



INTERNSHIP 5.0

BATCH 2

FINANCE ANALYSIS USING PBI

Presenting Amazon Finance Analysis

Using Power BI

TEAM MEMBERS (Team 2) -

- Omkar
- Kaarthika
- Kapil Namdev
- Ayushi Tiwari
- Anurag Goyal



GROUP LEADER - *ANURAG GOYAL*

PROJECT MENTOR - MR. AJITHKUMAR



STEPS IN PROJECT

- **Requirement Gathering** – Understand project goals by meeting stakeholders.
- **Data Walkthrough** – Review data structure, quality, and relevance.
- **Data Connection** – Connect Power BI to data sources (Excel, SQL, APIs).
- **Data Cleaning / Quality Check** – Ensure data accuracy by handling errors, missing values, and duplicates.
- **Data Modeling** – Define relationships between data tables.
- **Data Processing** – Transform raw data for analysis.
- **DAX Calculations** – Write DAX formulas for calculations and measures.
- **Charts Development** – Create and format visual charts and graphs.
- **Dashboard / Report Development** – Build the final interactive dashboard/report.



BUISNESS REQUIREMENTS

KPI'S REQUIREMENTS

- **Total Sales:** Total revenue generated from all completed orders during the period.
- **Shipped Products:** Number of products successfully shipped to customers during the period.
- **Number of Cancelled Products:** Total count of products that were cancelled by customers.
- **Number of Orders Delivered on Date:** Orders successfully delivered to customers on a specific date.
- **Most Order-Placed City:** The city with the highest number of placed orders.
- **Count of SKU's:** Total count of unique product SKUs in the inventory.
- **Total Shipment-Inprogress Products KPI:** Total count of products currently being shipped or in transit.

amazon Analysis



CHART'S REQUIREMENTS

- Product-wise Sales:
 - Objective: Analyze the sales performance of different products.
 - Chart Type: Bar Chart.
- Stock Availability by Product:
 - Objective: Display the available stock for each product.
 - Chart Type: Column Chart.
- Promotional Products:
 - Objective: Identify products under promotion.
 - Chart Type: Stacked Bar Chart.
- Top 5 SKU's Sales:
 - Objective: Highlight the top 5 selling SKUs by total sales.
 - Chart Type: Pie Chart.
- Month-on-Month Comparison by Product (DAX):
 - Objective: Compare product sales performance across different months.
 - Chart Type: Line Chart.

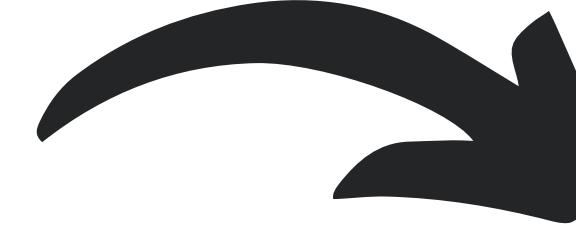
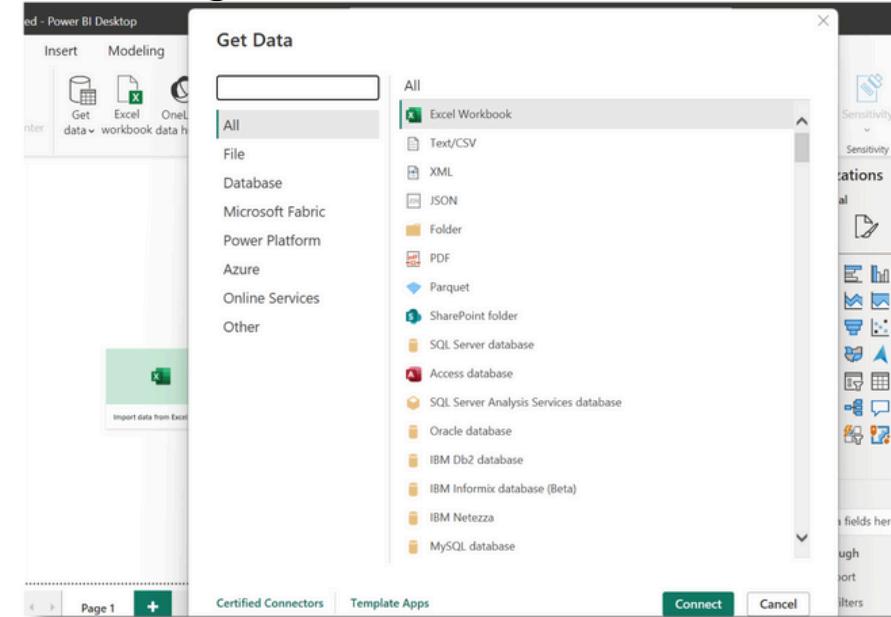
- **Out-of-Delivery Products (DAX):**
 - **Objective:** Show month-wise trends for out-of-delivery products.
 - **Chart Type:** Line Chart.
- **Cancelled Products (DAX):**
 - **Objective:** Track monthly product cancellations.
 - **Chart Type:** Area Chart.
- **International Product Sales:**
 - **Objective:** Display product sales at an international level.
 - **Chart Type:** Map Chart.
- **Shipped and Cancelled Products:**
 - **Objective:** Compare shipped and canceled products.
 - **Chart Type:** Stacked Column Chart.
- **Product Price by E-commerce Platform:**
 - **Objective:** List product prices across platforms.
 - **Chart Type:** Table.
- **State and City-wise Sales:**
 - **Objective:** Break down sales by state and city.
 - **Chart Type:** Map Visualization.
- **Total Delivery Status:**
 - **Objective:** Visualize the overall status of deliveries.
 - **Chart Type:** Donut Chart.

