



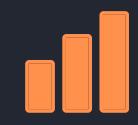
The Quick Commerce Conundrum: A Data-Driven Delivery Revival

Presented by

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Tools Used :

**Google Sheets, Orange, Binder (Python),
Julius AI, Napkin.ai**



Project Objective & Goal



The **objective** of this project is to analyze the **end-to-end operational** flow of QuickBazaar using three datasets:

- Order & Customer Data
- Delivery & Operations Data
- Inventory Stockout Data

The goal is to identify:

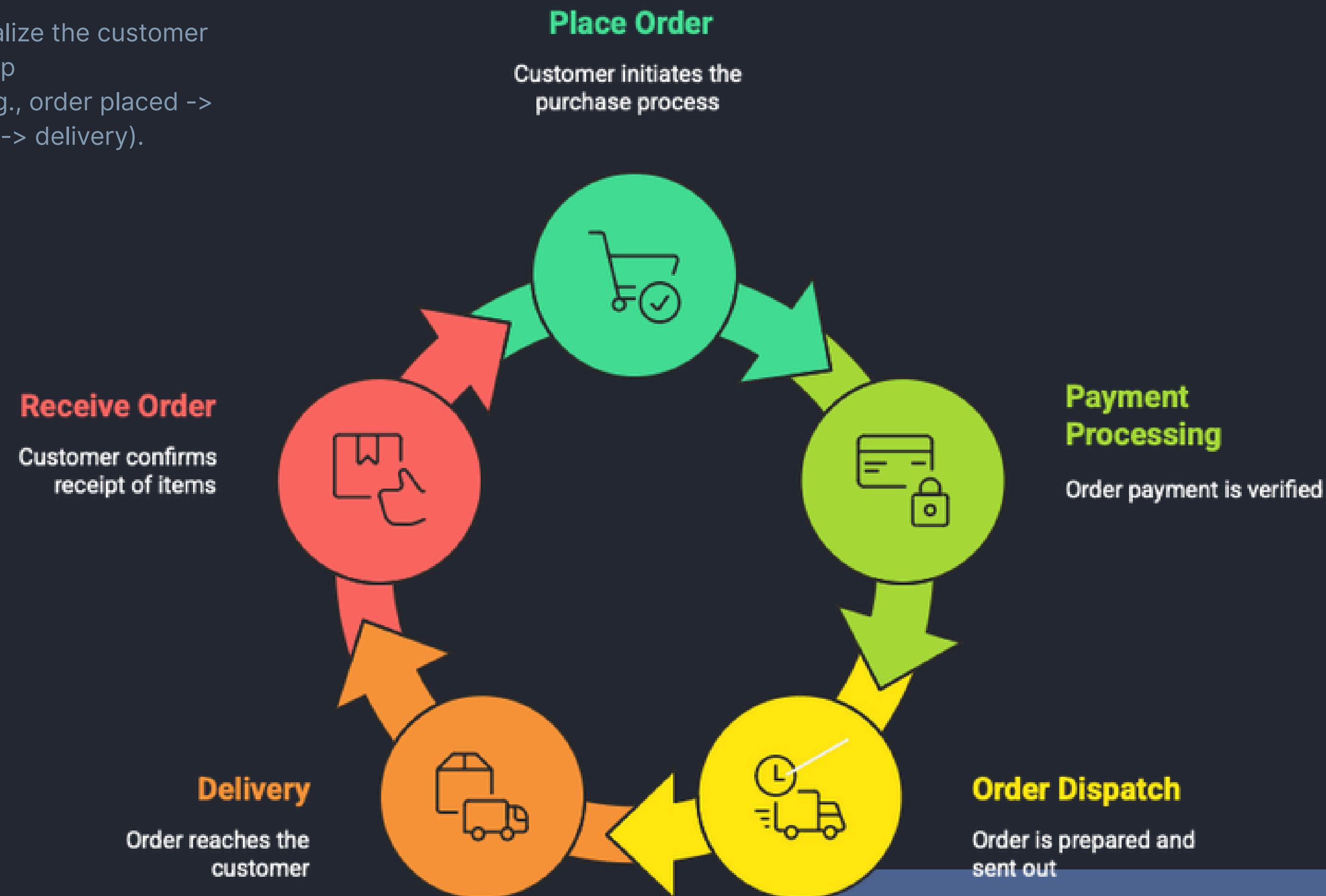
- Customer behavior patterns
- Delivery performance issues
- Inventory stockout problems
- Data-driven solutions for improvement



Quick-Commerce Customer Journey

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Used **napkin.ai** Visualize the customer order journey and map out friction points (e.g., order placed -> payment -> dispatch -> delivery).



Google Sheets

Organize datasets, perform data cleaning, calculate basic stats (mean, median), create pivot tables.

