

# Power BI Project: Sales Analysis Dashboard

Live Dashboard

View here:

<https://app.powerbi.com/view?r=eyJrIjoiZGQ0ZDY3Y2EtN2U3ZC00MjgxLWJlN2ItNDQ4MjRkMDk4NjNjIiwidCI6IjZhODgzMmRjLTUxNGQtNDZlZS05NmVILWU1YWY4NzVIY2VjNiIsImMiOiZ9>

Portfolio: [istiak-alam.github.io](https://github.com/istiak-alam)

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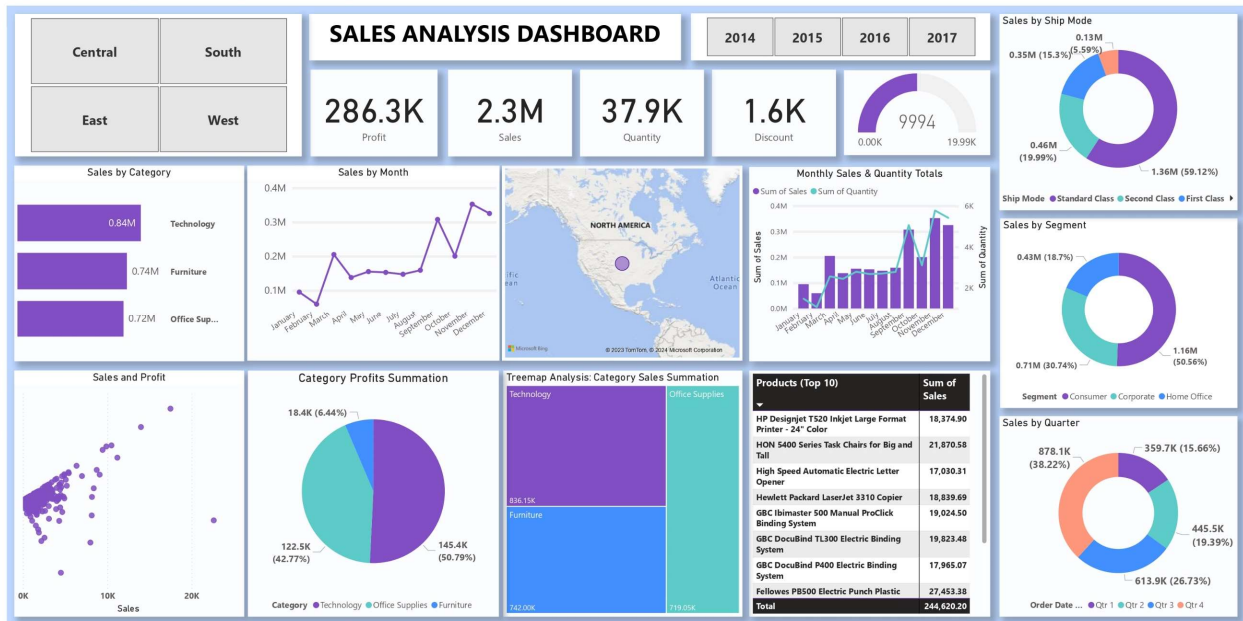
## OVERVIEW

This end-to-end Power BI dashboard provides a 360° view of retail sales across products, regions, segments, and time. Designed for managers and decision makers, it transforms multi-year sales data into interactive visuals, uncovers trends, and quantifies business impact for actionable decisions.