amazon Analysis



DATA CONNECTION

Selecting file format

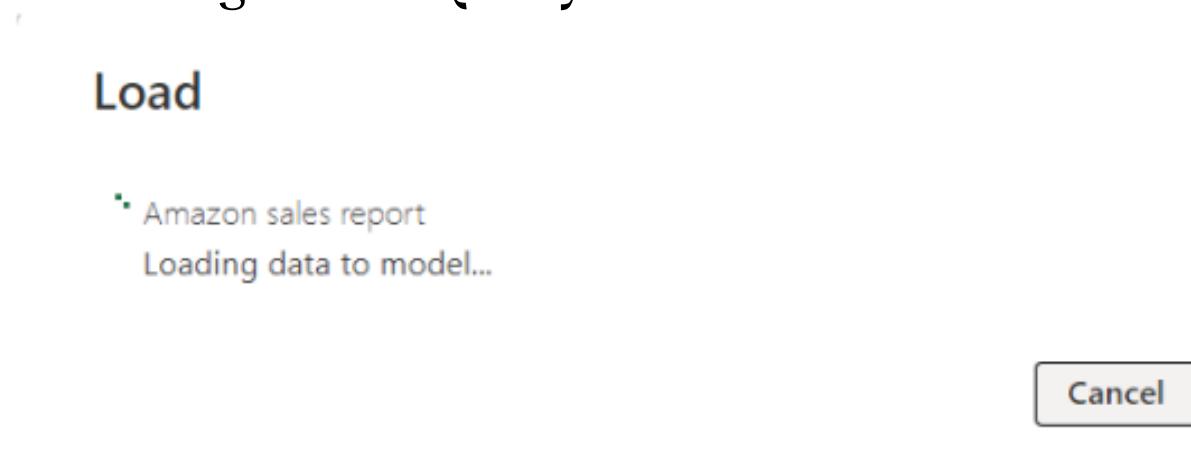


Selecting the table from file

Amazon sales report			
Order ID	Date	Status	Fulfilment
405-8078784-5731545	30-04-2022	Cancelled	Merchant
171-9198151-1101146	30-04-2022	Shipped - Delivered to Buyer	Merchant
404-0687676-7273146	30-04-2022	Shipped	Amazon
403-9615377-8133951	30-04-2022	Cancelled	Merchant
407-1069790-7240320	30-04-2022	Shipped	Amazon
404-1490984-4578765	30-04-2022	Shipped	Amazon
408-5748499-6859555	30-04-2022	Shipped	Amazon
406-7807733-3785945	30-04-2022	Shipped - Delivered to Buyer	Merchant
407-5443024-523168	30-04-2022	Cancelled	Amazon
402-4393761-0311520	30-04-2022	Shipped	Amazon
407-5633625-6970741	30-04-2022	Shipped	Amazon
171-4638481-6326716	30-04-2022	Shipped	Amazon
405-5513694-8146768	30-04-2022	Shipped - Delivered to Buyer	Merchant
408-7955685-3083534	30-04-2022	Shipped	Amazon
408-1298370-1920302	30-04-2022	Shipped - Delivered to Buyer	Merchant
403-4965581-9520319	30-04-2022	Shipped - Delivered to Buyer	Merchant
406-9379318-6555504	30-04-2022	Shipped	Amazon
405-9013803-8009918	30-04-2022	Shipped	Amazon
402-4030358-5835511	30-04-2022	Shipped - Delivered to Buyer	Merchant
405-5957858-1051546	30-04-2022	Shipped	Amazon
405-0607769-0716360	30-04-2022	Shipped	Amazon

Loading into PBQuery

Load



Dataset loaded

Order ID	Date	Status	Fulfilment	Sales Channel	Ship service level	Style	Sku	Category	Size	Courier status	Quantity	Currency
406-7955475-7819507	Saturday, 30 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3784	JNE3784-KR-M	Kurta Set	M	Shipped	1	INR
407-7268457-2258745	Thursday, 28 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3373	SET268-KR-NP-S	Kurta Set	S	Shipped	1	INR
408-6914283-1142727	Wednesday, 27 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3373	SET268-KR-NP-XL	Kurta Set	XL	Shipped	1	INR
403-2582734-5364360	Wednesday, 27 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET268	J0381	Kurta Set	XL	Shipped	1	INR
407-2558550-8526726	Tuesday, 26 April 2022	Shipped	Amazon	Amazon.in	Expedited	J0381	J0381-SKD-XL	Kurta Set	XL	Shipped	1	INR
405-0096063-1623264	Tuesday, 26 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3634	JNE3634-KR-XXL	Kurta Set	XXL	Shipped	1	INR
405-9745722-6526718	Tuesday, 26 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3373	SET268-KR-NP-L	Kurta Set	L	Shipped	1	INR
408-9255270-2463599	Monday, 25 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET268	SET268-KR-NP-XXL	Kurta Set	XL	Shipped	1	INR
405-4006693-2463599	Monday, 25 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3291	JNE3291-KR-XL	Kurta Set	XL	Shipped	1	INR
402-6019714-1941903	Monday, 25 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET291	SET291-KR-PP-XXL	Kurta Set	3XL	Shipped	1	INR
405-0892389-6639551	Sunday, 24 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET246	SET246-KR-PP-XS	Kurta Set	XS	Shipped	1	INR
403-2245173-0813952	Saturday, 23 April 2022	Shipped	Amazon	Amazon.in	Expedited	J0008	J0008-SKD-M	Kurta Set	M	Shipped	1	INR
407-1694063-8464367	Thursday, 21 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET300	SET300-KR-NP-XXXL	Kurta Set	3XL	Shipped	1	INR
406-6401795-8245117	Wednesday, 20 April 2022	Shipped	Amazon	Amazon.in	Expedited	J0010	J0010-LCD-XXXL	Kurta Set	3XL	Shipped	1	INR
404-9467645-9295527	Tuesday, 19 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3399	JNE3399-KR-XXXL	Kurta Set	XXL	Shipped	1	INR
403-9135355-2987542	Tuesday, 19 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET273	SET273-KR-NP-M	Kurta Set	M	Shipped	1	INR
406-8326948-9070710	Tuesday, 19 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET197	SET197-KR-NP-L	Kurta Set	L	Shipped	1	INR
403-9663684-0066739	Tuesday, 19 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE331	JNE331-KR-A-XXL	Kurta Set	XXL	Shipped	1	INR
171-2399842-6245115	Monday, 18 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET331	JNE331-KR-NP-M	Kurta Set	M	Shipped	1	INR
408-2463228-2714710	Monday, 18 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3368	JNE3368-KR-XL	Kurta Set	XL	Shipped	1	INR
405-1034532-6258736	Sunday, 17 April 2022	Shipped	Amazon	Amazon.in	Expedited	MEN5017	MEN5017-KR-M	Kurta Set	M	Shipped	1	INR
408-7119808-2820361	Sunday, 17 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET268	SET268-KR-NP-L	Kurta Set	L	Shipped	1	INR
171-01423263-7077900	Sunday, 17 April 2022	Shipped	Amazon	Amazon.in	Expedited	JNE3384	JNE3384-KR-S	Kurta Set	S	Shipped	1	INR
106-3315301-0316282	Gender: 17 April 2022	Ordered	Amazon	Amazon.in	Expedited	SET328	SET328-KR-XXXL	Kurta Set	3XL	Shipped	1	INR

