



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.

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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.

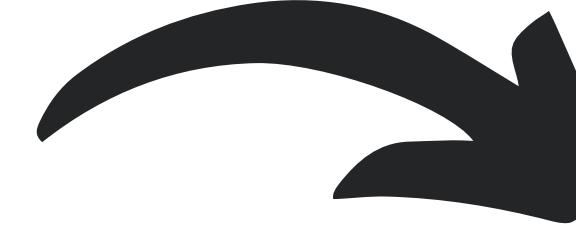
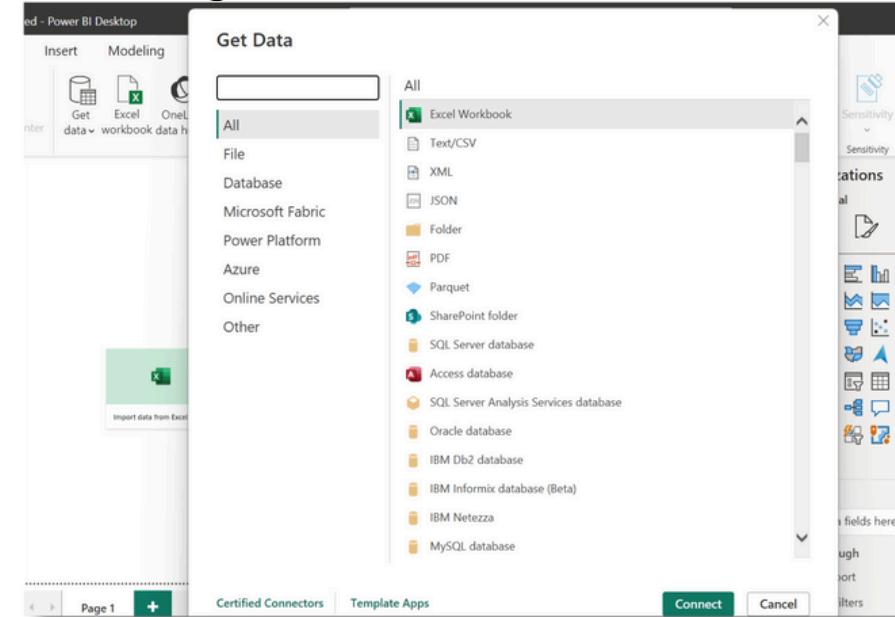
- **Out-of-Delivery Products (DAX):**
 - **Objective:** Show month-wise trends for out-of-delivery products.
 - **Chart Type:** Line Chart.
- **Cancelled Products (DAX):**
 - **Objective:** Track monthly product cancellations.
 - **Chart Type:** Area Chart.
- **International Product Sales:**
 - **Objective:** 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.

