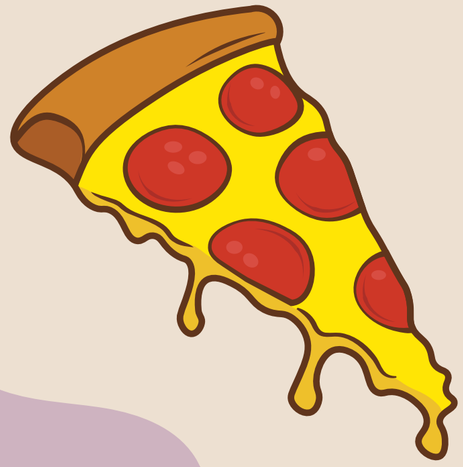
SQL ANALYSIS FOR PIZZAHUT



DISCRIPTION

In this SQL project, I analyzed Pizza Hut’s sales data to understand patterns and trends that impact revenue and customer preferences. The project includes SQL queries that explore top products, peak hours, and revenue distributions across different time periods. By leveraging SQL for data analysis, I identified opportunities for strategic decision-making to enhance Pizza Hut’s sales performance.

KEY BUSINESS INSIGHTS: ESSENTIAL SQL 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.
- Calculate the percentage contribution of each pizza type to total revenue.
- Analyze the cumulative revenue generated over time.
- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

1. RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
select count(order_id) as Total_orders
from orders;
```

	Total_orders
▶	198882

2. CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

```sql
select
round(sum(order_details.quantity * pizzas.price), 2) as total_sales
from order_details
join pizzas
on pizzas.pizza_id = order_details.pizza_id;
```

total_sales
817860.05

3. IDENTIFY THE HIGHEST-PRICED PIZZA.

```sql
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;
```

	name	price
▶	The Greek Pizza	35.95

4. IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```sql
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;
```

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

5. LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES.

```sql
select pizza_types.name, 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.name
order by quantity desc
limit 5;
```

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

6. JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.

```
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;
```

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

7. DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

```sql
select hour(order_time) as hour, count(order_id) as order_count
from orders
group by hour(order_time);
```

hour	order_count
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336
18	2399
19	2009
20	1642
21	1198
22	663
23	28

Result 1

8. JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS.

```
select category, count(name) from pizza_types
group by category;
```

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

9. GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

```
select round(avg(quantity), 0)
from(select orders.order_date, sum(order_details.quantity) as quantity
from orders
join order_details
on orders.order_id = order_details.order_id
group by orders.order_date) as order_quantity ;
```

round(avg(quantity), 0)
138

10. DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.

```sql
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;
```

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

11. CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

```sql
select pizza_types.category,
 round(sum(order_details.quantity*pizzas.price) / (select
round(sum(order_details.quantity * pizzas.price), 2) as total_sales
from order_details
join pizzas
on pizzas.pizza_id = order_details.pizza_id)*100,2) as revenue
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 revenue desc;
```

	category	revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

12. ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```sql
select order_date,
sum(revenue) over(order by order_date) as cum_revenue
from(select orders.order_date,
sum(order_details.quantity * pizzas.price) as revenue
from order_details
join pizzas
on order_details.pizza_id = pizzas. pizza_id
join orders
on orders.order_id = order_details.order_id
group by orders.order_date) as sales;
```

order_date	cum_revenue
2015-01-01	2713.8500000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55
2015-01-06	14358.5
2015-01-07	16560.7
2015-01-08	19399.05
2015-01-09	21526.4
2015-01-10	23990.350000000002
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.300000000003

14358.5

13. DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY.

```sql
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 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, pizza_types.name) as a) as b
where rn <= 3;
```

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