Pivot table

A	B	C	D
Delivery_Pincode	Late	On-Time	Late rate %
110080	4	3	57.14%
110052	5	5	50.00%
110082	4	4	50.00%
110004	6	7	46.15%
110003	5	6	45.45%
110031	4	5	44.44%
110025	3	4	42.86%
110038	3	4	42.86%
110064	4	6	40.00%
110047	5	8	38.46%
110053	6	10	37.50%

A	B	C	D	E
Phase	Task	Tool	Deadline	Status
Data Exploration	Load data	Google Sheets	Today	Done
Orange Analysis	Heatmap + Distr	Orange	Tomorrow	Done
Binder Analysis	Correlation	Binder	Tomorrow	Done
Flourish Dashboard	3 charts	Flourish	Day after tomorrow	Done
Strategy Writing	Roadmap	Google Docs	Later	Done
Presentation	Slides	Google Slides	Last day	Done

Pivot Table

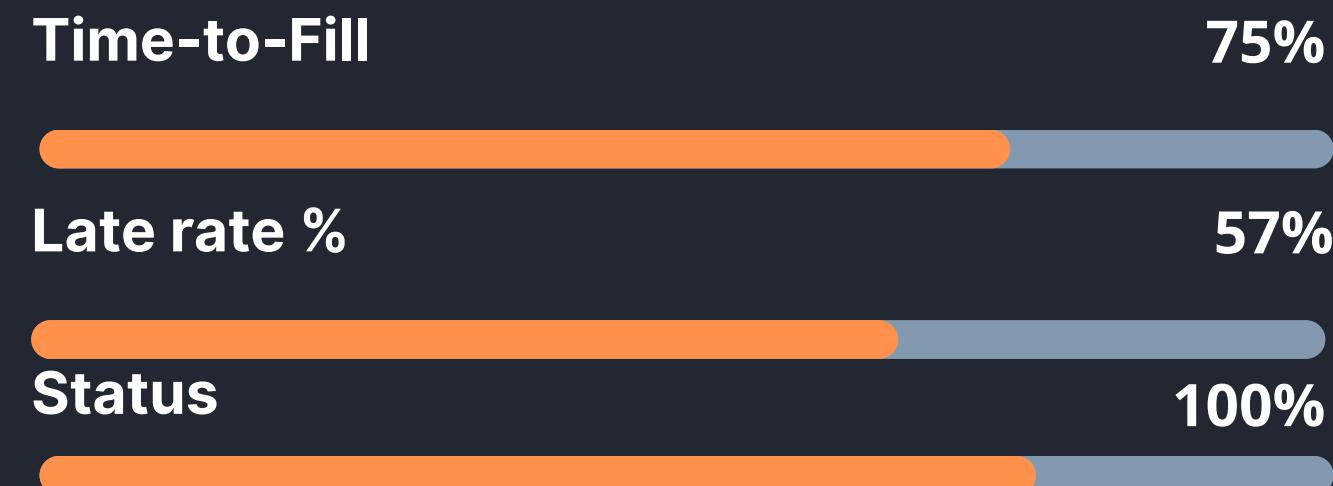
A	B
Customer_Rating	COUNTA of Customer_Rating
1	204
2	201
3	193
4	207
5	195
Grand Total	1000

Basic Stats

Time_to_dispatch	time-to_transit
mean	30.896
median	30
min	5
max	59
	15.95392465
	31.1664684