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DATA CONNECTION

Selecting file format

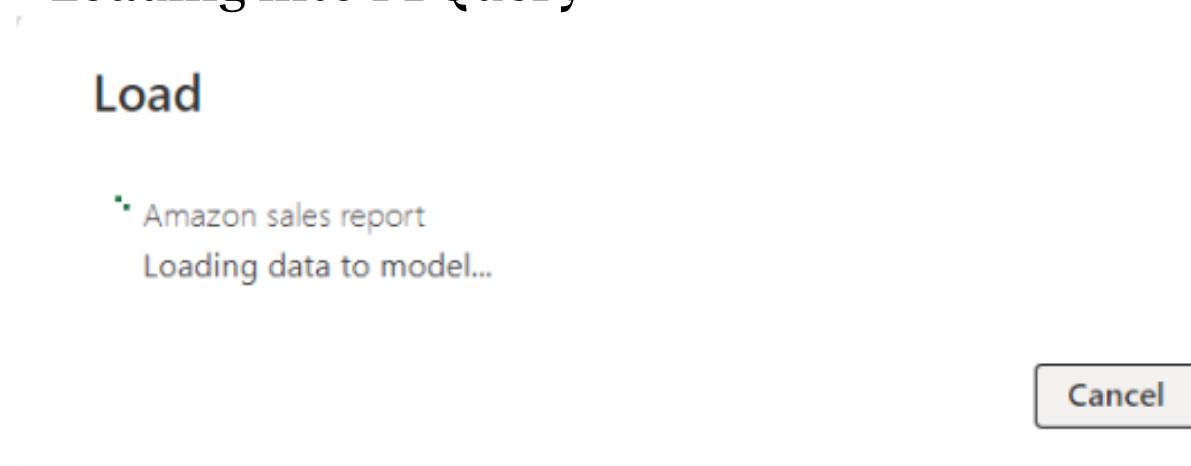


Selecting the table from file

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
405-0096063-1632364	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
408-9255270-2463559	Monday, 25 April 2022	Shipped	Amazon	Amazon.in	Expedited	SET268	SET268-KR-NP-XXL	Kurta Set	XL	Shipped	1	INR
405-4006693-2463559	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
408-2463288-2714710	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

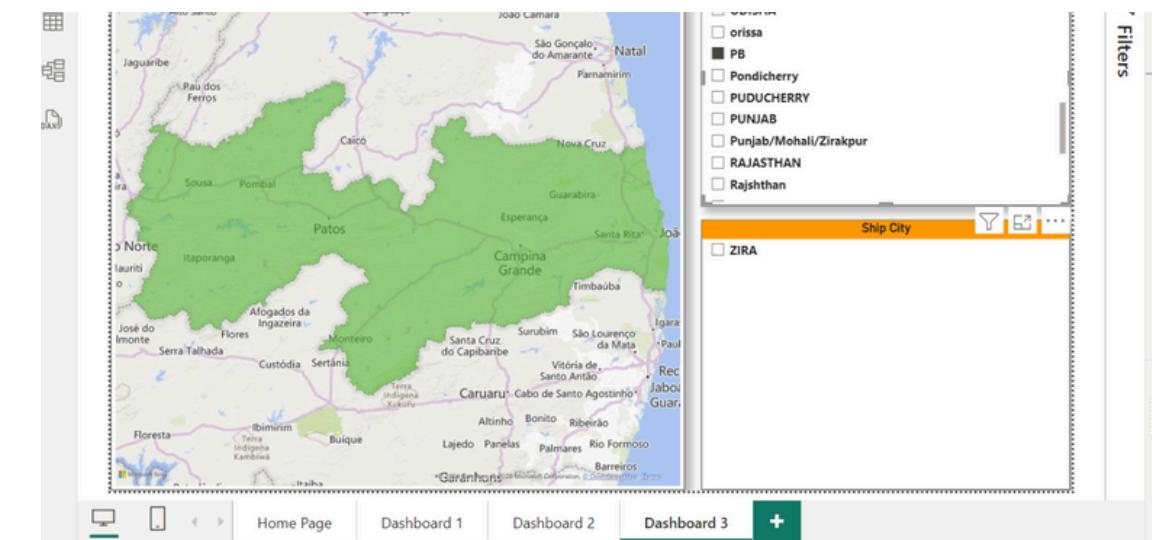
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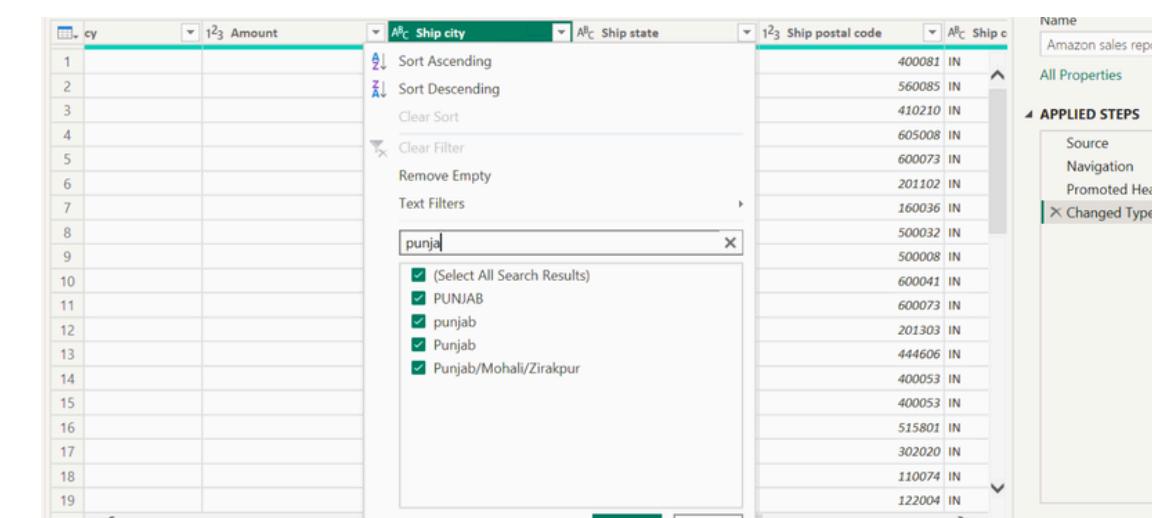
DATA CLEANING / QUALITY CHECK