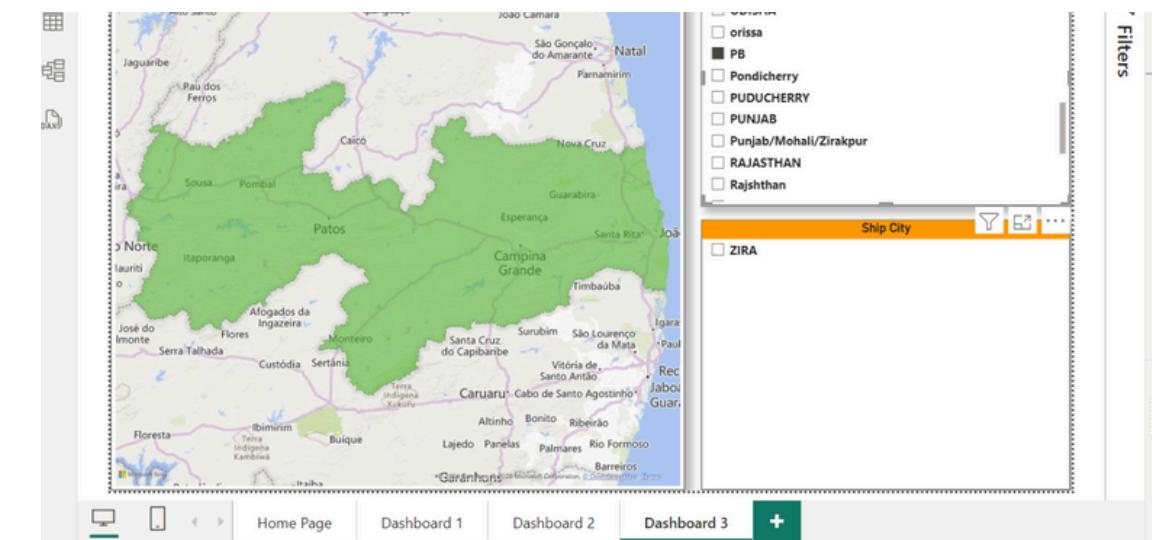
amazon Analysis



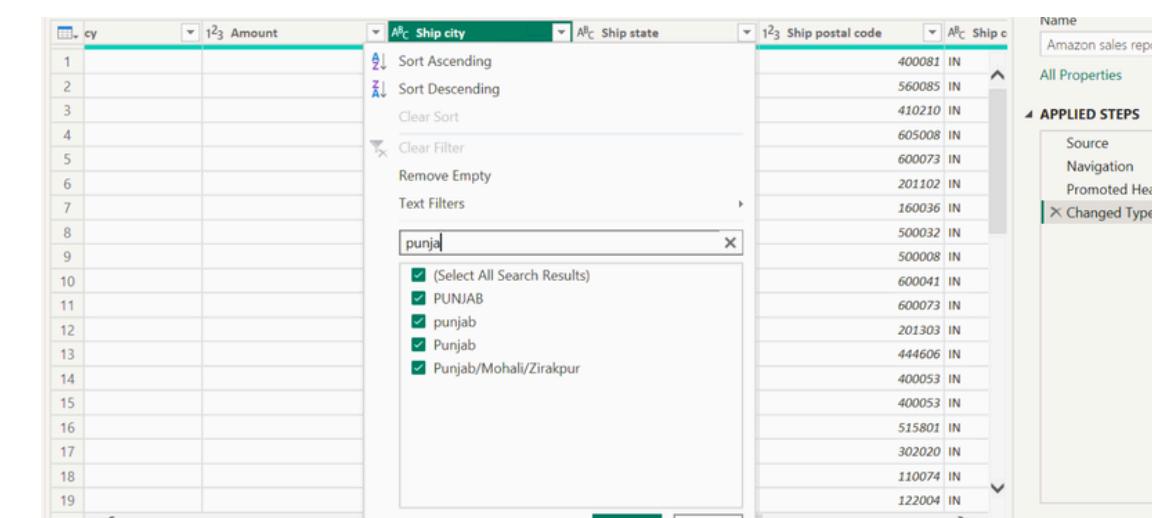
DATA CLEANING / QUALITY CHECK

- Column datatype adjustment
- Data inconsistency removal

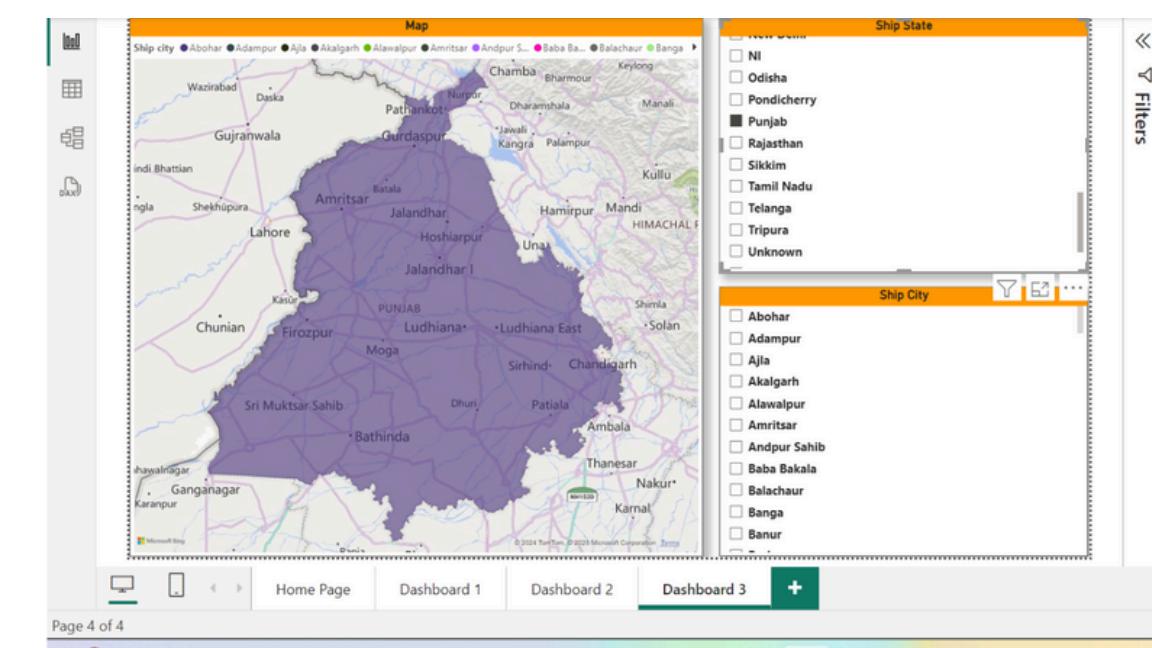
a. Inconsistent Data (PB, Punjab, punjab, PUNJAB)



b. We converted values in column
SHIP_STATE to lowercase > Replaced value (pb->punjab)



c. Then converted back into Uppercase > Close&Apply (in Power Query Editor)



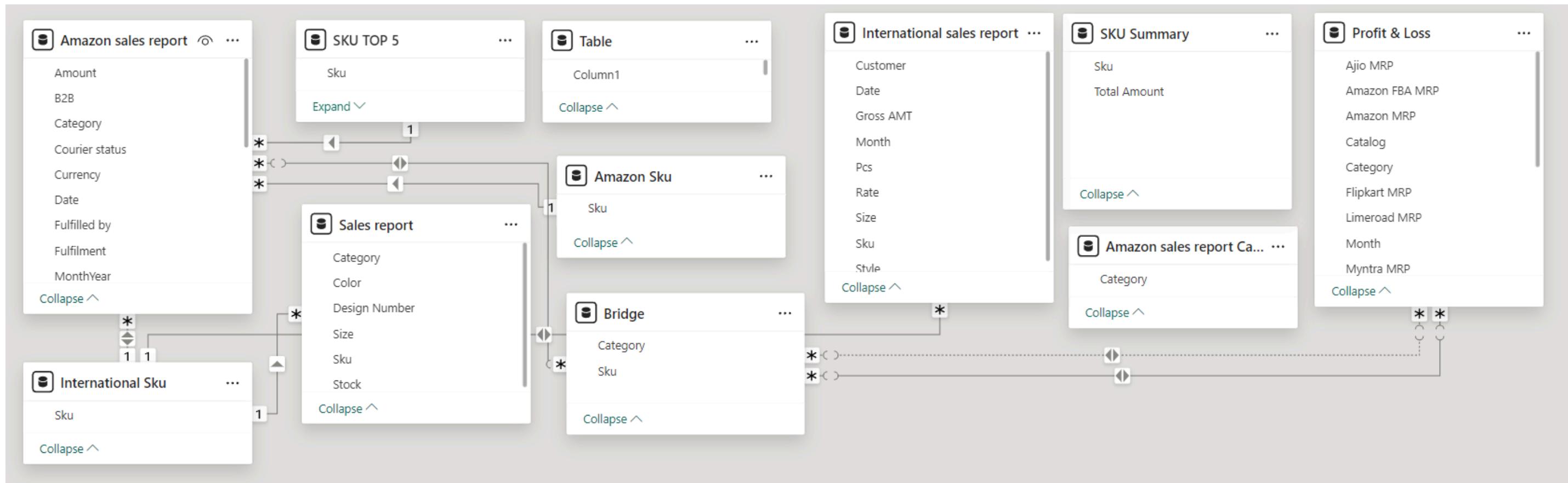
This is how the accuracy of resultant visuals has been increased.

amazon Analysis



DATA MODELLING

- Relationships in the Model
 - Fact Tables: Amazon Sales Report and International Sales Report act as the main data sources.
 - Dimension Tables: Tables like SKU TOP 5, Amazon SKU, and Bridge connect datasets via key attributes like SKU and Category.
- Optimized Structure
 - One-to-Many and Many-to-One relationships for hierarchical clarity.
 - Use of bridge tables (Bridge) for resolving many-to-many relationships.
- Purpose
 - Enable robust reporting and drill-down analysis.
 - Support cross-referencing of sales, SKUs, and profitability metrics for better decision-making.



amazon Analysis



DATA PROCESSING

Data processing comes with these essential steps:

- Data Collection
 - Data Cleaning
 - Data Transformation
 - Data Modeling
 - Data Validation

We have done couple of steps before here we look for
Data transformation.