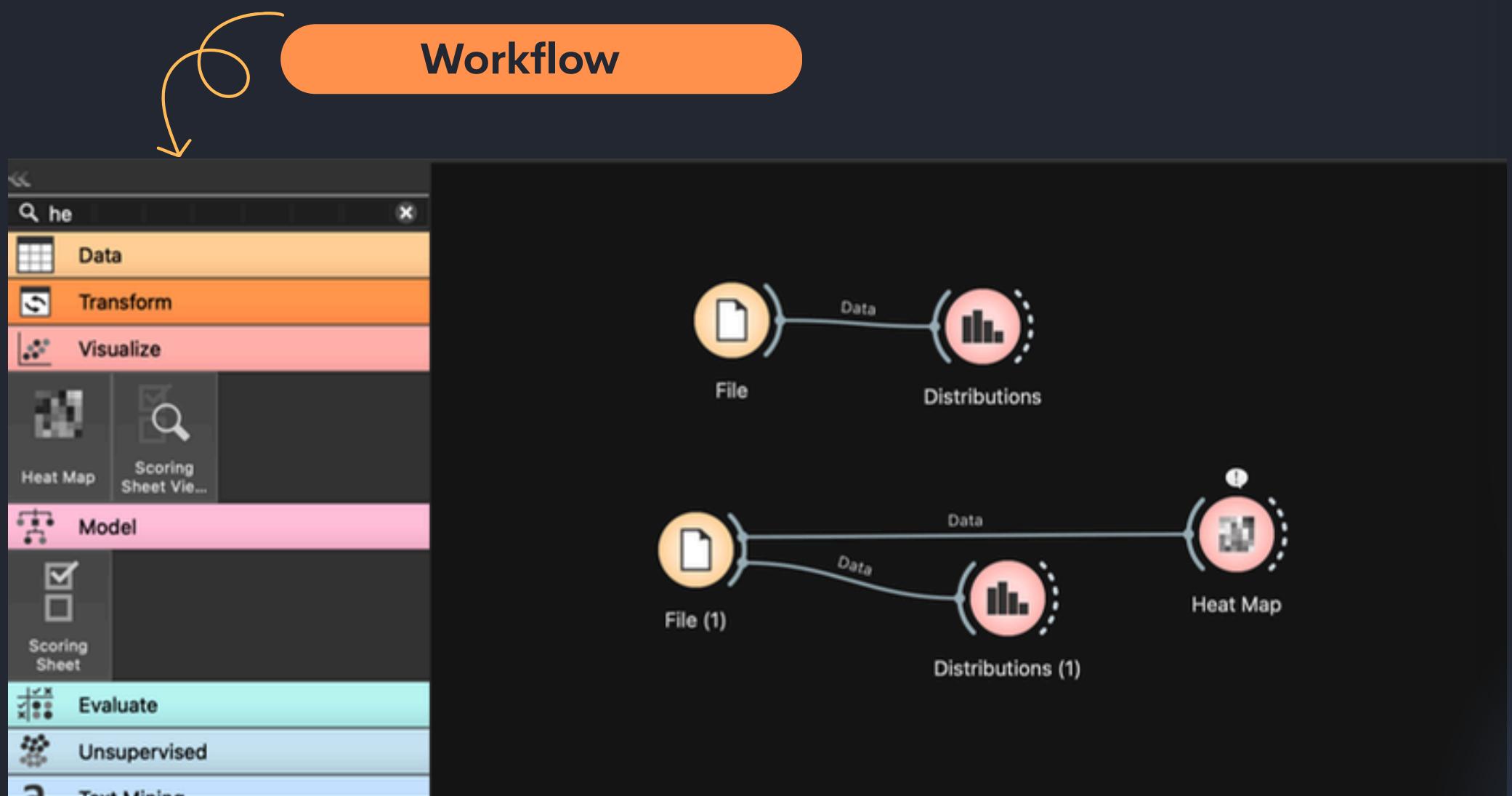
Basic stats

AOV	Customer_I
Mean	1292.10571
Median	1274.455
Min	152.59
Max	2495.59
std dev	675.8277296
	1.416284527