- Column datatype adjustment
- Data inconsistency removal

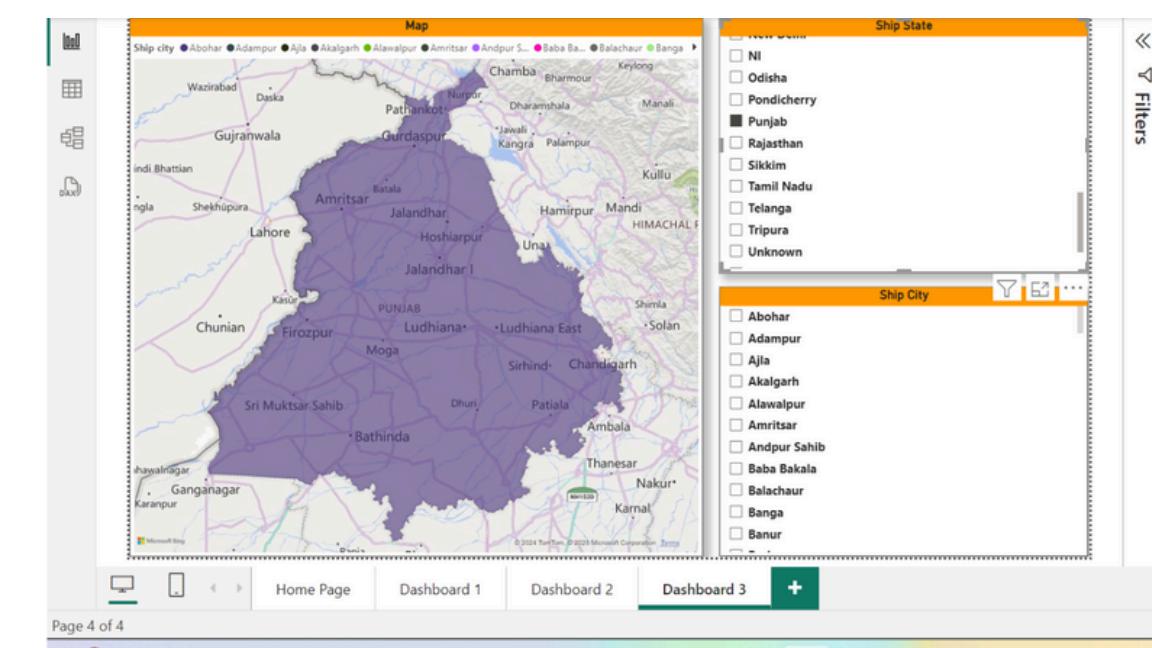
a. Inconsistent Data (PB, Punjab, punjab, PUNJAB)



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)