Added new columns :

- New column MonthYear (mmyyyy) from Date column (ddmm/yyyy).
 - Transformed column Promotion_ID (with bulky raw data) into new column Promo (with values yes/no).
 - Created new table ‘SKU TOP 5’ to fetch distinct values of Top 5 SKU Id with respective total amount.
 - Created new table ‘International SKU’ to fetch international orders from the table ‘International Sales Report’.

Data transformed under data transformation (PowerBi Measures)

Table

- Cancelled Products
- No of order June 15
- Number of Cancelled Products
- Out for Delivery Count
- PreviousMonthSales
- Shipped Product
- STDmode Count
- Total Sales
- TotalShippedProducts

```
L MonthYear = FORMAT('Amazon sales report'[Date], "MmM, YYYY")  
                (DAX Used)
```

Order ID	Date	Status	Full
406-7955475-7819507	Saturday, 30 April 2022	Shipped	Ame
407-7268457-2258745	Thursday, 28 April 2022	Shipped	Ame
408-6914283-1142727	Wednesday, 27 April 2022	Shipped	Ame
403-2582734-5364360	Wednesday, 27 April 2022	Shipped	Ame
407-2558503-8526726	Tuesday, 26 April 2022	Shipped	Ame
405-0096063-7632364	Tuesday, 26 April 2022	Shipped	Ame
405-9745722-6526718	Tuesday, 26 April 2022	Shipped	Ame
408-9255270-0457146	Tuesday, 26 April 2022	Shipped	Ame

Data Transformation

amazon Analysis



DAX CALCULATION

Why DAX?

- Enables complex calculations and aggregations.
- Facilitates custom KPIs and performance metrics.

Key DAX Measures Used:

► Total Sales in India (Simple DAX)

```
Total Sales = CALCULATE(SUM('Amazon sales report'[Amount]),ALL('Amazon sales report'))
```

Calculates overall revenue by multiplying quantity by unit price for each transaction.

► Total Orders

```
Total Orders = DISTINCTCOUNT('Sales report'[Sku])
```

Counts unique orders to track the total number of purchases.

► Total Shipped Products in India (Nested DAX)

```
TotalShippedProducts =  
CALCULATE(  
    COUNTROWS('Amazon sales report'),  
    FILTER(  
        'Amazon sales report',  
        LEFT('Amazon sales report'[Status],7) = "Shipped"  
    )  
)
```

Counts total orders that are out of shippment.

amazon Analysis



CHARTS DEVELOPMENT

Purpose of Chart Development

- Visualize key sales metrics and performance trends.
- Identify high-performing products, regions, & time periods.

Map Visualization :

State and City-wise Sales by breaking down sales by state and city.

Stacked Bar Chart:

