

# GLOBAL SALES ANALYTICS

**End-to-End BI Automation:  
Excel + SQL + Power BI + Fabric + Gateway**

**SAHEB RAFIQUE**

DATA ANALYST & BUSINESS INTELLIGENCE ANALYST

# Project Summary

## ► Goal

Automate Power BI dashboard updates by connecting MySQL to Microsoft Fabric through an On-Premises Gateway.

The objective was to create a seamless pipeline where new sales records automatically update all dashboards without manual intervention.

## ► Why Automation Was Needed

Manual refreshes were slow, repetitive, and error-prone

Dashboards often became outdated before stakeholder reviews

Increased data volume made manual processes unsustainable

Analysts spent more time maintaining reports instead of analyzing insights

## Outcome

Dashboard now **auto-refreshes** when new countries or records are inserted into MySQL

New regions like **Saudi Arabia** and **UAE** appeared instantly after SQL upload

All visuals update automatically, providing real-time insights

The BI workflow is now stable, scalable, and suitable for production environments

# BEFORE Refresh – Dashboard Summary



## Global Sales Analytics

Interactive Sales Insights Across Countries, Categories & Time

WELCOME, SAHEB RAFIQUE



Total Profit **1.11M**

Total Sales **4.85M**

Total Orders **3.50K**

Total Discount Given **89.54K**

Average Order Value **1.39K**

**Overview**

**Customer Insights**

**Product & Store Performance**

**Time Intelligence & Trends**

**SALES PERFORMANCE SUMMARY**

**Business Highlights**

- ">\$4.85M+ Total Sales generated across all markets.
- Australia, US & China lead in both revenue and profitability.
- Home & Kitchen ranks as the top-performing category by sales volume.
- Balanced Payment Behavior: Cash, Credit Card & Mobile Payment each contribute ~33%.
- Adults (25–40 yrs) are the strongest customer group, generating the highest sales.
- Top Performing Stores: New York, Birmingham & Guangzhou consistently outperform others.
- Monthly Sales Trend: Strong upward momentum from May → December, peaking during holiday season.
- YoY Growth: Positive and stable, signaling strong market expansion.
- Discount Efficiency: Total discounts of 89.54K are helping drive sales without significantly reducing profit.
- Top 10 Products show strong and consistent demand, with repeat buying behavior.
- Rolling 12-Month Trend: Smooth upward curve across both sales & profitability.

Note: Insights derived from sales transactions across 7 countries, 500+ stores, and multiple customer demographics.