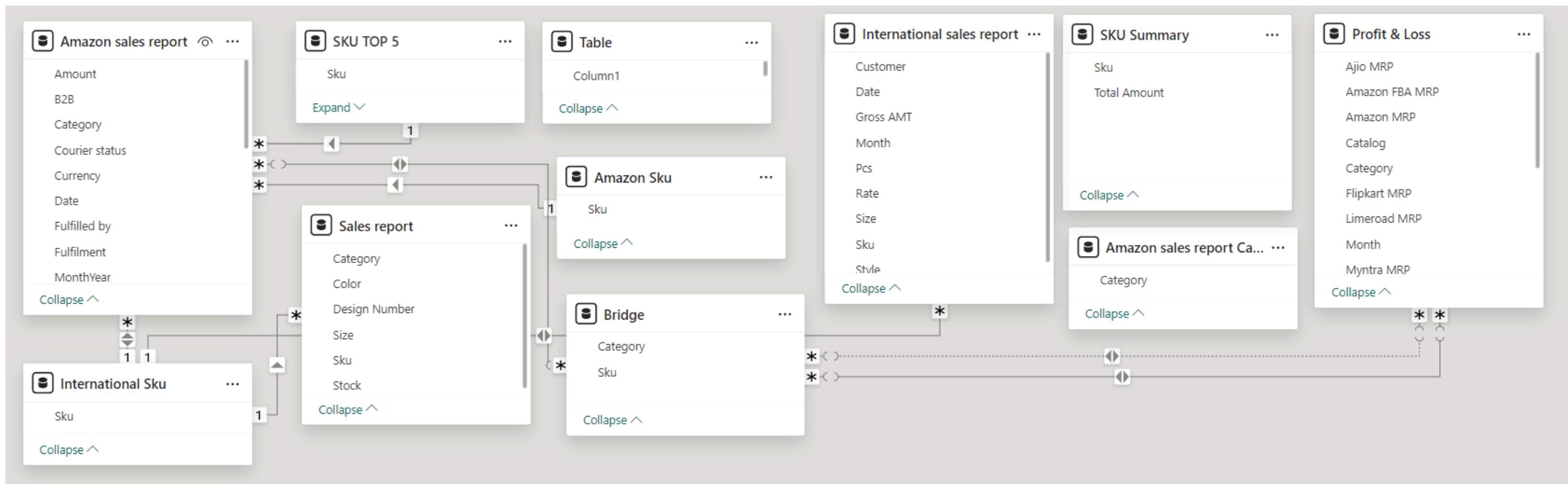
This is how the accuracy of resultant visuals has been increased.

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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.



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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

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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.

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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:

