Supply Chain
Order Analysis

Description

The Supply Chain Order Analysis project focuses on analyzing sales and canceled orders from a supply chain dataset.

It uses SQL to extract insights from two CSV files- “canceled_test.csv” and “sales_test.csv” which include data such as order numbers, customer IDs, item details, and the number of units ordered and shipped.

Tools Used

Dataset

Available in kaggle.
Supply chain CEL dataset

This dataset is a brief version of multiple orders in a supply chain system.
The data include orders in nearly 2 month January 2017 and February 2017.

sales_test.csv

```
1 SELECT * FROM supply_chain.sales_test;
```

39:1

Result Grid Filter Rows: Search Export: Fetch rows:

ORDER_NO	DATE	LINE	CUSTOMER_NO	ITEM	NS_ORDER	NS_SHIP
528950	Wednesday, January 4,...	1	43824877	1039305	1	1
529294	Wednesday, January 4,...	2	43824779	10135358	3	3

canceled_test.csv

```
1 SELECT * FROM supply_chain.canceled_test;
```

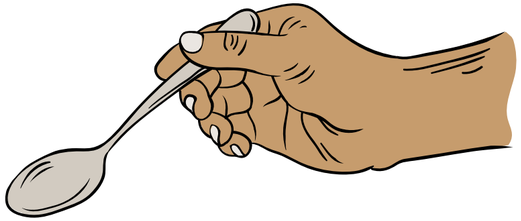
1:1

Result Grid | Filter Rows: Search | Export: | Fetch rows:

ORDER_NO	DATE	LINE	CUSTOMER_NO	ITEM	NC_ORDER	NC_SHIP
528703	Tuesday, January 3, 2017	1	1857566	10135139	1	1
528705	Tuesday, January 3, 2017	1	1857566	10135140	1	1

