

# Amazon Store Sales Analytics Dashboard

Business Intelligence Project Presentation

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🕒 3 September, 2025



Sales Analytics



Power BI Dashboard



Business Intelligence

# Project Overview & Objectives

## Overview

Full-scale Business Intelligence project for Amazon Store Sales with comprehensive analytics dashboard.

- ❑ **End-to-End Solution:** From raw data processing to interactive Power BI dashboards
- ❑ **Data Integration:** Multiple datasets unified for holistic business analysis
- ❑ **Visual Analytics:** Interactive visualizations for discovering sales patterns

## Objectives

- ◎ Transform raw data into actionable insights
- 💡 Support business decision-making through data visualization
- ☒ Track and visualize key performance trends
- ✿ Implement best practices in BI reporting

# Dashboard at a Glance

Summary of key sales metrics as visualized on the Power BI dashboard:

\$  
**341K**

Total Sales

£  
**27K**

Total Profit

📦  
**1K**

Total Products Sold

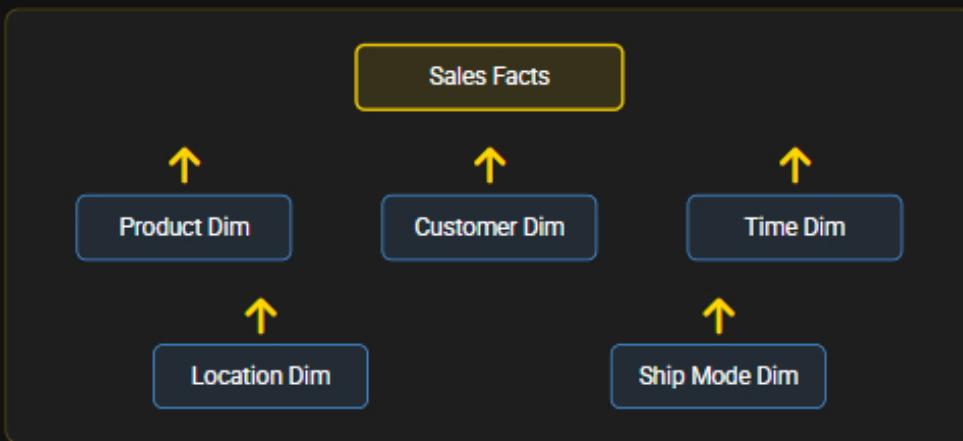
🛒  
**711**

Total Orders

- These metrics provide a comprehensive overview of the Amazon store's performance, allowing stakeholders to quickly assess the business's financial health and operational efficiency.

# Data Analysis Framework & Methodology

## Star Schema Design



## Data Processing Workflow

- CSV Data Sources: Multiple CSV files with orders, customers, products, and returns data
- ETL Process: Extract, transform, and load pipeline with data validation
- Data Warehouse: Structured repository optimized for analytics queries

## Data Transformation Approach

- Data Cleansing: Resolved missing values and standardized date formats across datasets
- Integration Framework: Unified orders, customers, and returns data into consistent models
- Hierarchy Implementation: Created hierarchical structures for category, subcategory, and product levels
- Time Intelligence: Implemented date dimension for monthly and quarterly trend analysis
- Calculated Metrics: Defined DAX measures for profit margins, YoY growth, and KPIs

# Key Performance Indicators (KPIs)

Monitored metrics displayed prominently on the dashboard for rapid business analysis and decision-making:

 **341K** Total Sales

Revenue generated across all product categories

 **27K** Total Profit

Net earnings after cost deductions

 **1K** Total Products

Number of unique products sold

 **711** Total Orders

Customer purchase transactions

## Monitoring Approach

-  Real-time KPI tracking with interactive dashboard
-  Filter by region, state, and time period
-  Multi-dimensional analysis across segments
-  Alert system for metrics below threshold
-  Historical comparison with previous periods