# AFTER Refresh – Dashboard Summary



## Global Sales Analytics

Interactive Sales Insights Across Countries, Categories & Time



WELCOME, SAHEB RAFIQUE

Total Profit  
1.81M

Total Sales  
7.58M

Total Orders  
4.50K

Total Discount Given  
99.85K

Average Order Value  
1.68K



### Overview



### Customer Insights



### Product & Store Performance



### Time Intelligence & Trends



### SALES PERFORMANCE SUMMARY

#### Business Highlights

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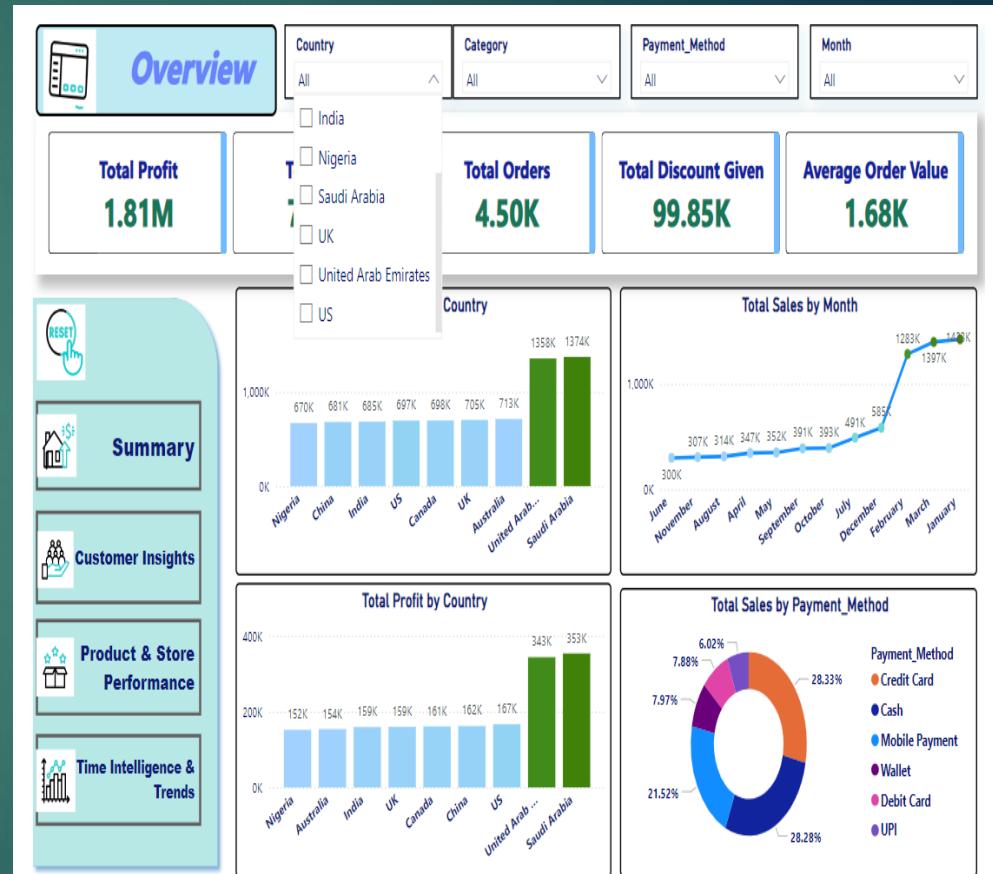
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# Before and After Refresh – Country Filter

Before



After



# Before and After Refresh – Customer Insights

Before

After



# Before and After Refresh – Product and Store Performance

Before

After

**Product & Store Performance**

Top Store Location: New York

No of Stores: 23

Top Product by Sales Item: Home & Kitchen

Category: All

Month: All

No Of Category: 7

**Sales by Store Location**

**Top 10 Products by Sales**

Item	Sales
OK	~18K
Degree	~18K
Trial	~18K
Foreign	~18K
Vote	~18K
Section	~18K
Result	~18K
Child	~18K
Not	~18K
Apply	~18K
Item	~22K

**RESET**

**Summary**

**Overview**

**Customer Insights**

**Time Intelligence & Trends**

**Top 10 Products by Profit**

Item	Profit
OK	~5K
Care	~5K
Trial	~5K
Eight	~5K
Military	~5K
Section	~5K
There	~5K
Apply	~5K
Foreign	~5K
If	~6K
Vote	~6K

**Sales by Store Location**

City	City	City	City	City	City	City	City	City	City
New York	Shanghai	Delhi	Mu...	Van...	Chic...	Port...			
Birmingham	Bangalore	Guangzhou							
Toronto	Montreal	Lagos	Los Ang...	Ade...	Syd...				
London	Abuja	Beijing	Manche...	Perth	Melbourne	Bris...			

**Product & Store Performance**

Top Store Location: Riyadh

No of Stores: 29

Top Product by Sales Item: Pro Pack

Category: All

Month: All

No Of Category: 7

**Sales by Store Location**

**Top 10 Products by Sales**

Item	Sales
Lite Unit	~110K
Lite Set	~120K
Ultra Unit	~120K
Eco Set	~120K
Max Box	~130K
Lite Pack	~140K
Prime Box	~140K
Prime Set	~150K
Pro Unit	~160K
Pro Pack	~170K

**RESET**

**Summary**

**Overview**

**Customer Insights**

**Time Intelligence & Trends**

**Top 10 Products by Profit**

Item	Profit
OK	~40K
Eco Unit	~45K
Max Box	~45K
Eco Set	~45K
Lite Set	~45K
Ultra Unit	~45K
Lite Pack	~50K
Prime Set	~50K
Prime Box	~50K
Pro Unit	~50K
Pro Pack	~50K

