

# SQL PROJECT ON PIZZAHUT SALES

-SRIJANI RAY



# INTRODUCTION

In this project I have analyzed pizzahut sales dataset by using sql to extract business insights to understand sales trend, customer preferences and revenue performance.

The data included 4 csv files - orders, order\_details, pizzas, pizza\_types. I have used the concepts of joins, group by, order by, subqueries, CTE, and window functions to turn the raw data into valuable insights.

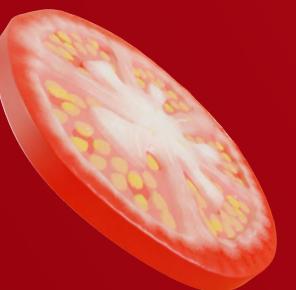
This sql project sharpened my data querying, aggregation and visualization skill. This project also deepened my understanding of data story telling and data driven decision making skill which can be applied to real world business challenges.



# GLIMPSE OF DATA SET

A	B	C	D
order_details_id	order_id	pizza_id	quantity
1	1	1 hawaiian_	1
2	2	2 classic_dlx	1
3	3	2 five_chees	1
4	4	2 ital_supr_	1
5	5	2 mexicana_	1
6	6	2 thai_ckn_l	1
7	7	3 ital_supr_	1
8	8	3 prsc_argla	1
9	9	4 ital_supr_	1
10	10	5 ital_supr_	1
11	11	6 bbq_ckn_s	1
12	12	6 the_greek_	1
13	13	7 spinach_si	1
14	14	8 spinach_si	1
15	15	9 classic_dlx	1
16	16	9 green_gar	1
17	17	9 ital_supr_	1

ORDER  
DETAILS



PIZZAS

A	B	C	D	E	F	G	H	I	J
1	pizza_type_id	name	category	ingredients					
2	bbq_ckn	The Barbe	Chicken	Barbecued Chicken, Red Peppers, Green Peppers, Tomatoes, Red Onions, Barbec					
3	cali_ckn	The Califor	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno Peppers, Fontina Cheese, Gouda Ch					
4	ckn_alfredo	The Chick	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms, Asiago Cheese, Alfredo Sauce					
5	ckn pesto	The Chick	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garlic, Pesto Sauce					
6	southw_ckn	The South	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions, Jalapeno Peppers, Corn, Cilantro,					
7	thai_ckn	The Thai C	Chicken	Chicken, Pineapple, Tomatoes, Red Peppers, Thai Sweet Chilli Sauce					
8	big_meat	The Big M	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sausage					
9	classic_dlx	The Classi	Classic	Pepperoni, Mushrooms, Red Onions, Red Peppers, Bacon					
10	hawaiian	The Hawai	Classic	Sliced Ham, Pineapple, Mozzarella Cheese					
11	ital_cpcollo	The Italian	Classic	Capocollo, Red Peppers, Tomatoes, Goat Cheese, Garlic, Oregano					
12	napolitana	The Napol	Classic	Tomatoes, Anchovies, Green Olives, Red Onions, Garlic					
13	pep_msh_pep	The Peppe	Classic	Pepperoni, Mushrooms, Green Peppers					
14	pepperoni	The Peppe	Classic	Mozzarella Cheese, Pepperoni					
15	the_greek	The Greek	Classic	Kalamata Olives, Feta Cheese, Tomatoes, Garlic, Beef Chuck Roast, Red Onions					
16	brie_carre	The Brie C	Supreme	Brie Carre Cheese, Prosciutto, Caramelized Onions, Pears, Thyme, Garlic					
17	calabrese	The Calabi	Supreme	'Nduja Salami, Pancetta, Tomatoes, Red Onions, Friggitello Peppers, Garlic					
18	ital_supr	The Italian	Supreme	Calabrese Salami, Pancetta, Tomatoes, Red Onions, Green Olives, Garlic					