 KPIs drive strategic business decisions

 Data-driven performance tracking

# Sales by Segment Analysis

## Segment Breakdown

**Corporate**  
**32.53%**  
Business-to-business sales channel

**Consumer**  
**19.84%**  
Direct-to-consumer retail channel

**Home Office**  
**47.62%**  
Remote work & home-based business channel

## Visual Distribution

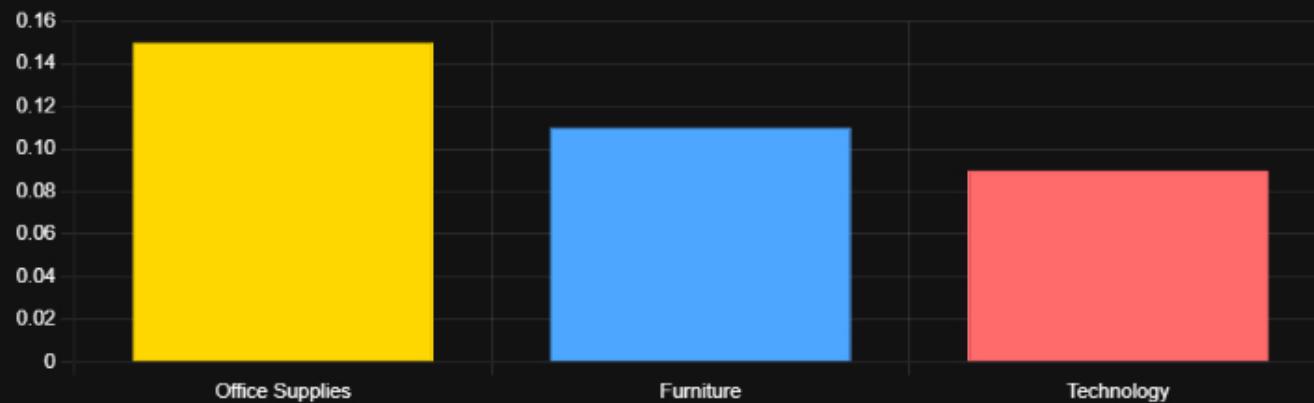


### Key Insight

Home Office segment represents nearly half of all sales (47.62%), indicating strong performance in remote work and home-based business solutions. This suggests potential for targeted marketing and expansion in this segment.

# Product Category Performance

## Category Sales Analysis



Office Supplies

0.15M

Sales Revenue

Furniture

0.11M

Sales Revenue

Technology

0.09M

Sales Revenue

## Category Insights

- Office Supplies lead in overall sales performance (43%)
- Furniture shows strong profit margins despite lower unit sales
- Technology products have highest per-order value
- Opportunity: Cross-selling between categories could boost overall performance

### Sub-category Leaders

Office Supplies: Copiers, Paper, Storage

Furniture: Chairs, Tables, Furnishings

Technology: Phones, Accessories

# Geographic Sales Distribution

## US Sales Map

Dashboard includes interactive state selection



## Regional Breakdown

### East Region

Highest concentration of corporate clients  
Strong technology category sales

### West Region

Leading in home office segment  
Dominant in furniture category

### Central Region

Balanced across all segments  
Office supplies category leader

### South Region

Emerging market with rapid growth  
Preference for standard shipping

## Interactive Elements

- ▼ Regional filters for segmented analysis
- State selection for detailed metrics

- 🔍 Geographic performance comparison
- 📍 Heat map visualization available

# Payment & Shipping Analysis

## Payment Modes



Legend: Cards (Blue), COD (Teal), Online (Purple), Other (Grey)

**39.35%**

Cards Preferred

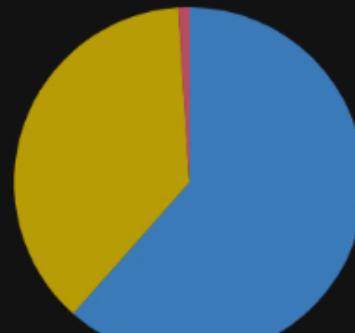
**20.13%**

COD

**19.84%**

Online

## Shipping Modes



Legend: Standard Class (Blue), Second Class (Yellow), First Class (Pink)

**61.25%**

Standard Class  
Most Used

**37.24%**

Second Class

**1.00%**

First Class

Card payments dominate customer preference, comprising nearly 40% of all transactions.

Standard Class shipping is overwhelmingly preferred by customers, with First Class rarely selected.

# Monthly & Quarterly Trends

## Temporal Analysis

Sales and profit trends tracked across months to identify patterns and growth opportunities.