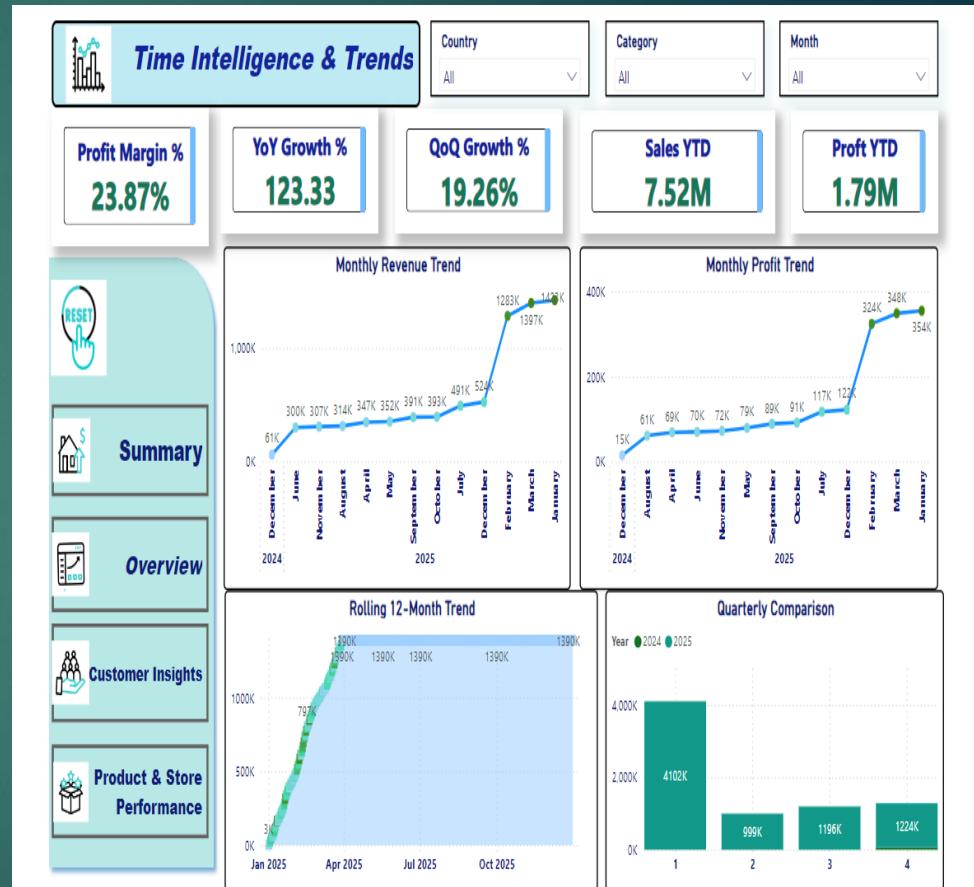
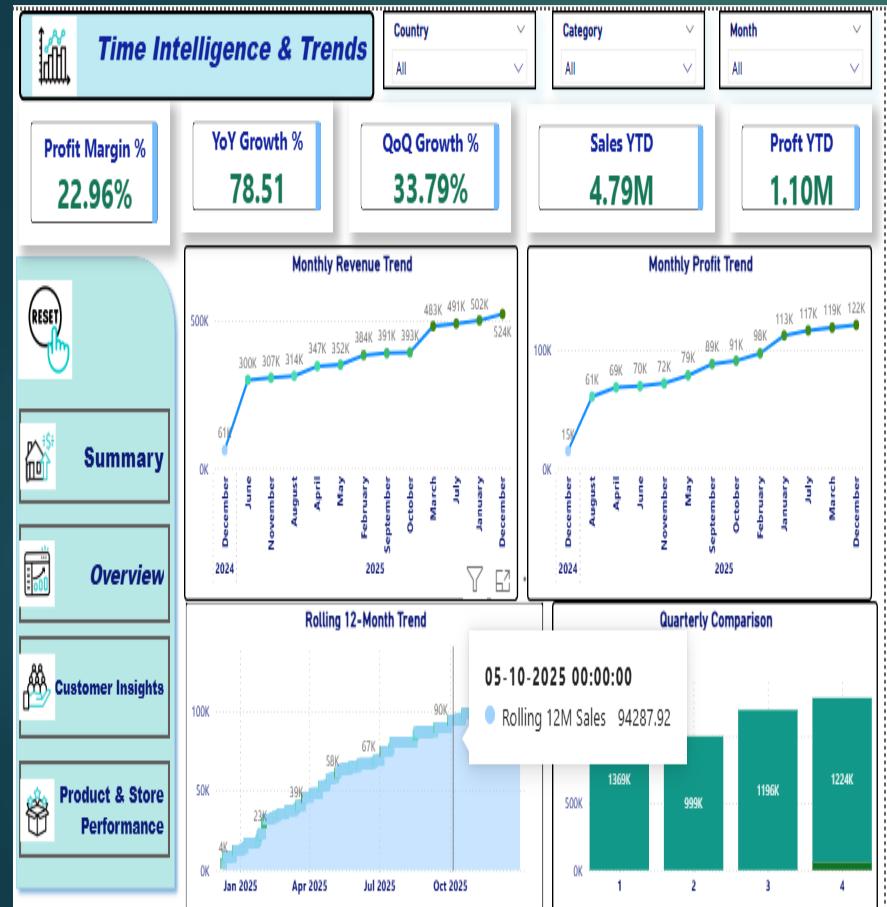
**Sales by Store Location**