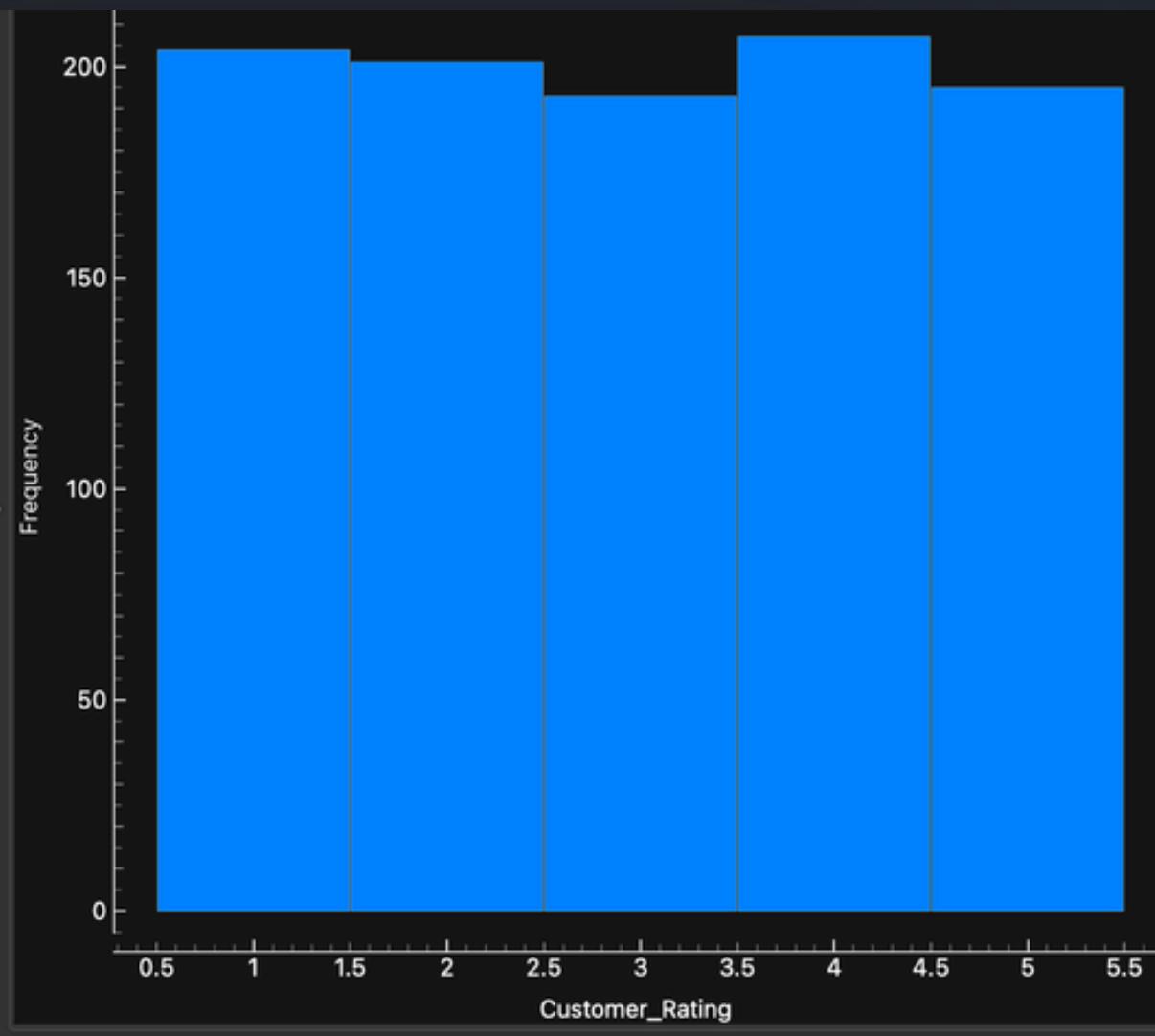




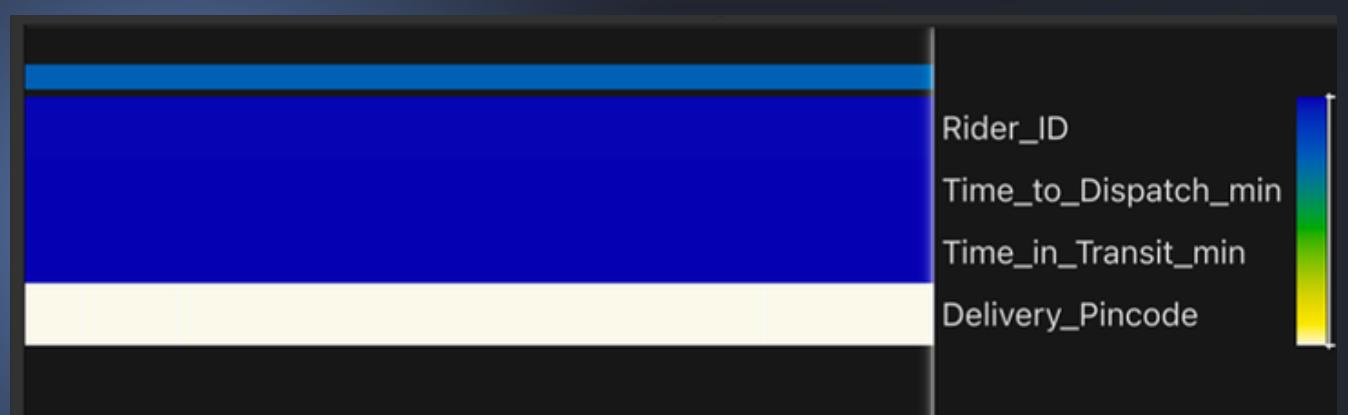
Orange Visualizations



Shows that customer rating are distributed and rating of 4 and 1 are equivalent



Created heatmap to get the corelation between values of Delievery data





Binder (Jupyter) models

```
[1]: import pandas as pd

orders = pd.read_csv("order_customer_data.csv")
delivery = pd.read_csv("delivery_operations_data.csv")
inventory = pd.read_csv("inventory_data.csv")

print("Orders Data:")
display(orders.head())

print("Delivery Data:")
display(delivery.head())

print("Inventory Data:")
display(inventory.head())
```