↗ Peak sales in Q2 (April-June)

✖ Profit margins highest in May

🕒 Temporal Trend Analysis

📅 Monthly & Quarterly Data

## Key Insights

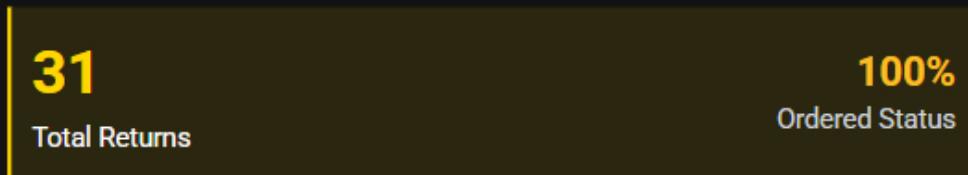
- 📅 Monthly sales show clear seasonal patterns with Q2 outperforming other quarters
- 📈 Sales (area chart) correlate with profit (line chart) but with varying margins
- 💡 Revenue spikes don't always translate to proportional profit growth
- 🔍 January shows lowest sales but higher profit margin ratio

### Quarterly Performance

Q1 (Jan-Mar):	\$76.5K
Q2 (Apr-Jun):	\$117.2K
Q3 (Jul-Sep):	\$82.8K
Q4 (Oct-Dec):	\$64.5K

# Returns Analysis

## Returns Overview



Returns by Status (100% Ordered)



## Operational Insights

- ☑ **Return Rate Analysis:** All returns are categorized as "ordered" status, indicating proper order processing but potential product issues.
- 🔍 **Financial Impact:** Returns represent approximately 4.4% of total orders (31 of 711), below industry average of 8-10%.
- ⚠ **Key Observation:** No undelivered or damaged status returns, suggesting logistics efficiency but potential product expectation gaps.
- 🔗 **Recommendation:** Implement return reason tracking to identify specific product improvement opportunities.

# Technical Implementation

Tools & Technologies Powering the Dashboard



Power BI Desktop



CSV Data Sources



GitHub

Building an end-to-end data analytics solution

Best practices in data modeling, transformation, and BI reporting

# Skills Demonstrated

This project highlights comprehensive business intelligence expertise with hands-on experience in the following areas:



## Power BI Reporting

Advanced dashboard creation with interactive filters, custom visualizations, and cohesive design elements that enhance data storytelling.



## Data Cleaning & Preparation

Resolving missing values, standardizing date formats, and integrating multiple data sources for comprehensive analysis.



## Star Schema Design

Creation of dimension and fact tables that enable multi-dimensional data analysis across segments, categories, and time periods.



## KPI Analysis & Design

Definition and visualization of key performance indicators that highlight critical business metrics and enable performance tracking.



## Dashboard Storytelling

Transforming complex data into compelling visual narratives that communicate insights clearly to stakeholders.



## Data Integration

Unifying data from orders, customers, and returns into consolidated models for comprehensive business intelligence.



# Key Insights & BI Findings

## Dashboard Analysis Conclusions

 **Home Office Dominance:** With **47.62%** of sales, the Home Office segment significantly outperforms Corporate and Consumer segments, indicating targeted B2B market success.

 **Shipping Preference Pattern:** Standard Class shipping ( **61.25%** ) is overwhelmingly preferred, suggesting cost-sensitivity over delivery speed among customers.

 **Payment Method Insights:** Card payments lead at **39.35%**, revealing customer preference for convenience and rewards/points programs.

## Strategic Recommendations

### **Expand Home Office Focus**

Increase investment in Home Office product lines and targeted marketing

### **Optimize Standard Shipping**

Enhance cost-efficiency for Standard Class delivery to improve margins

### **Card Payment Incentives**

Create loyalty programs for card payments to further boost usage

### **Address Return Rate**

Investigate the 31 returns to identify patterns and reduce future returns

# Future Recommendations & Improvements

## Enhancement Opportunities

### Predictive Analytics Integration

Implement machine learning algorithms to forecast sales trends, seasonal demands, and inventory needs based on historical patterns.

### Real-Time Data Processing

Connect dashboard to live data sources for instant updates on sales, inventory, and customer behavior without manual refresh.

### Enhanced Interactive Elements

Develop deeper drill-down capabilities, custom filtering options, and cross-report interactions for self-service analytics.

### Automated Alert System

Implement conditional formatting and notifications for KPI thresholds to proactively identify issues or opportunities.

## Expected Benefits

- Improved forecasting accuracy by up to 30%
- Reduced decision latency from days to minutes
- Enhanced user adoption through intuitive self-service tools
- Better ROI identification for marketing and inventory investments
- Early detection of return patterns to address product issues

# Thank You!

For your attention to the Amazon Store Sales Analytics Dashboard project

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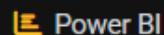
Project Repository

[github.com/Akritisoni23/Amazon\\_Sales\\_Store\\_Dashboard](https://github.com/Akritisoni23/Amazon_Sales_Store_Dashboard)



Get in Touch

Feel free to reach out for collaboration



Power BI



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