ASSIGNMENT 1

DATA SCIENCE

POWER BI DASHBOARD DESIGN

(NORTHWIND DATA SET)

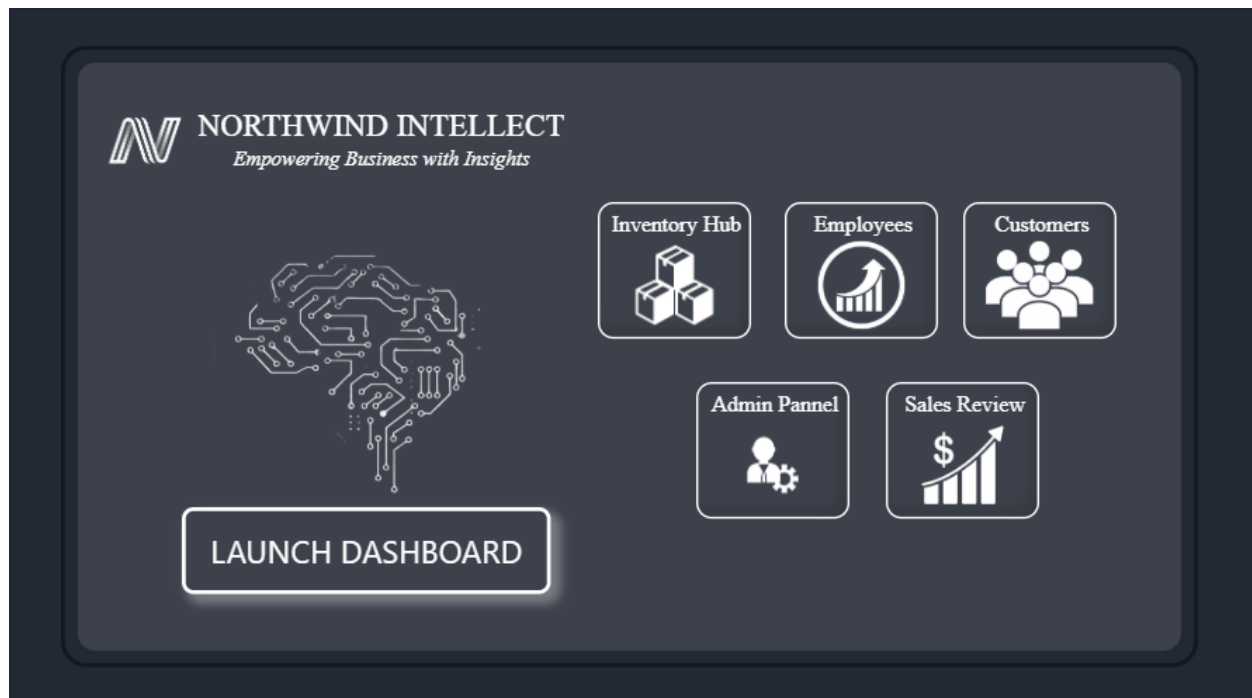Name: Zainab Sajid   Reg no: 23-NTU-CS-1218

Pages

1. Interactive Navigation Hub

Navigation Grid & Buttons: Serves as a professional "Control Center" that improves User Experience (UX) by allowing stakeholders to jump directly to specific modules (Sales, Inventory, etc.) without navigating complex menus.

