

# NEXUS COMMERCE INC. GLOBAL E-COMMERCE PERFORMANCE ANALYSIS

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Professional Business Intelligence & Analytics Portfolio Project

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## Project Ownership Declaration:

This project is fully conceived, designed, and developed by **Shivansh Yadav**. All data used in this analysis was **programmatically generated and collected using custom Python scripts**, structured into **CSV files**, and utilized exclusively for **educational, analytical, and professional portfolio purposes**. No third-party, proprietary, or personally identifiable data has been used in any phase of this project.

NEXUS COMMERCE INC.

GLOBAL E-COMMERCE PERFORMANCE ANALYSIS PROJECT

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# Project Ownership

This project is fully conceived, designed, and developed by Shivansh Yadav. All datasets were programmatically generated using Python scripts and stored in CSV format strictly for educational and professional portfolio purposes.

## Executive Summary

This project delivers an end-to-end Business Intelligence solution for a fictional global e-commerce company operating across North America, Europe, Asia Pacific, and Latin America. Using Excel Power Pivot and DAX, transactional data from 2022–2024 was transformed into actionable insights covering revenue, customers, operations, and marketing performance.

## Business Objective

To build a centralized analytics dashboard enabling leadership to:

- Monitor revenue and YoY growth
- Understand customer behavior
- Evaluate operational efficiency
- Measure marketing effectiveness
- Identify optimization opportunities.

## Project Scope

- 15,000 synthetic transactions (2022–2024)
- 4 product categories
- 4 customer segments
- 6 marketing channels
- Global regional coverage
- KPI-driven executive dashboard.

## Key KPIs

Financial: Total Revenue, YoY Growth, AOV

Customer: CSAT, Segment Mix

Operational: Fulfillment Rate, Cancellation Rate

Marketing: Channel Revenue Share

## Deliverables

1. Nexus\_Analytics.xlsx – Master analytics workbook (Power Pivot, DAX, dashboard)
2. Documentation – Problem Statement, Solution Guidelines, Business Insights
3. Dashboard Exports – PNG & PDF
4. Source CSV dataset

# TECHNICAL REQUIREMENTS

## SOFTWARE SPECIFICATIONS

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**Primary Tool:** Microsoft Excel 2019/365 Professional

**Alternative:** Excel 2016 with Power Query add-in

**Required Excel Features:**

- Power Query (Get & Transform) for data import
- PivotTables and PivotCharts (Standard and Data Model)
- Power Pivot for advanced calculations (optional)
- Slicers and Timelines for interactivity
- Conditional Formatting for heat maps
- Advanced formulas (INDEX-MATCH, SUMIFS, array formulas)

## HARDWARE REQUIREMENTS

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- Processor: Intel i5 or equivalent (for large dataset handling)
- RAM: 8GB minimum, 16GB recommended
- Storage: 500MB free space for workbook and temp files
- Display: 1920x1080 resolution for dashboard viewing

## File Structure

### Nexus\_Analytics\_Project/

```
|— Nexus_Analytics.xlsx
|— 01_Data/
|   |— ecommerce_sales_data.csv
|— 02_Documentation/
|   |— Problem_Statement.pdf
|   |— Solution_Guidelines.pdf
|   |— Business_Insights.docx
|— 03_Dashboard_Exports/
|   |— Nexus_Dashboard.png
|   |— Nexus_Dashboard.pdf
|— 04_Resources/
|   |— Data_Dictionary.xlsx
|   |— KPI_Definitions.xlsx
```

## Analytical Focus Areas

- Revenue trends & seasonality
- Category and regional performance
- Customer segmentation
- Fulfillment health
- Marketing ROI

## Success Criteria

- Accurate KPI calculations
- Interactive dashboard
- Executive-ready visuals
- Clear business insights
- Portfolio-grade documentation.

## Conclusion

This project demonstrates practical data analytics capabilities including data modeling, DAX measures, dashboard design, and business insight generation within Excel Power Pivot.

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