Task

Basic



Intermediate

Advanced

Basic

01 How many orders were placed in January 2017?

02 What is the total number of units ordered?

03 How many unique customers are there?

SQL concepts used

Select Query

Aggregate Functions- COUNT, SUM,AVG

Alias

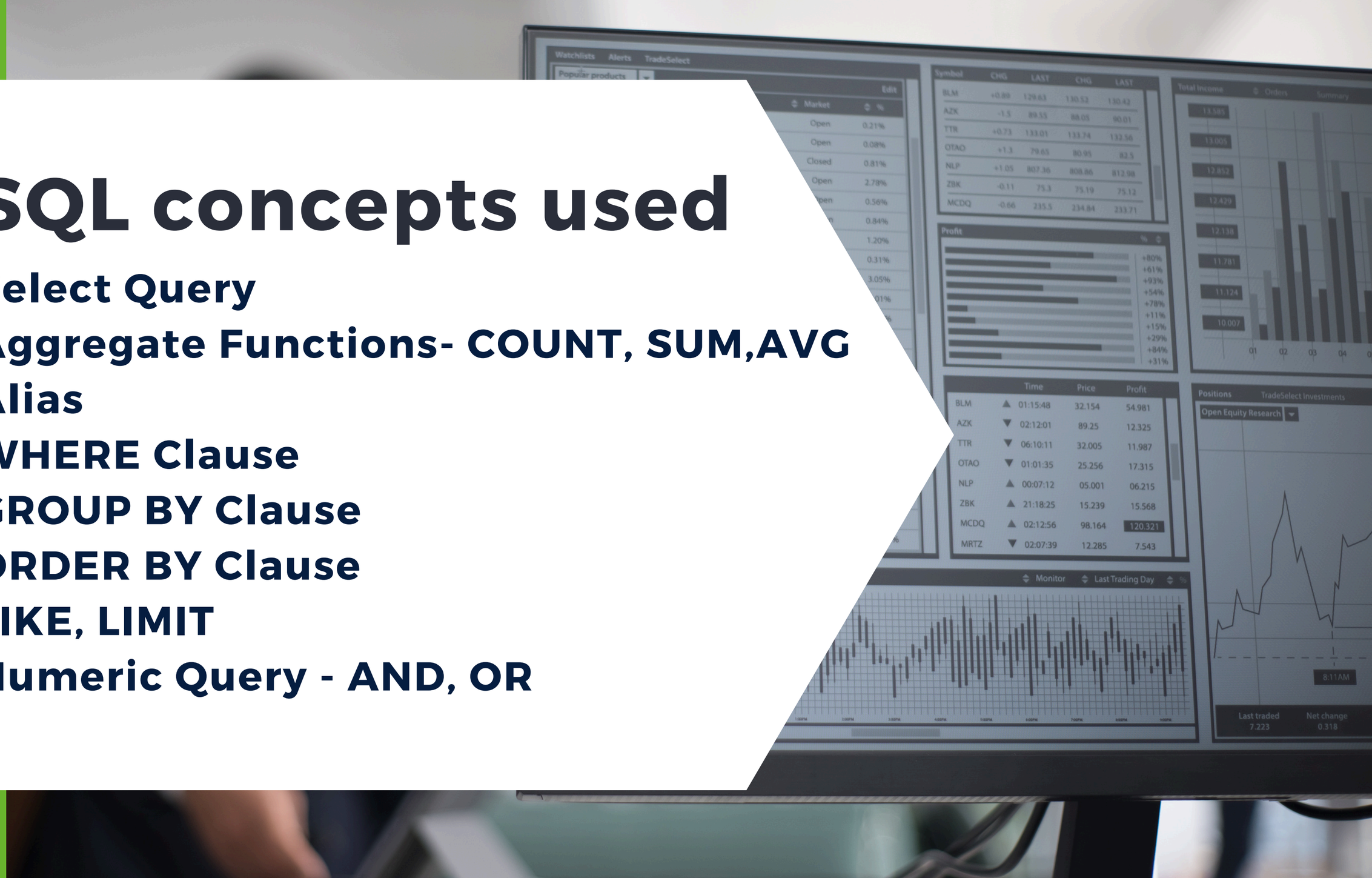
WHERE Clause

GROUP BY Clause

ORDER BY Clause

LIKE, LIMIT

Numeric Query - AND, OR



Intermediate

01 Find the total number of units ordered and canceled for each item that appears in both the table.

02 Compare the number of canceled orders and successful orders for the same items.

03 Find the top 3 customers with the most canceled orders in canceled_test.csv.

SQL concepts used

JOIN

INNER JOIN

LEFT JOIN

CASE Statement

Subqueries or Nested queries

Basic Mathematical Concepts

Advanced

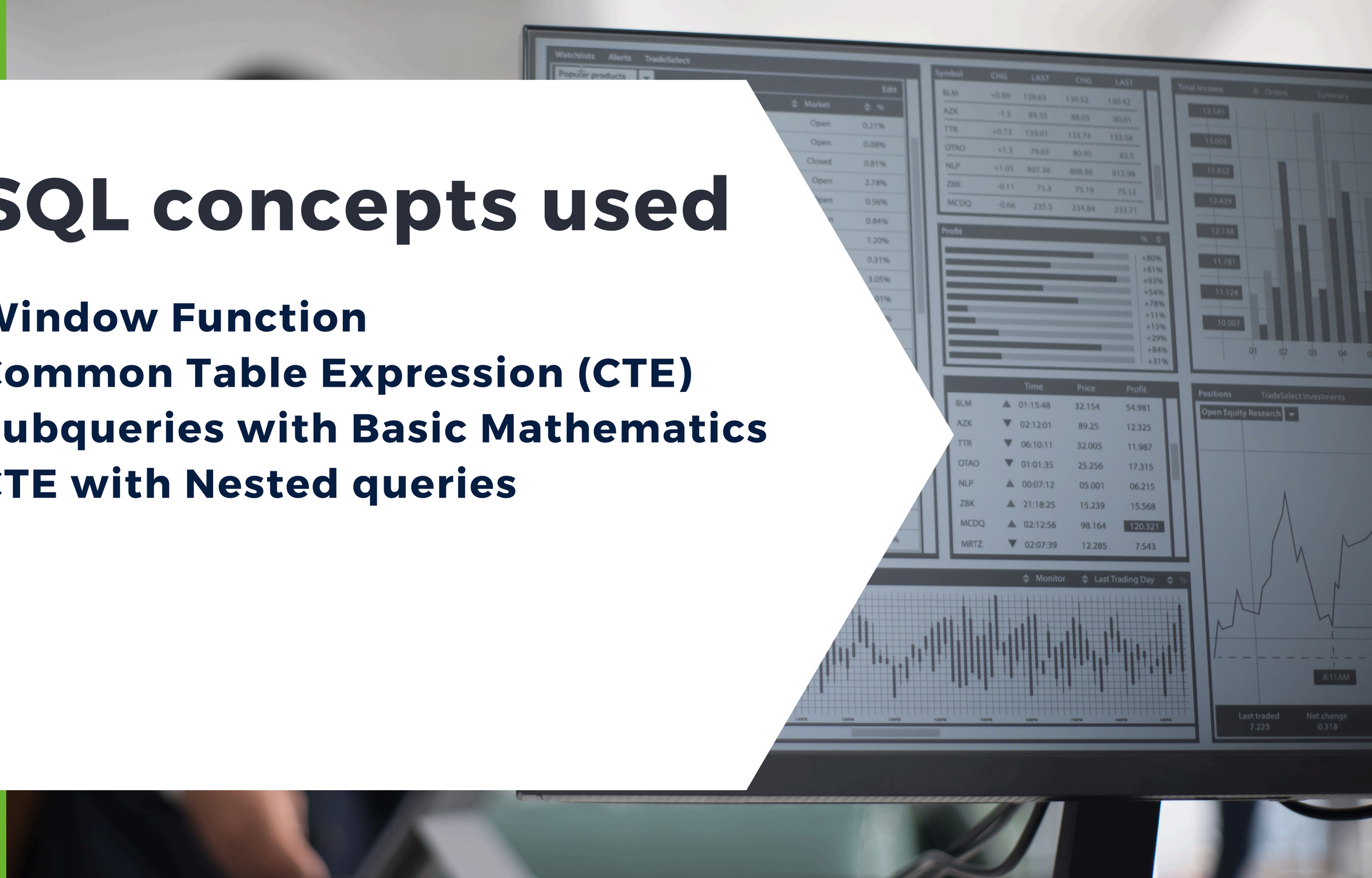
01 Find out the contribution of top 5 customers to overall sales.

02 For each customer, calculate the cumulative total of ordered units over time and rank the orders by date.

03 Perform an ABC classification of items.

SQL concepts used

Window Function
Common Table Expression (CTE)
Subqueries with Basic Mathematics
CTE with Nested queries



Outcome

This project demonstrated the value of data analytics in optimizing supply chain operations. The insights gained can help inform strategic decisions, like-

1. Improve Service Levels
2. Optimize Inventory Management
3. Reduce Order Cancellations
4. Focus on Top Customers
5. Enhance Supply Chain Efficiency
6. Targeted Marketing for High-Demand Products
7. Manage Seasonal Demand

Thank You!

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