Integrated Benefit: This design provides a clean, clutter-free entry point, which is particularly useful for high-level executives who need to access specific business intelligence quickly.
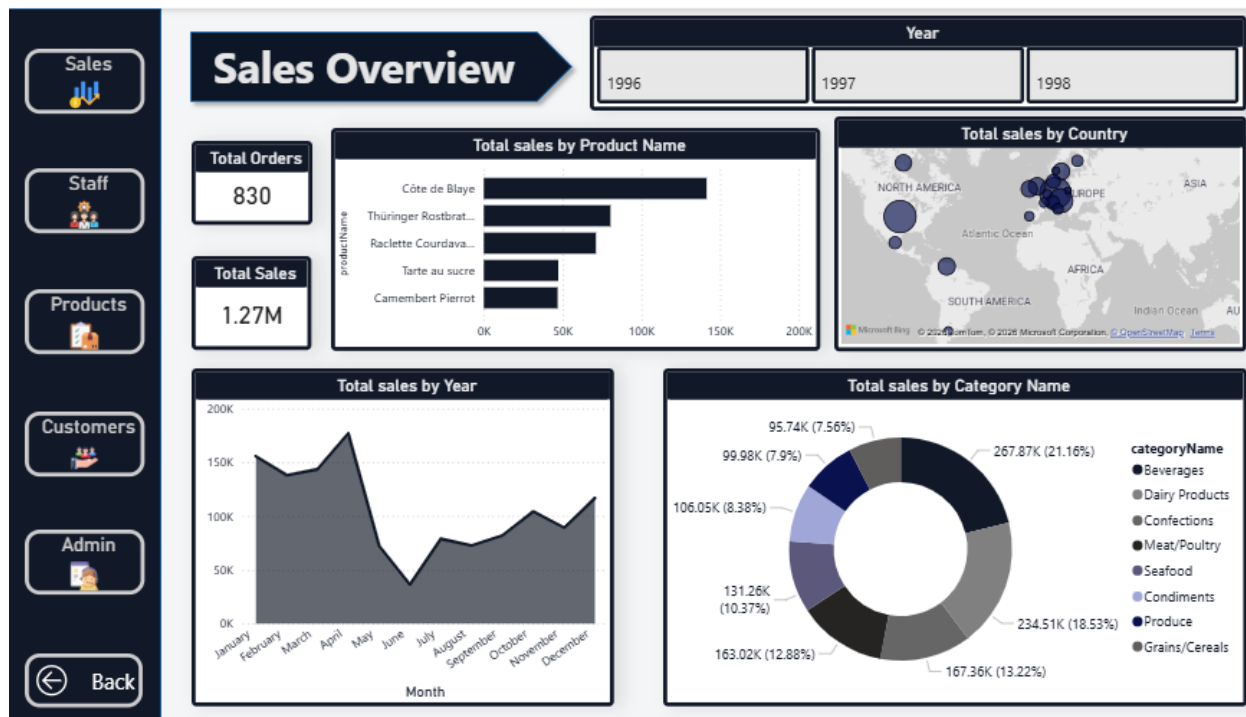
2. Sales Overview: Strategic Performance Analysis

Total Orders and Sales Cards: Provides an immediate high-level snapshot of the company's financial health, essential for monitoring business scale and revenue.

Top Products Bar Chart: Identifies "Best-Sellers," which helps marketing teams prioritize their budget and inventory focus on high-performing items.

Sales by Country Map & Category Donut Chart: Visualizes global market reach and product dominance, enabling managers to optimize regional supply chains and understand which categories, like Beverages, drive the most growth.