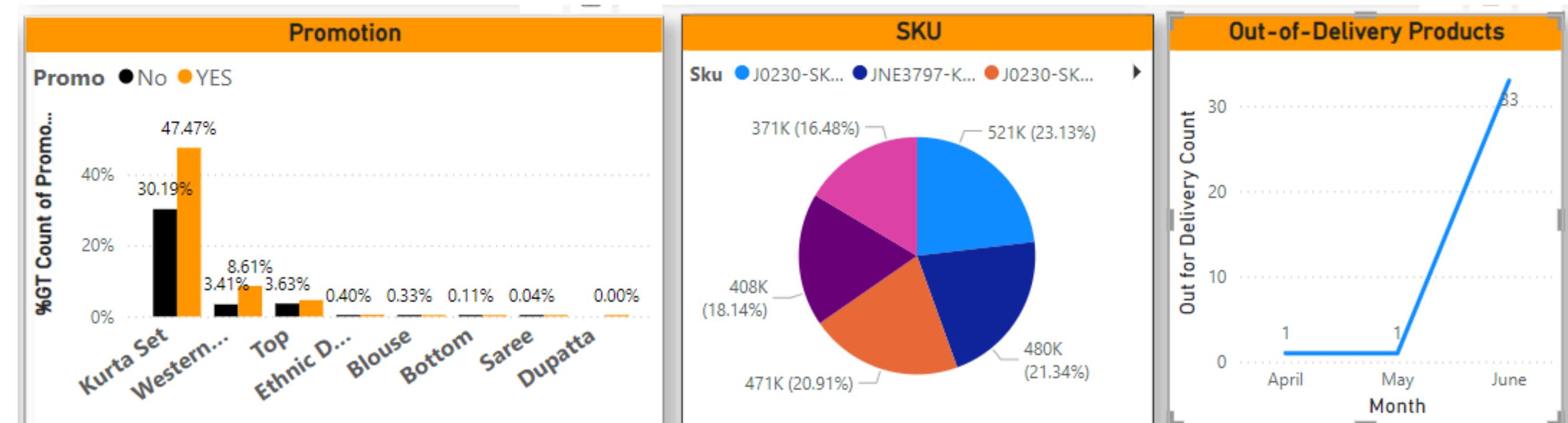
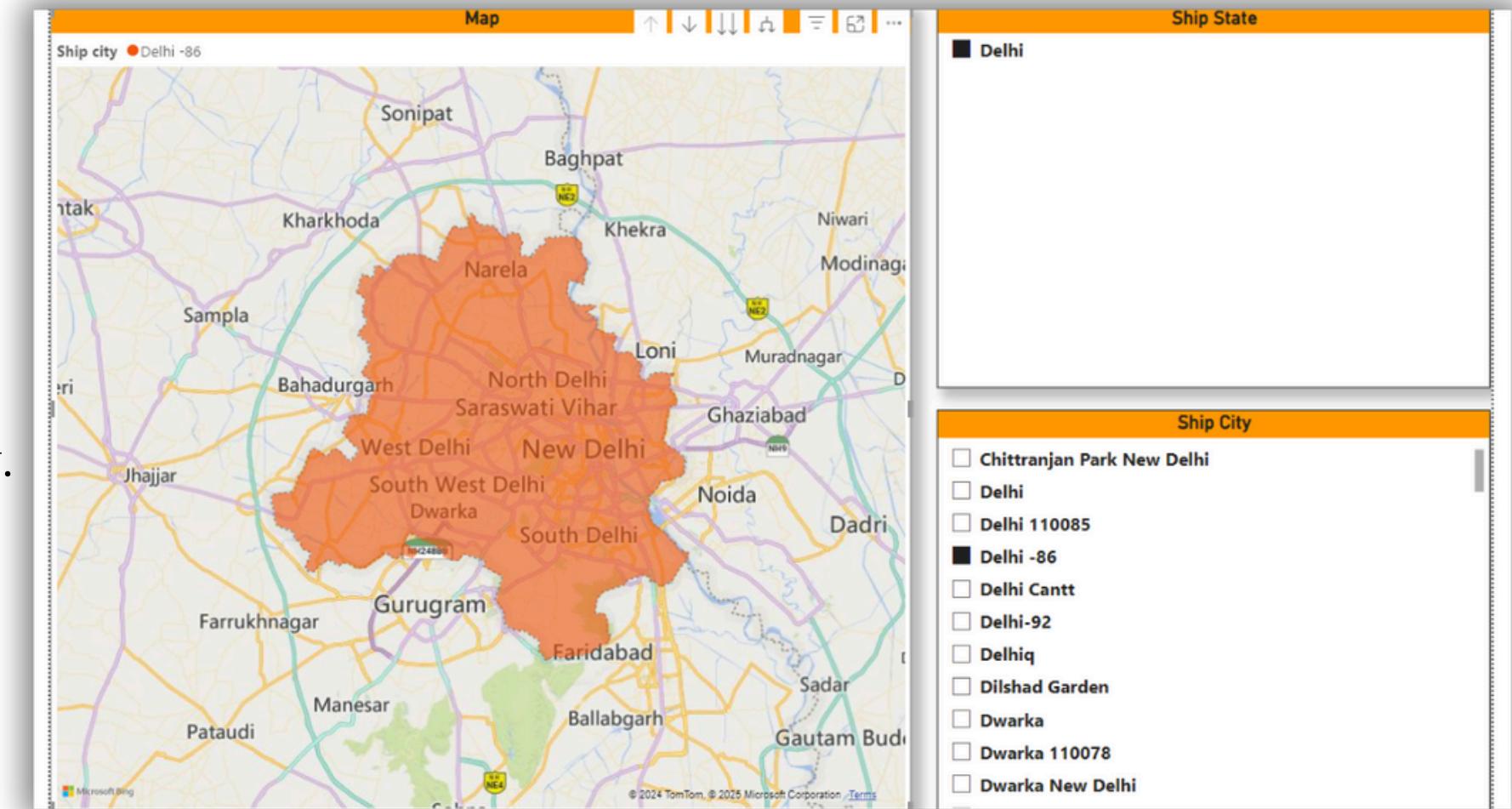
Identify products under promotion by percentage.

Pie Chart:

Highlight the top 5 selling SKUs by total sales.

Line Chart:

Show month-wise trends for out-of-delivery products.



amazon Analysis



REPORT/ DASHBOARD DEVELOPMENT

1. Objective of the Dashboard

- Provide a comprehensive view of Amazon sales performance.
- Enable real-time monitoring of key sales KPIs.
- Facilitate data-driven decisions by visualizing trends, patterns, and anomalies.

2. Key Components of the Dashboard

- KPI Cards
- Charts (Line, Column, Pie, Stacked)
- Map Visualization

3. Interactivity and Filters (Category and Product)

4. KPIs Displayed

- Total Sales, Shipped Products, Number of Cancelled Products, Number of Orders Delivered on Date, Most Order-Placed City, Count of SKU's, Total Shipment

