Problem Statement: E-Commerce Sales Analysis

You have been provided with a comprehensive e-commerce dataset from **GlobalMart** (fictional name), a rapidly growing retail company operating across multiple regions in the United States. The organization has observed fluctuations in sales performance, profit contribution, and customer ordering patterns over recent years. To support strategic decision-making, the company requires a detailed analysis of sales trends, profitability, product category performance, and geographical insights.

Your task is to analyse this dataset and build an interactive **E-Commerce Sales Analysis Dashboard** that answers critical business questions related to revenue growth, profit dynamics, and product performance. The goal is to help the company maximize profit, optimize inventory decisions, and identify high-value customer segments.

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1. Overall Sales Performance

Determine the company's total sales, total profit, total quantity sold, total number of orders, and the overall profit margin. Measure the **Year-over-Year (YoY)** performance across these key metrics to evaluate business growth.

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2. Sales & Profit Trend Analysis

Analyse monthly sales and profit trends for the entire year. Identify peak and low-performing months and examine the consistency between sales volume and profit generation.

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3. Category-Wise Profit

Evaluate the profitability of major product categories. Determine which categories are driving profit growth, which are underperforming, and the contribution of each segment to total profit.

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4. Category-Wise Sales Share %

Analyse how total sales are distributed across product categories. Identify which category dominates overall sales and how others compare.

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5. Regional Sales Analysis

Examine **sales performance across U.S. states**.
Identify high-performing states contributing the most to revenue and highlight regions with potential for growth or requiring strategic interventions.

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6. Top Sub-Categories by Sales

Identify the **top 5 best-selling sub-categories**. Understand the demand pattern and determine which products have the highest revenue impact.

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7. Order & Quantity Insights

Analyse total quantity sold and number of orders placed. Understand how order volume trends correlate with yearly performance and customer purchasing behaviour.

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8. Profit Margin Assessment

Evaluate the overall profit margin and its YoY percentage growth or decline. Identify factors contributing to margin improvement or deterioration.

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9. Interactive Filters

Enable dynamic analysis using filters such as **Year, Segment, and Region**. Allow users to deep-dive into performance insights for specific customer segments (Consumer, Corporate, Home Office) and regional markets.