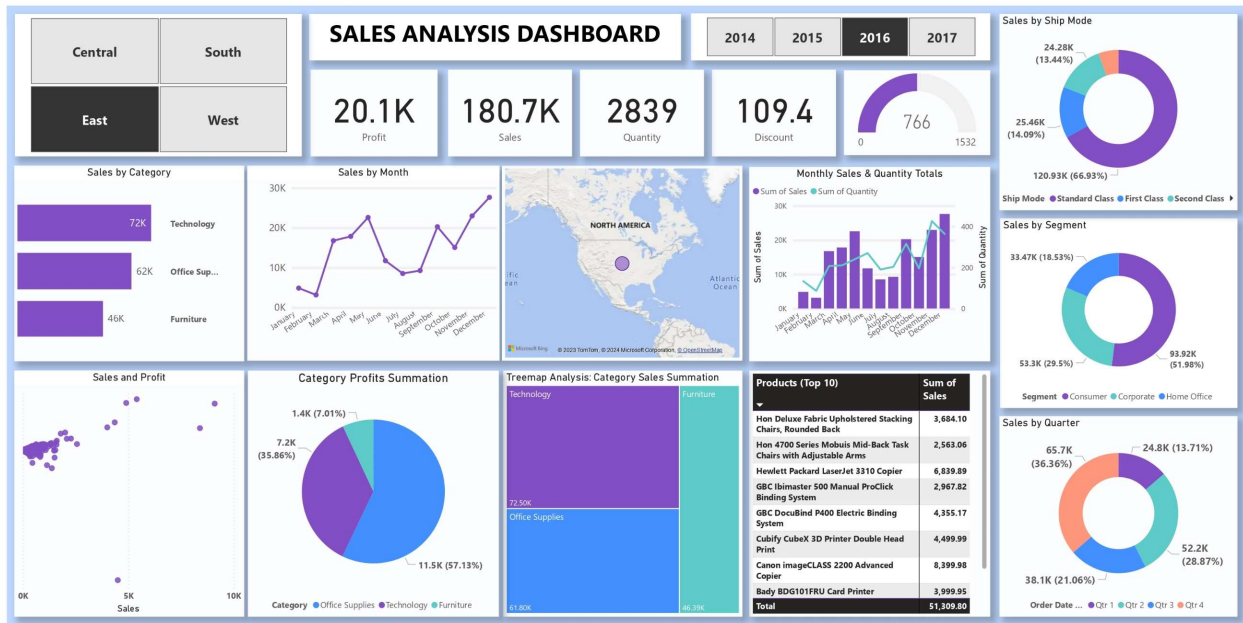
## FEATURES

- Category, region, and segment drilldown for dynamic sales and profit analysis
- Yearly, quarterly, and monthly sales trends for forecast and planning
- Top 10 product reporting to uncover star performers
- Ship mode and discount impact assessment
- Regional breakdowns for comparative sales management and strategy