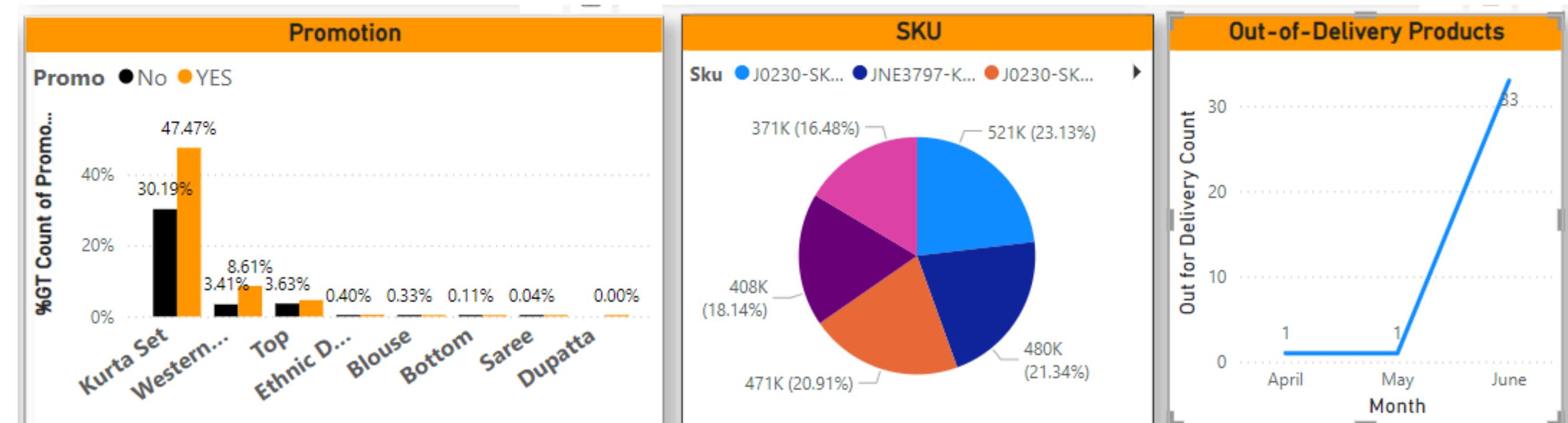
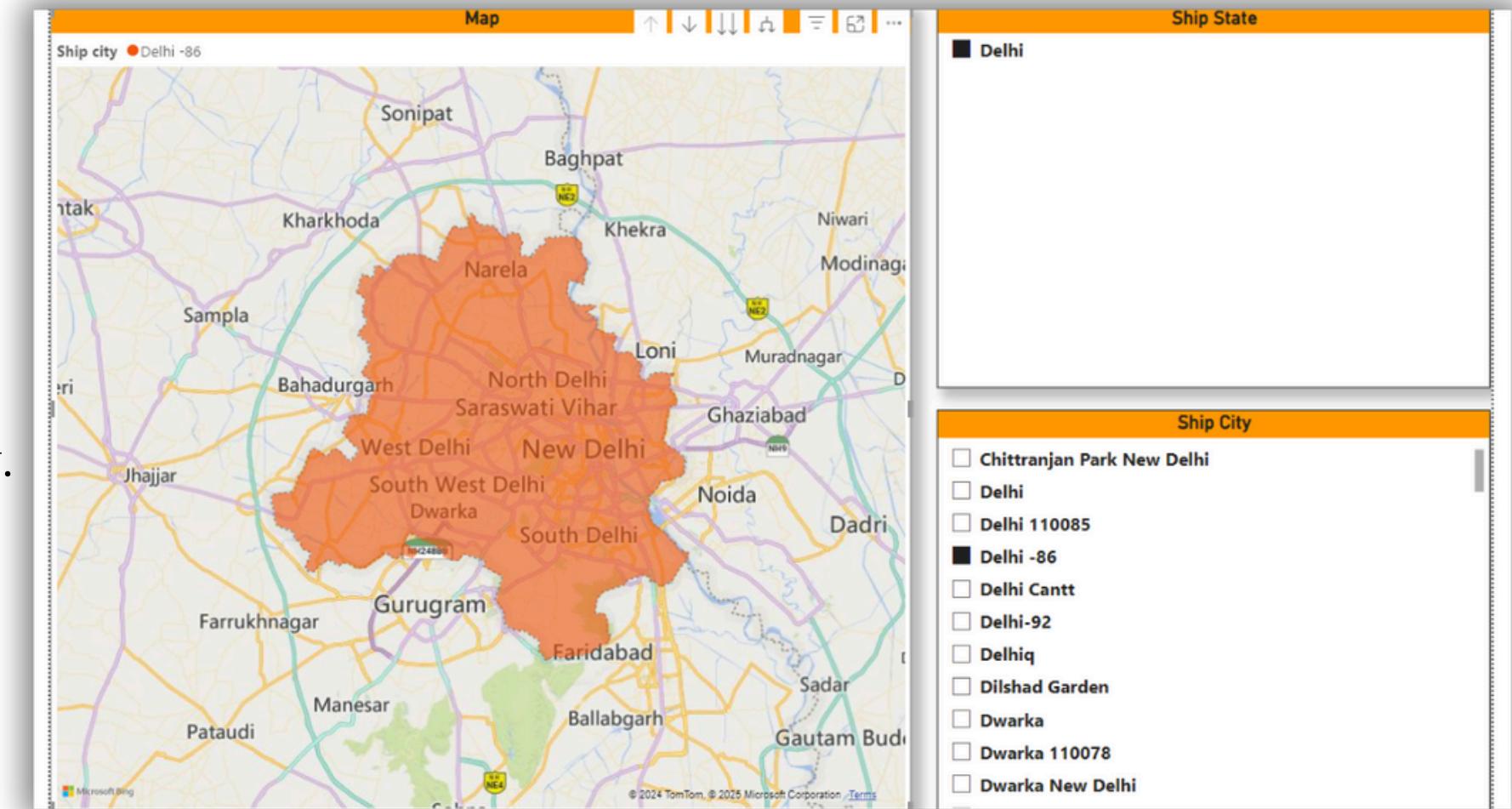
Identify products under promotion by percentage.