Importing
data in Jupyter

```
[8]: corr=df['Time_in_Transit_min'].corr(df['Customer_Rating'])
print("Correlation is ",corr)

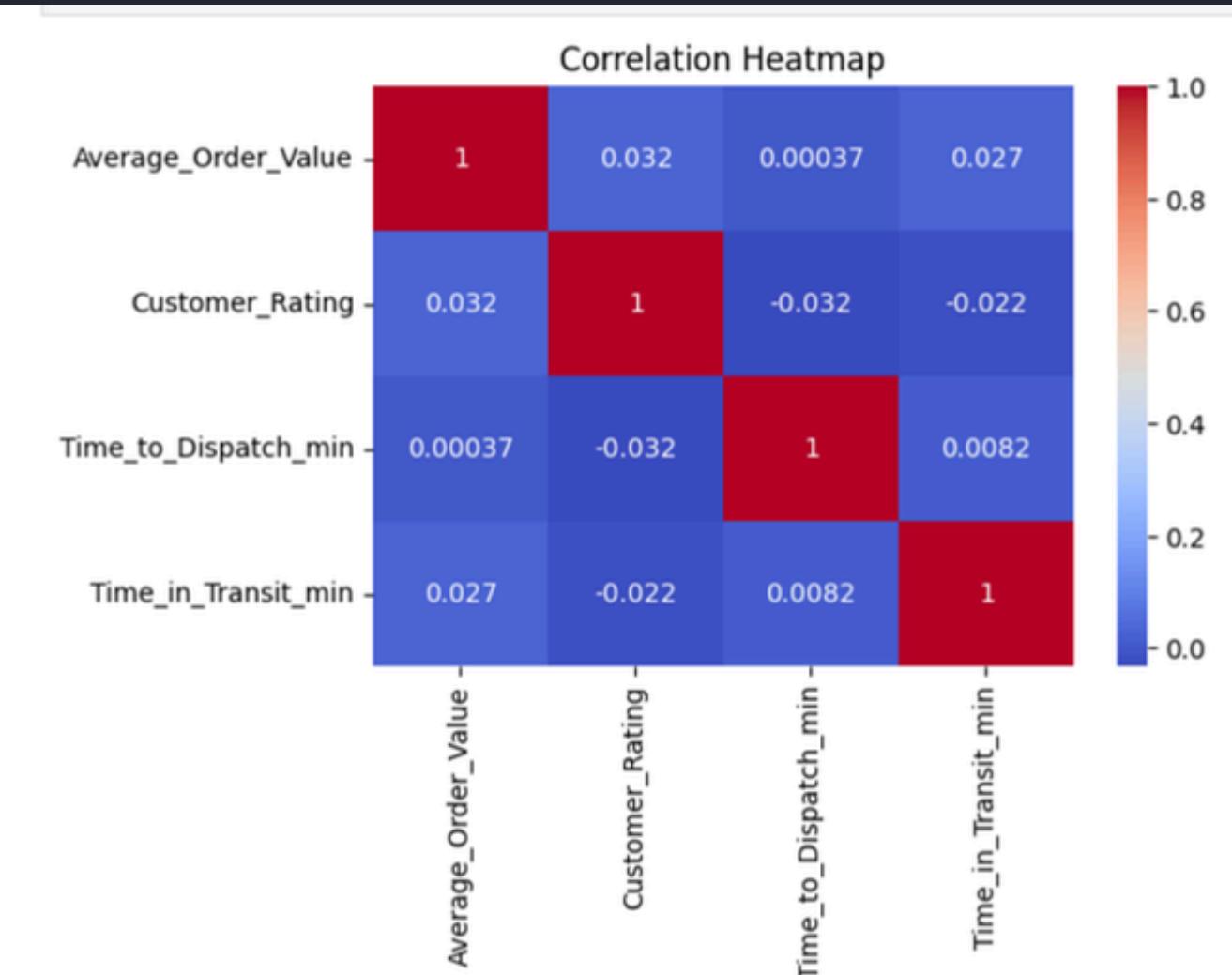
Correlation is -0.022161241556687434
```

```
[9]: import statsmodels.api as sm

X = df[['Time_in_Transit_min']]
y = df['Customer_Rating']

X = sm.add_constant(X) # add intercept

model = sm.OLS(y, X).fit()
model.summary()
```



Github repo link to check project :
<https://github.com/AnantaAgarwal/QuickBazaar-project.git>

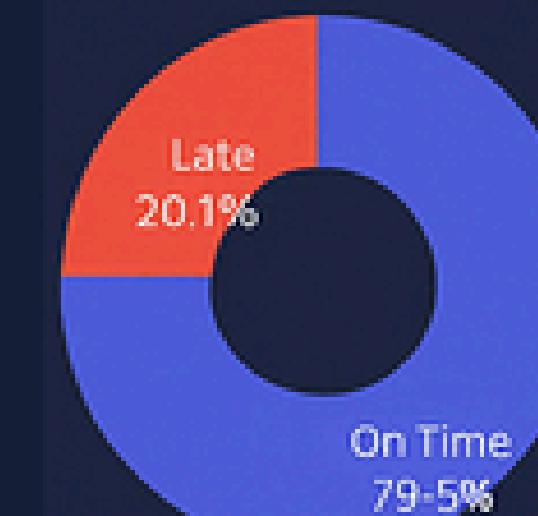
Applying correlation
and statsmodel in data