Sales Trend (Area Chart): Shows seasonal fluctuations over time, which is beneficial for predicting future demand and preparing for peak sales periods.
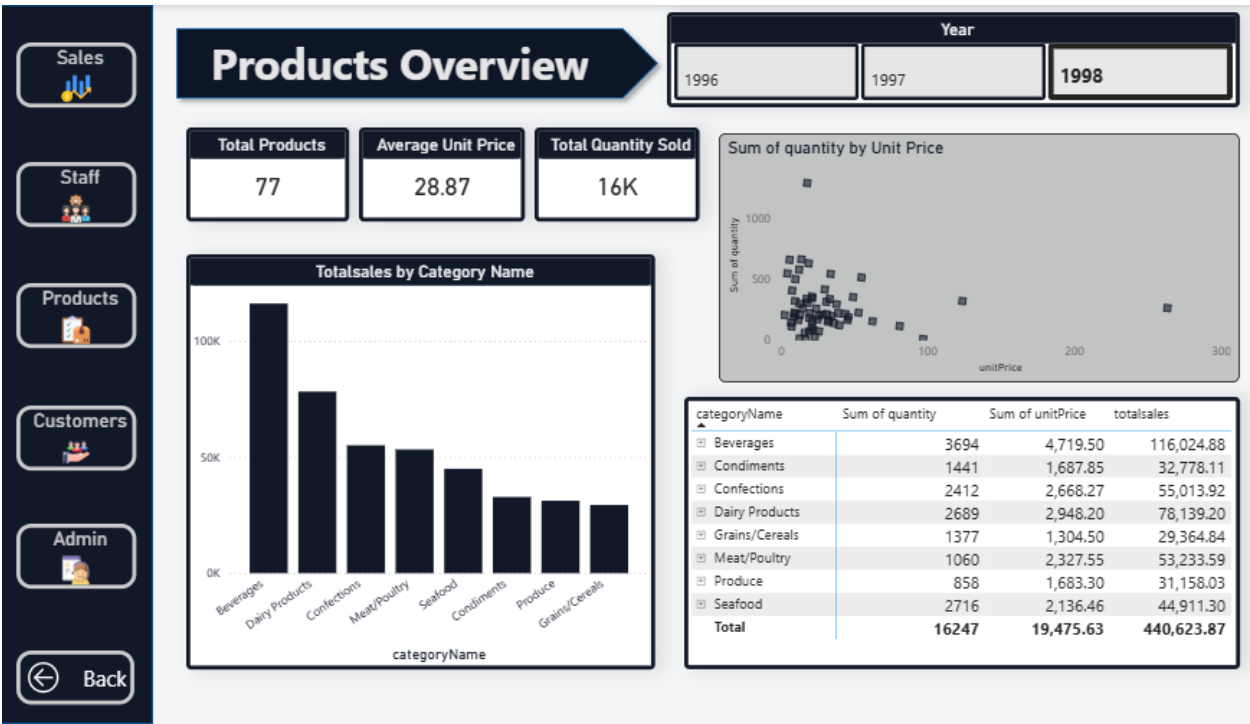
3. Products Overview: Operational Stock Efficiency

Product KPIs (Quantity, Avg Price): Displays unique product counts and pricing averages, which helps officers maintain a balanced and profitable product catalog.

Price vs. Demand Scatter Chart: Analyzes "Price Sensitivity" by showing how unit price changes impact the quantity sold, which is a critical benefit for revenue optimization.

Category Comparison & Matrix Table: Directly compares revenue across product lines and provides granular data, helping inventory managers identify "Dead Stock" versus high turnover items to reduce warehouse costs.
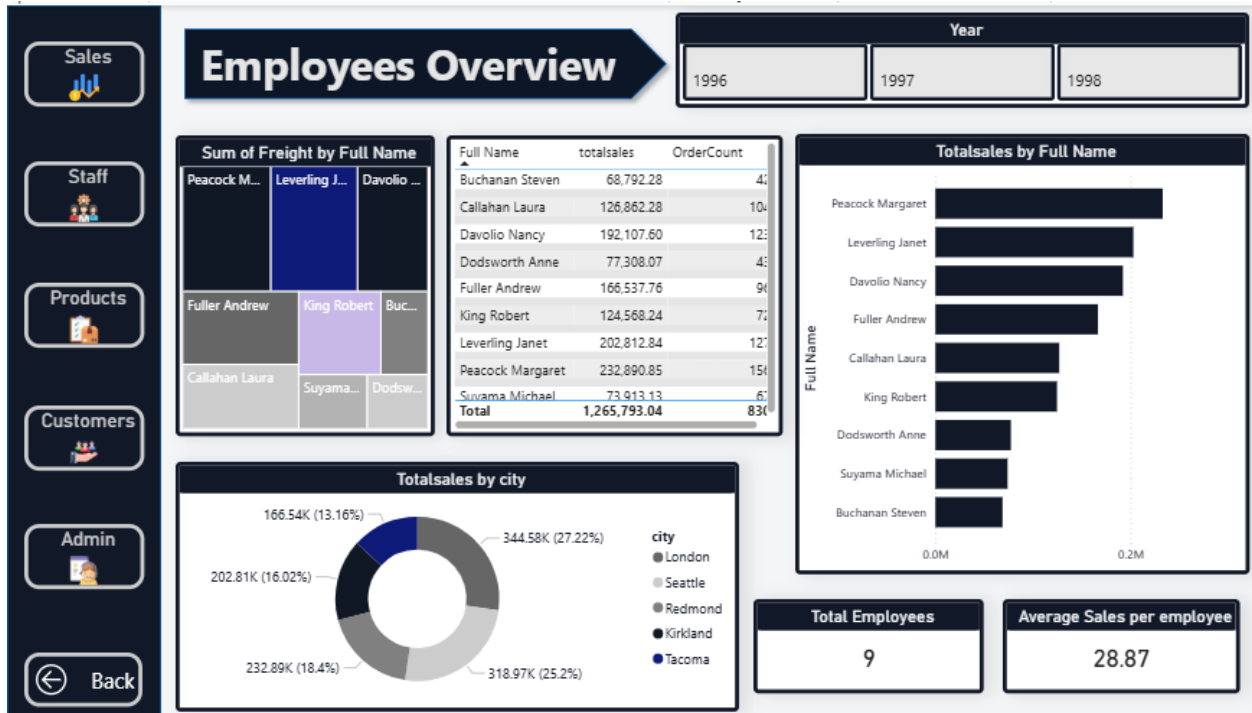