Pie Chart:

Highlight the top 5 selling SKUs by total sales.

Line Chart:

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



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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

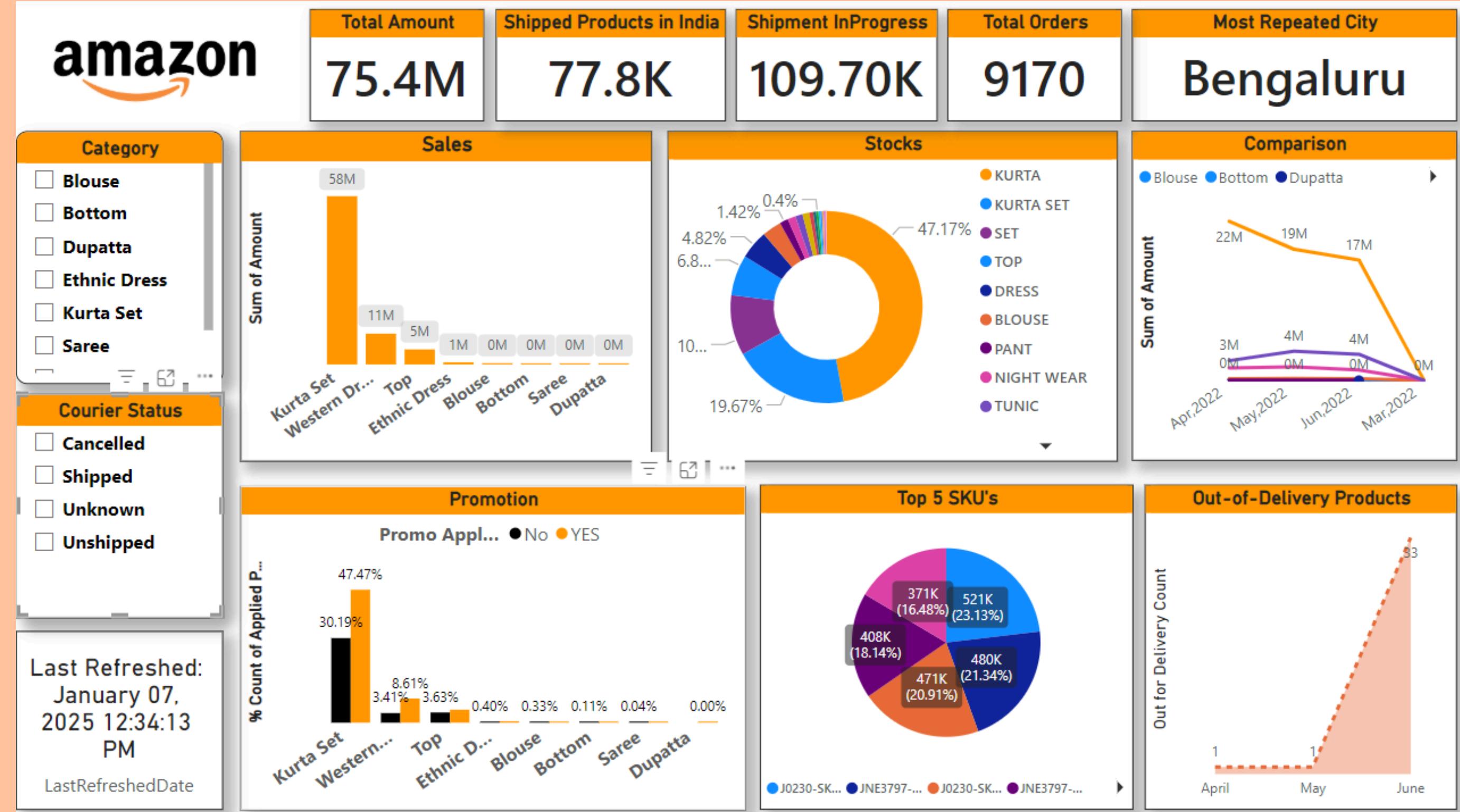
- Interactive, real-time dashboard with dynamic slicers.
- Easy to share and access for stakeholders through Power BI Service.