QuickBazaar Key Metrics Dashboard

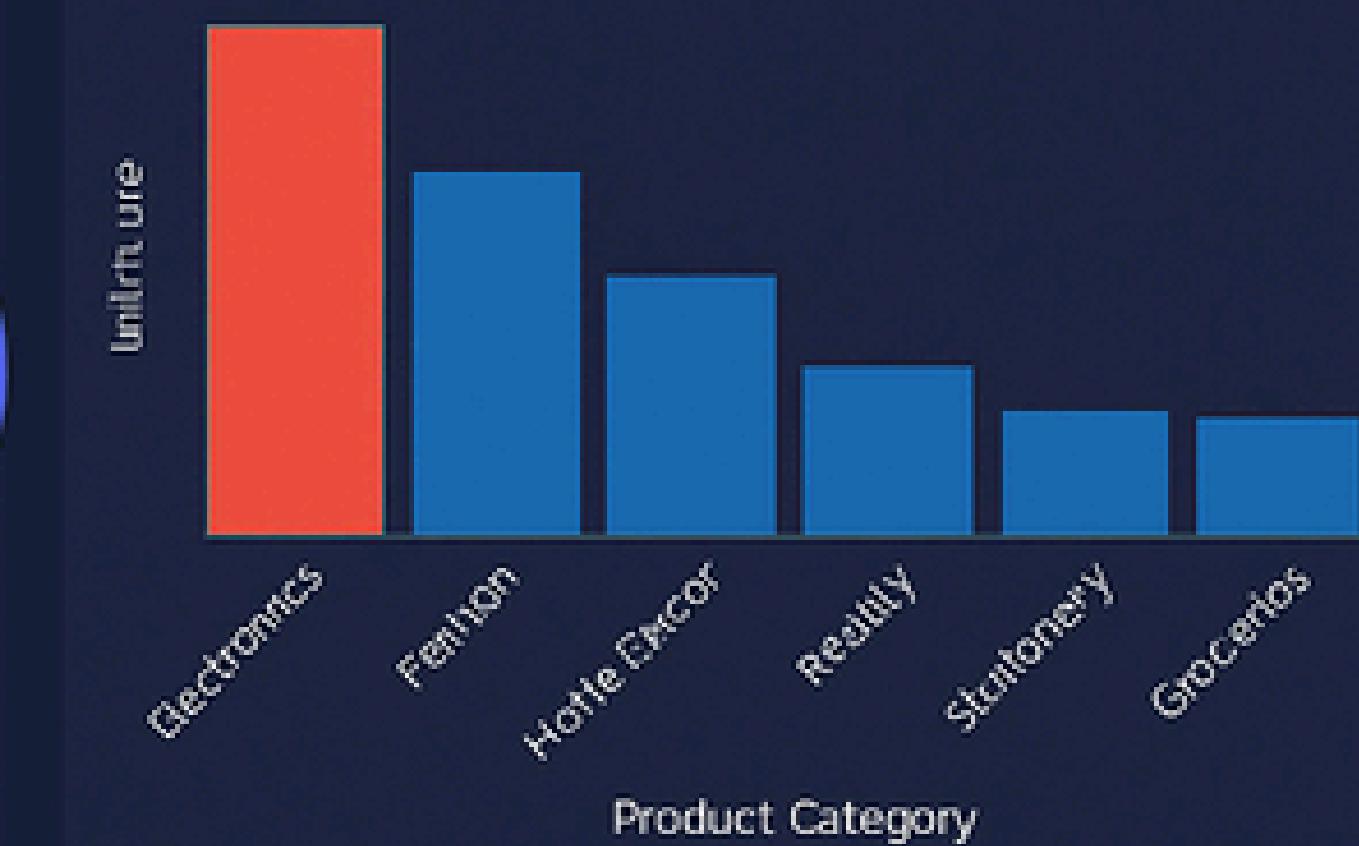
Distribution of Customer Ratings



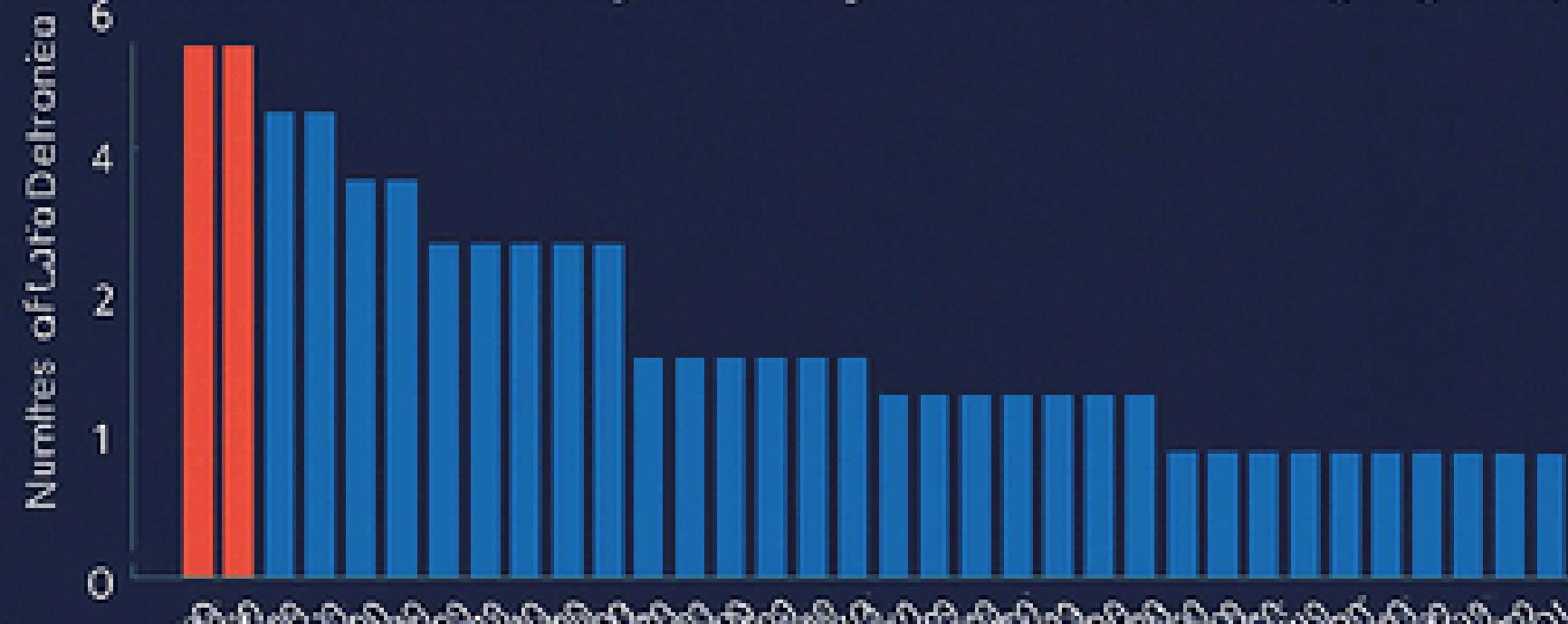