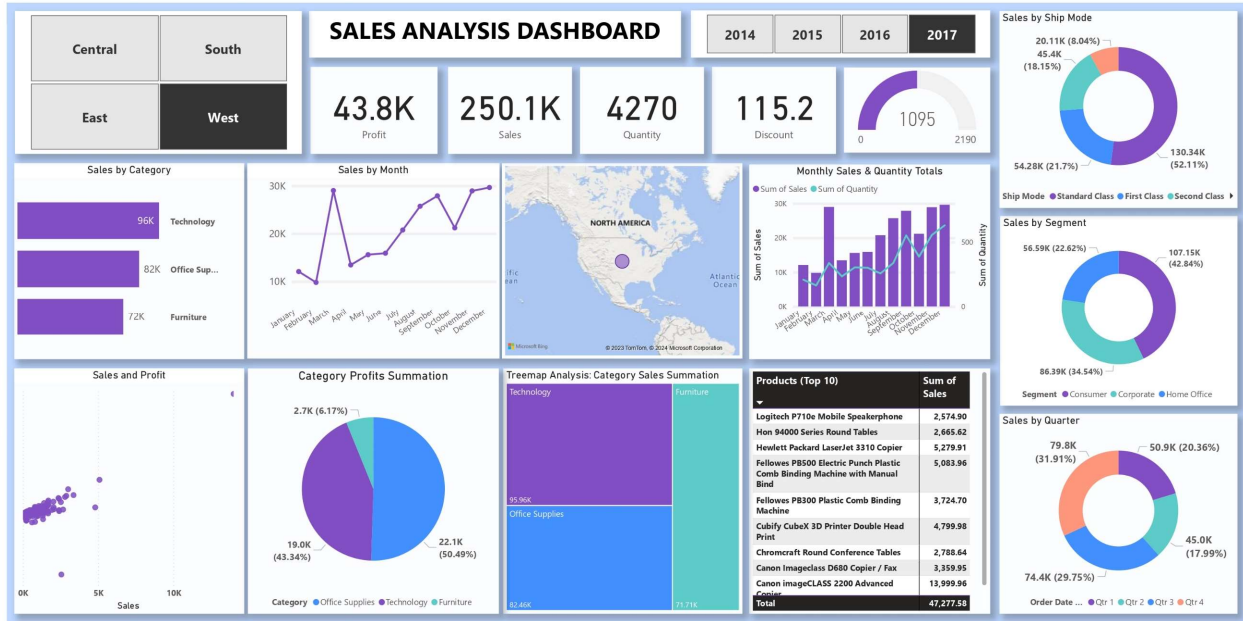
## DASHBOARD SNAPSHOTS



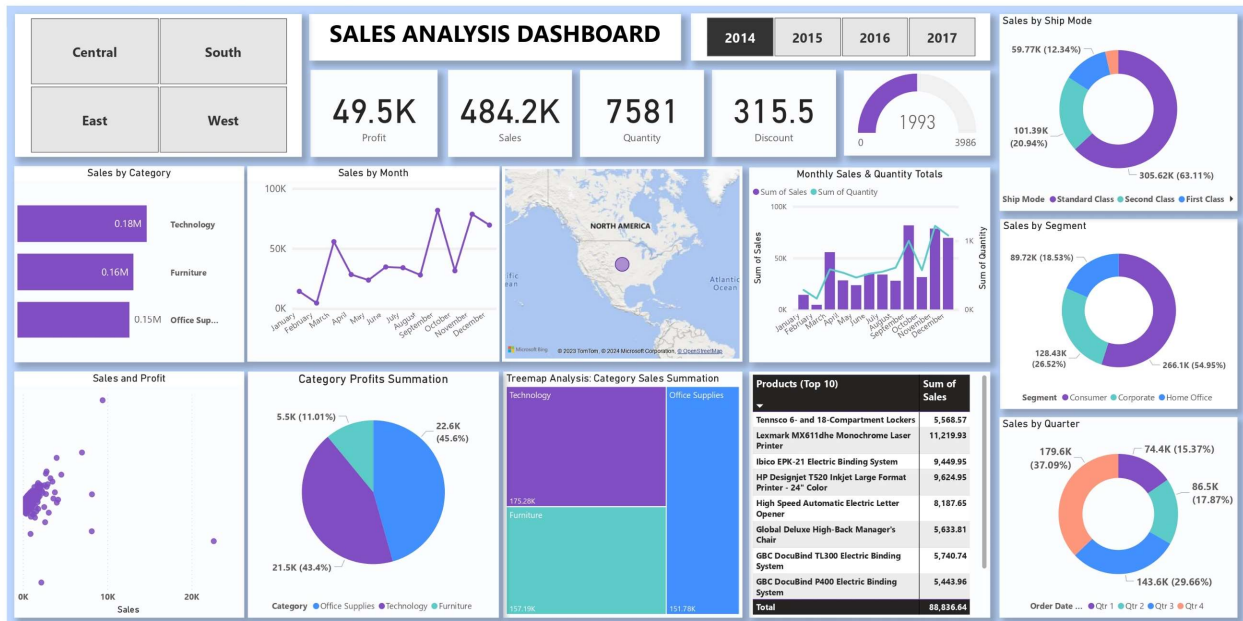
High-level KPI page with headline sales, profit, quantity, category, and segment splits



East region dashboard: 2016 performance highlights, products, and operations



West region 2017—detailed sales and profit analytics for local optimization



Time, product, and customer segment analytics for 2014, with discount impact

## KEY INSIGHTS

- Technology and Office Supplies consistently dominate category sales, driven by seasonality and regional preferences.
- Consumer segment is the largest contributor, but Corporate and Home Office grow fastest.
- Regional analysis reveals East and Central as reliable growth areas while West is a turnaround opportunity.
- Most sales and profit are generated via Standard shipping, suggesting areas for operational focus.
- Product-level and discount breakdowns identify specific profit drivers and risk areas.

## HOW TO USE

1. Use the live dashboard to filter by region, segment, date, and more.
2. Use images and insights above for presentations, quick reviews, or strategic planning.
3. Apply findings to support sales strategy, inventory management, and operations.

## ABOUT

Author: Istiak Alam

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All data/visuals are for demonstration and portfolio use only.

## TECHNICAL IMPLEMENTATION

### DATA SOURCE:

- Exported CSVs from core sales, product, and order management systems.

### DATA STORAGE:

- Stored locally and in the cloud; imported to Power BI Desktop.

### **UPDATE FREQUENCY:**

- Monthly or quarterly refresh; automated scheduling available in Power BI Service in production.

### **ETL PROCESS:**

- Data loaded and transformed in Power Query (M):
  - Removed incomplete rows, merged tables, formatted dates/categories, engineered new KPI columns.

### **CONNECTION MODE:**

- Import mode, enabling advanced DAX analytics and fast navigation.

### **DATA TRANSFORMATION:**

- Null cleaning, text/category harmonization, time indexing, margin/discount calculations all completed in Power Query.

### **DATA MODELING CHALLENGES:**

- Built a star schema: linked date, category, and region to fact table; resolved code inconsistencies and ensured all relationships are one-to-many for optimal DAX.

### **DAX FUNCTIONS USED:**

- CALCULATE, SUMX, FILTER, ALLSELECTED, RANKX for top-N analysis, and DIVIDE and VAR for custom KPIs.

### **KPIs:**

- Sales, profit, quantity, discount %, profit ratio, best/worst products, segment and region splits.

### **BEST PRACTICES:**

- Star schema, logical field/measures naming, colorblind-friendly palettes, drill-through navigation for multi-level analysis.

### **PERFORMANCE OPTIMIZATION:**

- Query folding, column/row reduction, minimized visuals, and intelligent page design for speed.

### **RLS:**

- Not implemented but enabled as required by business region/user role.

**DATA VALIDATION:**

- Checked all calculations against legacy Excel and raw reports.

**END USERS:**

- Executives, sales managers, operations teams, and business analysts.

**DATA REFRESH:**

- Scheduled or on-demand via Power BI Service.

**COLLABORATION & SHARING:**

- Published to Power BI Service; images and findings shared in business meetings and strategic sessions.