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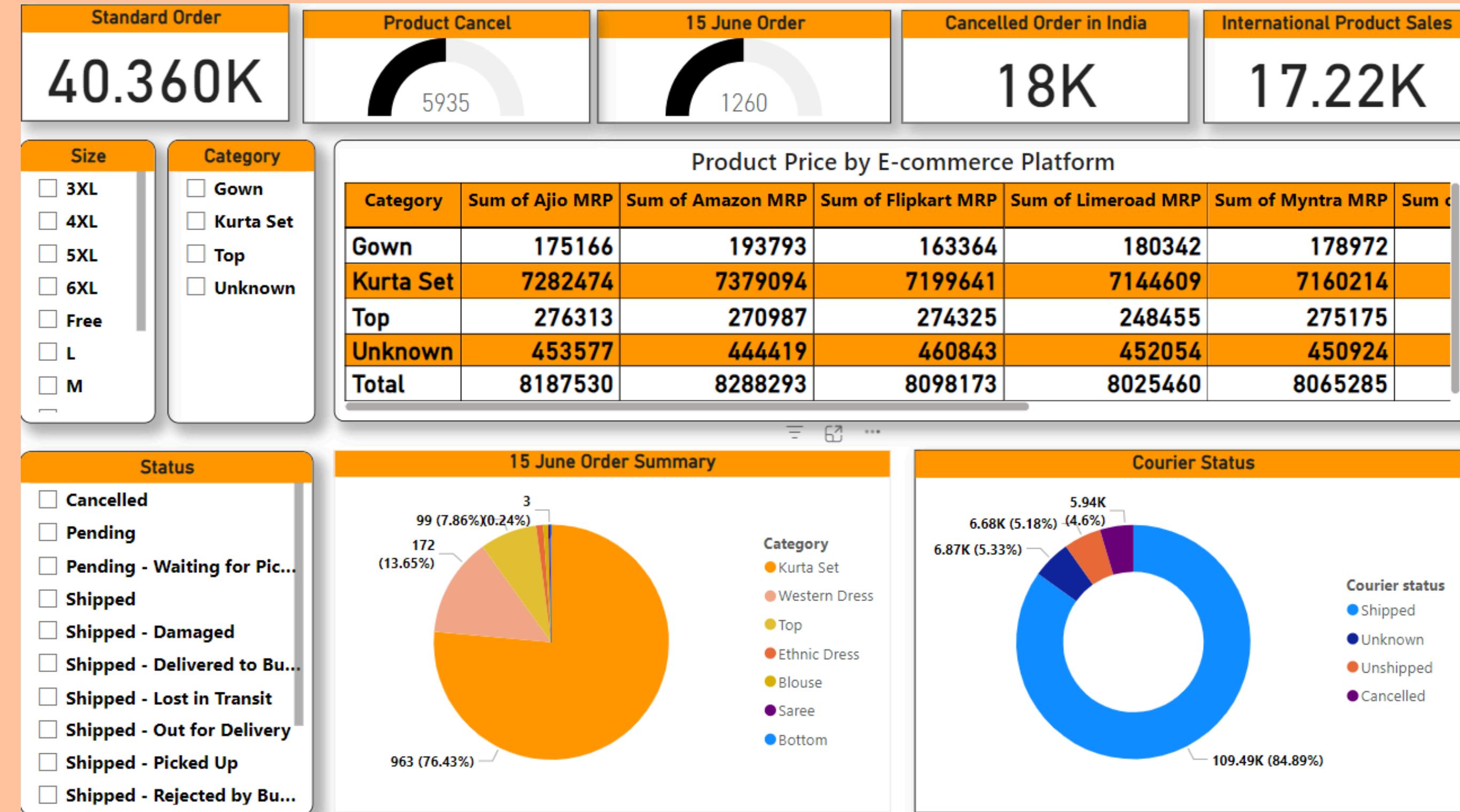
Dashboard 1