Late vs On-Time



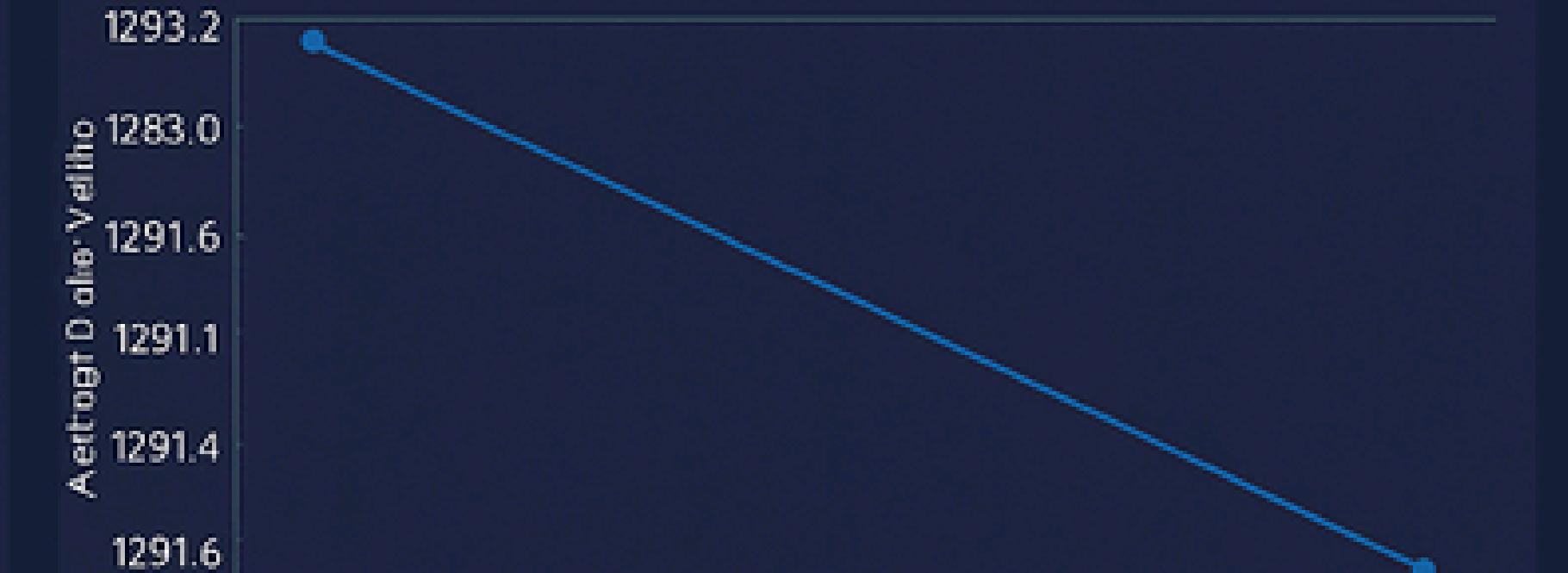
Weekly Stockout Incidents by Product Cat



Late Deliveries by Delivery Pincode (Top 5 Highlighted)