City	City	City	City	City	City	City	City	City	City
Riyadh	Sharjah	Toronto	Abuja	Delhi	Gua...	Lagos			
			London						
Abu Dhabi		Dammam	Beijing	Pot...	Lo...	M...			
			Shanghai						
Dubai			Mumbai						
			Bangalore						
Jeddah			New York	Vancouver	Adel...	M...			
			Birmingham	Montreal	Chicago	Perth	Brisbane		

# Before and After Refresh – Time Trends

Before

After



## SQL & Data Update Process

- ▶ • Inserted Saudi Arabia & UAE records into MySQL master table.
- ▶ • Updated Profit & Total Amount calculations.
- ▶ • Ensured consistent schema and formatting for Power BI ingestion.

```
1 •  SELECT Country
2      FROM sales_analysis.master_sales_data
3      group by Country
```

The screenshot shows a MySQL query editor interface. At the top, there is a code editor window containing the following SQL query:

```
1 •  SELECT Country
2      FROM sales_analysis.master_sales_data
3      group by Country
```

Below the code editor is a toolbar with buttons for 'Result Grid' (selected), 'Filter Rows', 'Export', and 'Wrap Cell Content'. The main area displays a table titled 'Result Grid' with the following data:

Country
Canada
China
India
Nigeria
UK
US
Australia
Saudi Arabia
United Arab Emirates

# Fabric - Gateway Automation

- Successfully connected Microsoft Fabric to the MySQL database using the **On-Premises Data Gateway**, enabling secure, real-time access to local data from the cloud environment.
- Configured, mapped, and validated the semantic model connection to ensure Power BI/Fabric could correctly read and query the updated MySQL tables.
- Set up a scheduled refresh cycle so the dashboard automatically updates on a daily basis without manual intervention, ensuring stakeholders always see the latest sales insights.
- Performed a manual on-demand refresh to confirm the gateway connection, refresh pipeline, and semantic model were functioning correctly before full automation.

# Why We Used Gateway Instead of Direct-Query in Power BI

## **MySQL does not support Direct-Query natively in Power BI Service**

Power BI Desktop can connect to MySQL,  
**but Direct-Query mode is not supported for refresh in Power BI Service.**

Without Direct-Query, publishing the report would not allow real-time queries.

- ◆ **To enable automatic updates, we used the On-Premises Data Gateway**

The Gateway securely connects Power BI Service with the **local MySQL Server**.

It allows Power BI to refresh the dataset on a schedule or manually.

No need to republish the PBIX file every time the database changes.

- ◆ **Gateway enables enterprise-grade data refresh**

Supports encrypted credential storage.

Automatically refreshes the semantic model from MySQL.

Ensures the dashboard always reflects the latest sales records.

- ◆ **Result**

After adding Saudi Arabia & UAE data to MySQL,  
**the Power BI dashboard updated automatically after Gateway refresh**  
— demonstrating successful automation.

# Key Outcomes

- ▶ • Dashboard updated instantly with new regions.
- ▶ • Fully automated BI workflow achieved.
- ▶ • No manual imports needed.
- ▶ • Scalable for future countries and datasets.

# Final Remarks

- ▶ This project demonstrates a complete Data Analytics + BI pipeline:
- ▶ Excel → SQL → Transformation → Fabric Gateway → Power BI Automation.
- ▶ A strong showcase of automation, modeling, and professional dashboard development.