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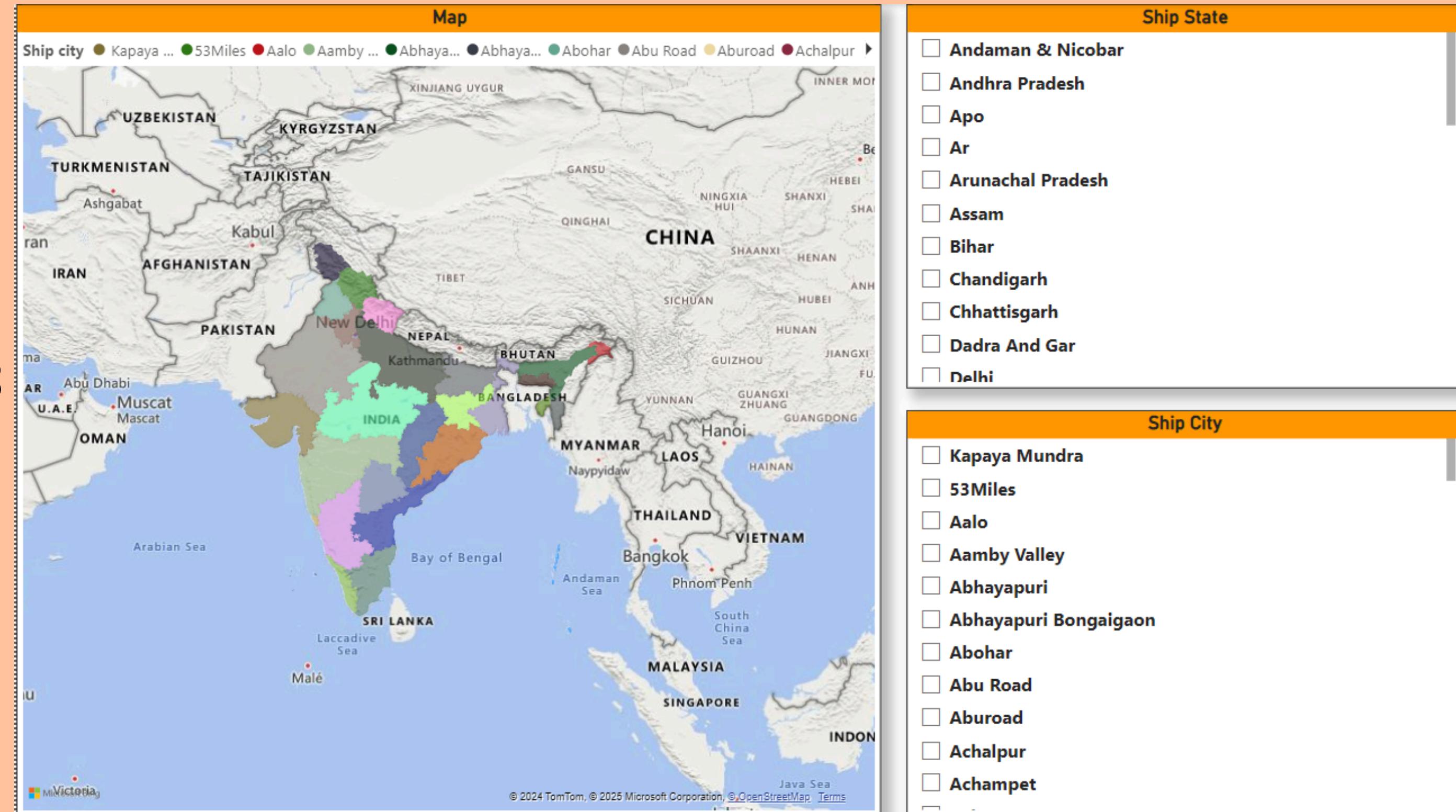
Dashboard 2



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Dashboard 3



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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

Briefly elaborate on what you want to discuss.



Omkar

Briefly elaborate on what you want to discuss.



Anurag Goyal

Briefly elaborate on what you want to discuss.



Ayushi Tiwari

Briefly elaborate on what you want to discuss.



Kaarthika

Briefly elaborate on what you want to discuss.