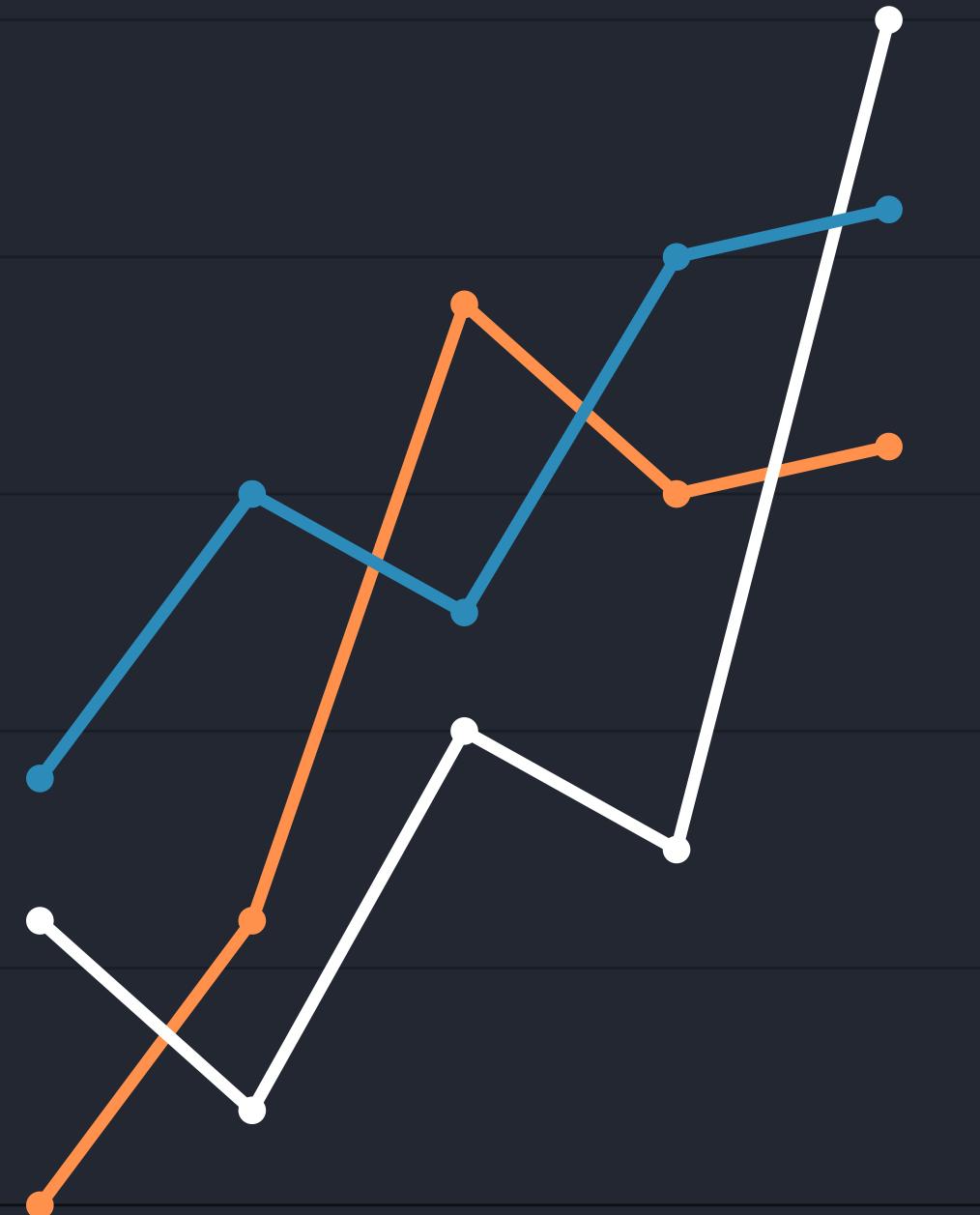
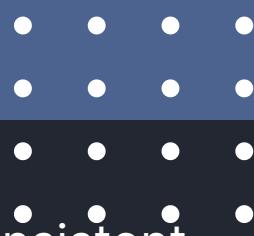


Average Order Value by Month





Insights



Customer Behavior Insights

- AOV remains stable across months, showing consistent buying patterns.
- Ratings skew towards 4–5, indicating strong satisfaction overall.
- Lower ratings likely link to delivery delays or stockout experiences.



Delivery Performance

- Late deliveries are highly concentrated in top 5 pincodes, signaling localized bottlenecks, not system-wide issues.
- Likely causes: poor route optimization, last-mile delays, partner inefficiencies.



Inventory Stockouts

- Few categories show disproportionately high stockout incidents.
- Indicates demand forecasting gaps, slow replenishment, or supplier delays.



Key Patterns

- Areas with high late deliveries correlate with lower customer ratings.
- High-stockout categories directly impact customer satisfaction.
- Stable AOV + operational issues = missed opportunity for loyalty & revenue growth.



Recommended Solutions

→ Delivery:

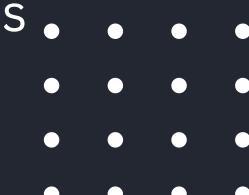
- Increase rider allocation in high-delay pincodes
- Optimize routing & reduce transit time
- Track rider performance & dispatch efficiency

→ Customer:

- Improve communication on delays
- Address low-rating feedback patterns

→ Inventory:

- Forecast demand better using stockout trends
- Maintain buffer stock for fast-moving categories
- Improve supplier coordination





Conclusion

QuickBazaar has strong customer sentiment and stable spending, but faces challenges from localized delivery delays and specific category stockouts. Solving these issues can significantly boost customer satisfaction, retention, and revenue.



THANKYOU