5. Final Output

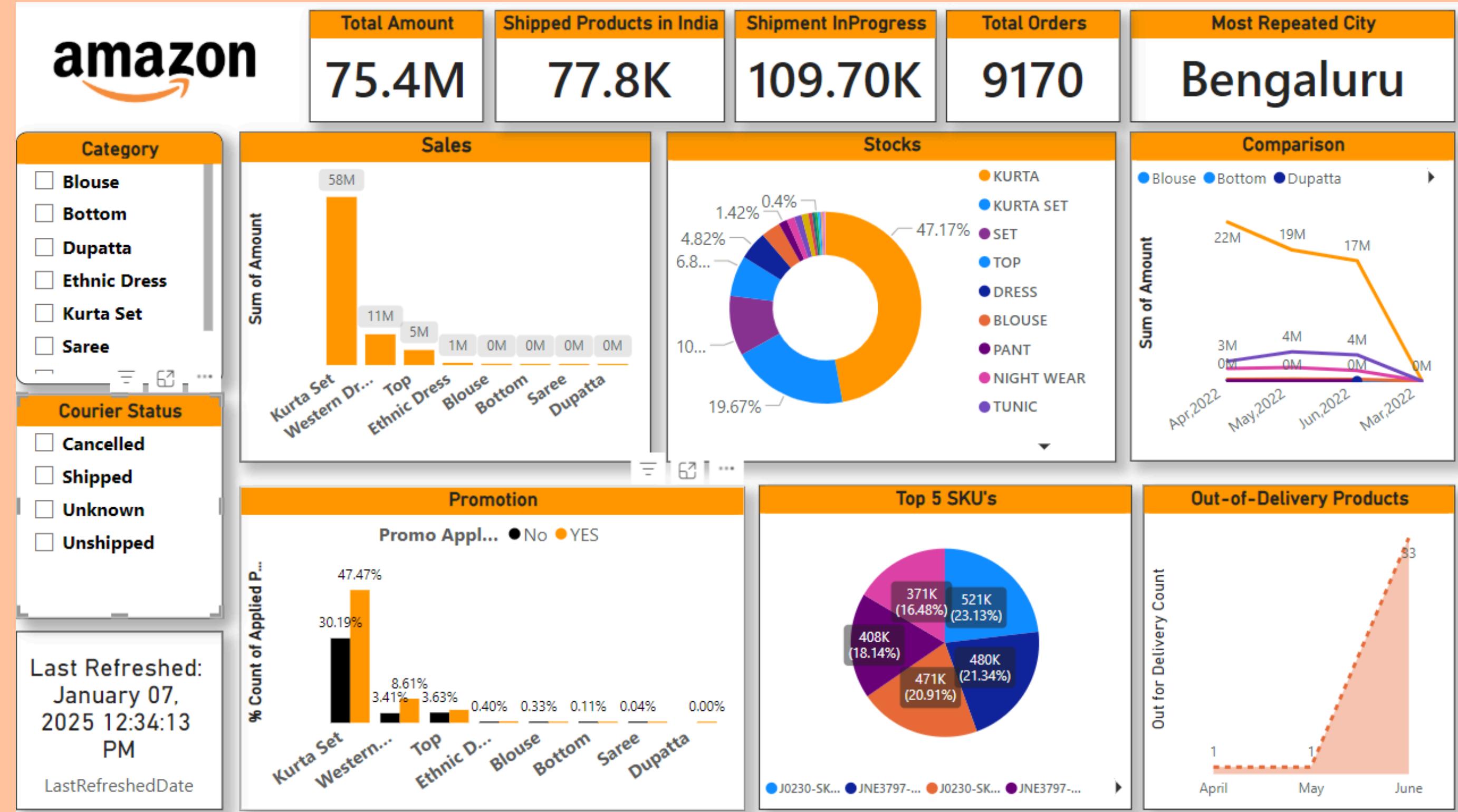
- Interactive, real-time dashboard with dynamic slicers.
- Easy to share and access for stakeholders through Power BI Service.



