Data-Driven Analysis of Pizza Sales: Insights and Trends Using SQL.

Summary

This project focuses on analyzing pizza sales data using SQL to uncover key insights and trends. The dataset includes detailed records of pizza orders, such as order times, customer information, pizza types, sizes, and quantities.

The primary objective is to utilize SQL queries to perform various data analyses, including sales performance by pizza type and size, peak ordering times, customer purchasing behavior, and revenue generation.

By leveraging SQL's powerful data manipulation and aggregation functions, this project provides actionable insights that can help improve inventory management, optimize menu offerings, and enhance overall business strategies for pizza sales.

List of Queries

Retrieve the total number of orders placed.

Calculate the total revenue generated from pizza sales.

Identify the highest-priced pizza.

Identify the most common pizza size ordered.

List the top 5 most ordered pizza types along with their quantities.

Join the necessary tables to find the total quantity of each pizza category ordered.

Determine the distribution of orders by hour of the day.

Join relevant tables to find the category-wise distribution of pizzas.

Group the orders by date and calculate the average number of pizzas ordered per day.

Determine the top 3 most ordered pizza types based on revenue.

Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```sql
-- Retrieve the total number of orders placed.
select count(order_id) as order_details from orders;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Cont

	order_details
▶	21350

```sql
-- Calculate the total revenue generated from pizza sales.
select
round(sum(order_details.quantity * pizzas.price),2) as total_revenue
from order_details join pizzas
on pizzas.pizza_id = order_details.pizza_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_revenue
817860.05

```sql
-- Identify the highest-priced pizza.
select
pizza_types.name ,pizzas.price
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
order by pizzas.price desc limit 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Co

name	price
The Greek Pizza	35.95

```sql
-- Identify the most common pizza size ordered.
select
pizzas.size , count(order_details.order_details_id) as order_count
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id
group by pizzas.size order by order_count desc ;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

size	order_count
L	18526
M	15385
S	14137
XL	544
XXL	28

```sql
-- List the top 5 most ordered pizza types along with their quantities.
select
pizza_types.name, sum(order_details.quantity) as most_ordered
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.name order by most_ordered desc limit 5;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

name	most_ordered
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

```sql
-- Join the necessary tables to find the total quantity of each pizza category orde
select
pizza_types.category ,sum(order_details.quantity) as quantity
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category order by quantity desc
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

```sql
-- Determine the distribution of orders by hour of the day.
select hour(time) as hour , count(order_id) as ordered_item from order
group by hour(time);
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

hour	ordered_item
11	1231
12	2520
13	2455
14	1472
15	1468

```sql
-- Join relevant tables to find the category-wise distribution of pizza
select category , count(name) from pizza_types
group by category;
```

sult Grid | Filter Rows: | Export: | Wrap Cell Content:

category	count(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

```sql
-- Group the orders by date and calculate the average number of pizzas order
select avg(quantity) from
(select orders.date, sum(order_details.quantity)
as quantity from orders join order_details
on orders.order_id = order_details.order_id
group by orders.date) as order_quantity;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

avg(quantity)
138.4749

```sql
-- Determine the top 3 most ordered pizza types based on revenue.
select pizza_types.name,
sum(order_details.quantity * pizzas.price) as revenue
from pizza_types join pizzas
on pizzas.pizza_type_id = pizza_types.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.name order by revenue desc limit 3;
```

sult Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch ro

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

```sql
-- Determine the top 3 most ordered pizza types based on revenue for each pizza category.
select name, revenue from
(select category, name, revenue,
rank() over(partition by category order by revenue desc) as rn from
(select pizza_types.category, pizza_types.name, sum((order_details.quantity) * pizzas.price) as revenue from pizza_types join pizza
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category, pizza_types.name) as a) as b
where rn <= 3;
```

ult Grid | Filter Rows: | Export: | Wrap Cell Content:

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5
The Classic Deluxe Pizza	38180.5
The Hawaiian Pizza	32273.25
The Pepperoni Pizza	30161.75
The Spicy Italian Pizza	34831.25
The Italian Supreme Pizza	33476.75
The Sicilian Pizza	30940.5
The Four Cheese Pizza	32265.70000000065
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5