimization

*Implement real-time traffic rerouting. Flag chronically slow routes and improve navigation in high-traffic zones.*

# Expected Impact

## Operational Excellence

*Reduce wait times by 25%, increase ride acceptance rate to 90%, and complete 15% more rides per driver daily.*

## Revenue Growth

*Boost off-peak utilization by 30%, increase digital transactions to 85%, and grow high-value route revenue by 20%.*

## Customer Satisfaction

*Improve retention through targeted offers, reduce cancellations by 40%, and enhance driver earnings transparency.*