amazon Analysis



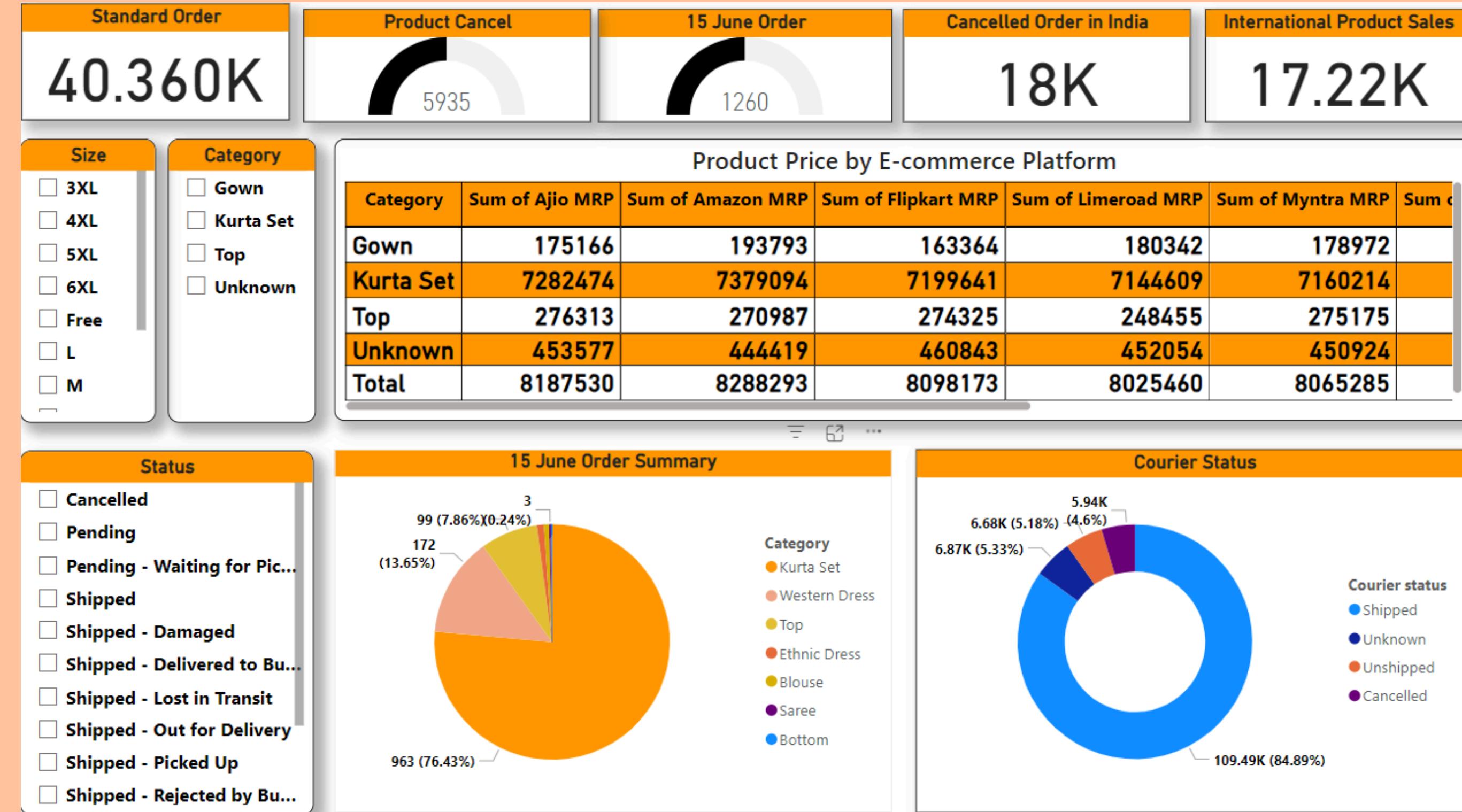
Dashboard 1



amazon Analysis



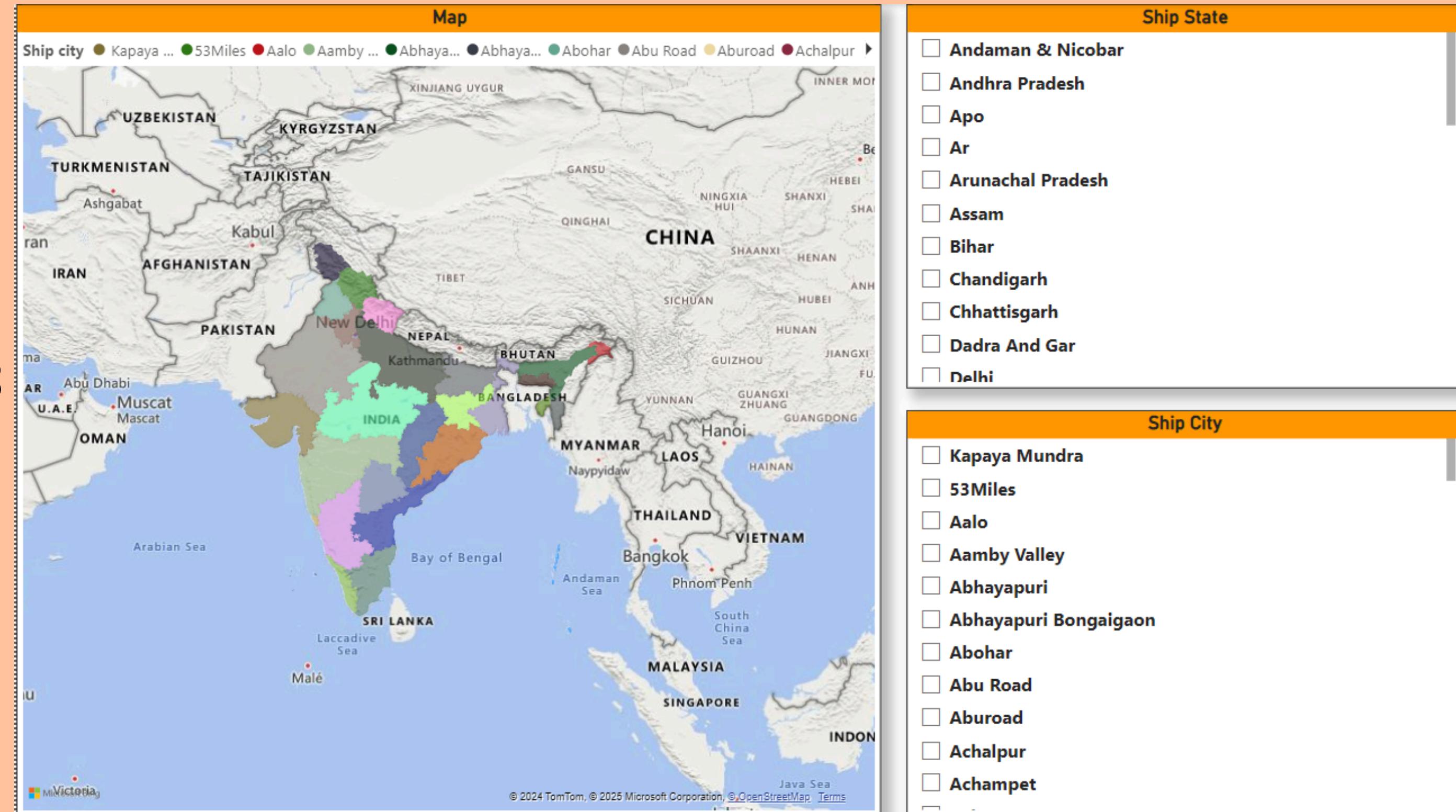
Dashboard 2



amazon Analysis



Dashboard 3



amazon Analysis



CONCLUSION

- Kurta Set is the top-performing category, driving the majority of sales.
- Bengaluru is the most frequently shipped-to city, showing strong demand.
- The top 5 SKUs contribute significantly to total revenue.
- Promotions boost sales for specific categories like Kurta Set and Western Dress.
- Logistics need improvement, with 18K cancelled orders and some damaged shipments.

THANK YOU



Kapil Namdev

AIML|JAVA|MICROSOFT AZURE AI
CERTIFIED|JAVA|DBMS WITH
MYSQL|



Omkar

Dashboard Expert | Data
Analyst



Anurag Goyal

Group Leader

SAAS Dev | Data Analyst (PowerBI,
Ignos) DAX & Dashboard Expert



Ayushi Tiwari

Data Science Enthusiast | Power
BI Expert



Kaarthika

Data Analyst | Dashboard
Developer