

Nected Assignment Submission



By

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Skillset 1 - Pattern Recognition - Identify any noticeable patterns or trends in the sales data.

What are the top 3 best-selling product categories?

I used a pivot table to determine the top three best-selling products. We add the product category as a row and summed the total sales for each category.

I was able to sort the pivot table in descending order to identify the top three categories with the highest total sales.

The results revealed that the top-selling products are:

1. Electronics
2. Clothing
3. Groceries

Are there any seasonal trends in the sales data? If so, describe them

First, I created a pivot table with the Date field in the rows and the total sales summed for each month. To analyze seasonal trends, I created a line chart to visualize which months had the highest and lowest sales. The analysis showed that April had the highest sales, while November had the lowest.

Which store has the highest average sales per transaction?

I created a pivot table with the Store_ID field in the rows and the total sales and count of Date for finding the average .

Skillset 2 - Ability to Build Hypotheses

Hypothesize any external factors that might be influencing sales trends (e.g., holidays, weather).

Holidays: I notice that during festive seasons like Christmas, New Year, or local holidays, people usually spend more money. This can increase sales.

Weather: I see that weather conditions can affect sales. For example, hot summers might increase sales of groceries like ice cream and cold drinks. Cold winters could lead to more sales of clothing like coats and sweaters.

Hypothesize the impact of price changes on the total sales.

Price Changes and Sales: I want to understand how changing prices affects sales. If prices go up a lot, people might buy less because they can't afford it. If prices go down, more people might buy.

Promotions or Discounts: Temporary price cuts, like sales or discounts, can boost sales during certain times.

Based on the patterns you identified, formulate three hypotheses about the sales performance.

1. **Seasonal Trends:** I want to see if sales change at different times of the year, like during holidays when sales might be higher.

2. **Product Category Influence:** I want to check if certain types of products, like electronics, always sell better than others.

3. **Store-Specific Effects:** I need to look at how different stores perform since their sales might vary due to location, the type of customers they have, or their marketing strategies.

3.Skills in MS Excel and SQL

Using Excel, calculate the total sales for each store for the entire period.

I used a pivot table to determine total sales for each store, We add the Store_ID as a row and summed the total sales for each category in the pivot table.

Using SQL, write a query to find the total units sold for each product category.

```
SELECT Product_Category, SUM(Units_Sold) AS Total_Units_Sold  
  
FROM retail_sales_data  
  
GROUP BY Product_Category;
```

This query counts the total number of items sold for each type of product. It takes the data from the "retail_sales_data" table and shows how many units were sold for each product category.

Using Excel, create a pivot table showing the monthly sales for each product category.

I used a pivot table to determine monthly sales for each product category, we add the Date and product_category as a row and summed the total sales for each category in the pivot table.