📘 Power BI Dashboards – Comprehensive Analytics Report

Prepared by: *Syed Murtaza Hassan (Murtaza Rizvi)*
 Tools Used: Power BI, DAX, Power Query, Data Modeling

---

1. Introduction

This project presents a collection of **eight fully developed Power BI dashboards**, each built using real-world datasets and analytical techniques.
 The purpose of this report is to:

- Demonstrate BI skills across multiple business domains

- Showcase dashboard design, KPIs, DAX measures, and data storytelling

- Provide insights for business decision-making based on trends and patterns

- Build a strong portfolio for analytics, data science, and BI roles

---

2. Dashboard Summaries & Insights

🌐 2.1 E-Commerce Sales Dashboard

Business Purpose

Analyze sales, profit, customer behavior, category performance, and state-wise revenue.

Key KPIs

- **Total Sales:** ₹438K

- **Total Quantity:** 5615

- **Total Profit:** ₹37K

- **AOV:** ₹121K

Key Insights

✔ **Clothing** contributed **63%** of quantity — highest demand.
✔ **Printers, Bookcases, Saree, Accessories** show high profit contribution by sub-category.
✔ **Maharashtra & Delhi** are top-performing states in sales revenue.
✔ **UPI (21%)** & **COD (13%)** are top payment methods.

Trend Insights

📈 Profit fluctuates across months — peaks in Jan, May, Oct.
👤 Top customers include **Harivansh, Madhav, Mohan, Shiva**.

🧍 2.2 HR Analytics Dashboard

Business Purpose

Analyze employee attrition and HR-related KPIs to identify workforce trends.

Key KPIs

- **Total Employees:** 1470

- **Attrition:** 237

- **Attrition Rate: 16.1%**

- **Average Age:** 37

- **Average Salary:** 6.5K

- **Average Years:** 7 years

Key Insights

✔ Highest attrition in **Life Sciences (38%)**, Marketing (27%), Technical Degree (15%).
✔ Age group **26–35** has the highest attrition (116 employees).
✔ Top roles with highest attrition:

- Laboratory Technician (62)

- Sales Executive (57)

- Research Scientist (47)

✔ **Low salary slabs (Upto 5k)** have the highest attrition.

Trend Insights

📊 Majority of attrition occurs in **Research**, **Sales**, and **Technical** departments.

⛅ 2.3 Weather Forecast Dashboard

Business Purpose

Monitor weather conditions for Karachi, Lahore, and Islamabad with AQI analysis.

Key KPIs (Karachi)

- **Temperature:** 26.3°C

- **Humidity:** 12%

- **Visibility:** 5KM

- **Wind Speed:** 22.7 km/h

- **UV Index:** 4

- **Pressure:** 1019 mm

Key Insights

✔ Clear 7-day forecast with slight temperature increase ahead.
✔ AQI indicators show:

- **O3:** 73

- **PM10:** 34

- **PM2.5:** 32

- **NO2:** 17

- **SO2:** 14

- **CO:** 805

AQI Category: **Good — Air is clean and healthy**.

✔ Rain probability stays low across all days.

Trend Insights

📈 Monday & Tuesday show slightly higher temperatures.

🏬 2.4 Superstore Sales Dashboard

Business Purpose

Analyze store performance across regions, categories, payment modes, and customer segments.

Top KPIs

- **Sales:** 1.6M

- **Orders:** 22K

- **Profit:** 175K

- **Ship Days:** 10

Key Insights

✔ **Office Supplies (0.64M)** is top-performing category.
✔ **Phones, Chairs, Binders, Storage** lead sub-category sales.
✔ **Standard Class shipping** used in **91%** of orders.
✔ Region-wise:

- West (33%)

- East (29%)

- Central (22%)

- South (16%)

✔ Consumer segment contributes nearly **50%** of sales.

Trend Insights

📈 Sales trend line shows strong performance in Q1 & Q4.
📉 Profit dips in April and August.

🔮 2.5 Superstore Sales Forecast (-15 Days)

Business Purpose

Predict future 15-day sales using historical data and time series.

Key Insights

✔ Forecast model predicts steady sales between **5K – 15K** for next days.
✔ Strong states in revenue:

- California

- New York

- Texas

- Washington

✔ Forecast vs actual lines show close alignment → model accuracy is good.

Trend Insights

📈 Consistent increasing trend every quarter.
🟢 Forecast highlights upcoming demand peaks.

💳 2.6 Credit Card Transaction Report

Business Purpose

Track revenue, transactions, customer behavior, card performance & acquisition costs.

Top KPIs

- **Revenue:** 57M

- **Total Transaction Amount:** 46M

- **Transaction Count:** 667K

- **Total Interest:** 8M

Key Insights

✔ **Q4** has the highest revenue (14.5M).
✔ Highest spending categories:

- Bills

- Entertainment

- Fuel

- Grocery

✔ Most revenue by education: **Graduate (23M)**
✔ Top job categories:

- Businessmen (18M)

- Self-employed (9M)

- Govt Employees (8M)

✔ Card performance:

- Blue → 47M

- Silver → 6M

- Gold → 3M

- Platinum → 1M

Trend Insights

📈 Revenue consistently increases from Q1 → Q4.
📉 Delinquent rate at **6.1%** — requires monitoring.

🧾 2.7 Credit Card Customer Report

Business Purpose

Understand customer demographics, spending behavior, revenue distribution & card performance.

Top KPIs

- **Revenue:** 57M

- **Income:** 588M

- **Interest Earned:** 8M

- **CSS Score:** 3.19

Key Insights

✔ Revenue highest among:

- Age 40–50 group

- Male customers

- High-income group

✔ Revenue by Job:

- Businessman (17.6M)

- Self-employed (8.5M)

- Govt (8.3M)

✔ By State:

- TX, NY, CA, FL, NJ lead revenue

✔ Marital Status:

- Married: 16M

- Single: 13M

Trend Insights

📈 High correlation between income + spending.
📉 Swipe transactions dominate online/card usage.

🛍️ 2.8 Customer Behavior Dashboard

Business Purpose

Analyze demographics, subscriptions, rating scores & category performance.

Top KPIs

- **Customers:** 3.9K

- **Average Purchase:** $59.76

- **Average Rating:** 3.75

Key Insights

✔ **73% of customers** have no subscription — opportunity for upsell.
✔ Highest revenue categories: Clothing & Accessories.
✔ Shipping insights:

- Free Shipping most used

- 2-day priority also popular

✔ Customer segmentation:

- Middle-aged → highest revenue

- Young adults → highest purchases

Trend Insights

📈 Age → directly influences revenue.
📈 Subscription → leads to higher average purchase.

---

3. Combined Insights Across Dashboards

Cross-Domain Findings

- Sales and credit card dashboards show **strong Q4 growth** patterns.

- Weather data can be combined with sales to create **climate-based demand forecasting**.

- Customer behavior aligns strongly with income, job type, and card category.

- HR attrition patterns show where employee retention strategies are needed.

---

4. Tools & Techniques Used

- Power BI Desktop

- DAX (Time intelligence, conditional measures, KPIs)

- Power Query (JSON transformation, ETL)

- Star Schema Data Modeling

- Forecasting models

- Custom visualizations & UI/UX

---

5. Conclusion

This multi-dashboard Power BI portfolio demonstrates advanced analytics capabilities across several business domains including sales, HR, finance, customer behavior, forecasting, and weather intelligence. The dashboards showcase strong skills in:

✔ BI Development
✔ Data Analysis
✔ Forecasting
✔ DAX & Modeling

✔ Data Visualization
✔ Business Insights Storytelling