4. Employees Overview: Human Capital Audit

Employee Performance Bar Chart & Table: Ranks staff members by revenue and order volume, providing a transparent basis for data-driven appraisals and performance reviews.

Freight by Staff Tree Map: Shows which employees handle the heaviest shipping loads, allowing logistics managers to balance the workload and improve overall operational efficiency.

City-wise Staff Impact (Donut Chart): Tracks where the sales team is most effective geographically, helping team leads identify regional strengths or areas needing more training.

5. Customers Overview: Loyalty and Geographic Reach

Decomposition Tree: Offers a powerful "drill-down" capability from country to specific companies, helping CRM managers pinpoint exactly where revenue is originating.

Top Customers Bar Chart: Highlights "VIP" clients, which is beneficial for marketing teams when creating targeted loyalty programs to retain the most profitable businesses.

Ribbon Chart: Tracks how sales rankings between different countries change over time, providing a dynamic view of market shifts and emerging geographic trends.

Customer Segmentation (Scatter Chart): Correlates order frequency with total spending to distinguish between loyal repeat customers and one-time big spenders.

6. Admin Preview: System and Financial Control

Discount Leakage Funnel Chart: Visualizes where profit is being lost through heavy discounting, which is a critical audit tool for identifying revenue leaks in specific categories.

Warehouse Value Waterfall Chart: Displays the cumulative "locked" value of inventory, showing administrators exactly how much capital is tied up in stock across different product lines.

Ask Questions (Q&A) Box: Empowers non-technical users through Natural Language Processing (NLP), allowing them to type simple questions and receive instant visualizations for ad-hoc reporting.

Sales

Staff

Products

Customers

Admin

Back

Admin Preview

Year

| 1996 | 1997 | 1998 |

TotalDiscountAmount by categoryName

100%

Beverages	
Dairy Products	
Meat/Poultry	
Seafood	10.36K
Confections	9.74K
Condiments	7.65K
Produce	5.28K
Grains/Cereals	4.98K

26.7%

Inventory Value by Category Name

● Increase ● Decrease ● Total

InventoryValue
50K
0K

Seafood Beverages Condiments Dairy Produ... Confections Meat/Poultry Grains/Cere... Produce Total

categoryName

Ask Questions

which **are top 5 products sale in 1997?**

Showing results for *are top 5 products sale in 1997?*

productName

Schoggi Schokolade
Grandma's Boysen...
Rogede sild
Louisiana Hot Spic...
Queso Manchego ...

0   20   40   60

AverageBasketSize