PIZZA TYPES

A	B		C	D
1	pizza_id	pizza_type_id	size	price
2	bbq_ckn_s	bbq_ckn	S	12.75
3	bbq_ckn_m	bbq_ckn	M	16.75
4	bbq_ckn_l	bbq_ckn	L	20.75
5	cali_ckn_s	cali_ckn	S	12.75
6	cali_ckn_m	cali_ckn	M	16.75
7	cali_ckn_l	cali_ckn	L	20.75
8	ckn_alfredo_s	ckn_alfredo	S	12.75
9	ckn_alfredo_m	ckn_alfredo	M	16.75
10	ckn_alfredo_l	ckn_alfredo	L	20.75
11	ckn pesto_s	ckn pesto	S	12.75
12	ckn pesto_m	ckn pesto	M	16.75
13	ckn pesto_l	ckn pesto	L	20.75
14	southw_ckn_s	southw_ckn	S	12.75
15	southw_ckn_m	southw_ckn	M	16.75
16	southw_ckn_l	southw_ckn	L	20.75
17	thai_ckn_s	thai_ckn	S	12.75
18	thai_ckn_m	thai_ckn	M	16.75

ORDERS

A	B		C
1	order_id	date	time
2	1	01-01-2015	11:38:36
3	2	01-01-2015	11:57:40
4	3	01-01-2015	12:12:28
5	4	01-01-2015	12:16:31
6	5	01-01-2015	12:21:30
7	6	01-01-2015	12:29:36
8	7	01-01-2015	12:50:37
9	8	01-01-2015	12:51:37
10	9	01-01-2015	12:52:01
11	10	01-01-2015	13:00:15
12	11	01-01-2015	13:02:59
13	12	01-01-2015	13:04:41
14	13	01-01-2015	13:11:55
15	14	01-01-2015	13:14:19
16	15	01-01-2015	13:33:00
17	16	01-01-2015	13:34:07
18	17	01-01-2015	13:53:00
19	18	01-01-2015	13:57:08



A large pizza is shown on a round wooden board. The pizza is cut into several slices and topped with melted cheese, ham, and small red pepper pieces. It is placed on a dark surface with a blue and white striped cloth underneath.

# QUESTIONS

## BASIC

- 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.

## INTERMEDIATE

- 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.

## ADVANCE

- 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.

# RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
27 • select count(order_id) as total_orders  
28   from orders;
```

Result Grid	
	total_orders
▶	21350

# CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

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

Result Grid	
	total_sales
▶	817860.05

# IDENTIFY THE HIGHEST-PRICED PIZZA.

```
36 • select name,price  
37   from pizza_types join pizzas  
38   on pizza_types.pizza_type_id = pizzas.pizza_type_id  
39   order by price desc  
40   limit 1;
```

Result Grid | Filter Rows:

	name	price
▶	The Greek Pizza	35.95

# IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```
43 • select size , count(order_details_id)as order_count  
44   from order_details join pizzas  
45   on order_details.pizza_id = pizzas.pizza_id  
46   group by size  
47   order by order_count desc  
48   limit 1;
```

Result Grid | Filter R

	size	order_count
▶	L	18526

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

```
51 • select name , sum(quantity) as order_count  
52   from pizza_types  
53   join pizzas on pizza_types.pizza_type_id=pizzas.pizza_type_id  
54   join order_details on pizzas.pizza_id = order_details.pizza_id  
55   group by name  
56   order by order_count desc  
57   limit 5;
```

Result Grid | Filter Rows:

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

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

```
64 • select category , sum(quantity) as total_quantity  
65   from pizza_types  
66   join pizzas on pizza_types.pizza_type_id=pizzas.pizza_type_id  
67   join order_details on pizzas.pizza_id = order_details.pizza_id  
68   group by category  
69   order by total_quantity desc;
```

Result Grid | Filter Rows:

	category	total_quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

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

```
72 • select hour(order_time) hour , count(order_id) order_count  
73   from orders  
74   group by hour ;
```

Result Grid | Filter Rows:

	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
	10	8
	9	1

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

```
77 • select category , count(name)  
78   from pizza_types  
79   group by category;
```

Result Grid | Filter Rows:

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

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

```
82 • select round(avg(total_quantity),0) as avg_pizza_ordered_per_day  
83   from  
84   (select order_date , sum(quantity) as total_quantity  
85     from orders join order_details  
86       on orders.order_id = order_details.order_id  
87     group by order_date) as order_quantity_table;
```

Result Grid	
	avg_pizza_ordered_per_day
▶	138

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

```
90 • select name , sum(price*quantity) as revenue  
91   from pizzas  
92   join pizza_types on pizzas.pizza_type_id=pizza_types.pizza_type_id  
93   join order_details on order_details.pizza_id=pizzas.pizza_id  
94   group by name  
95   order by revenue desc  
96   limit 3;
```

Result Grid | Filter Rows:

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

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

```
104 • select category,round(sum(price*quantity/(select sum(quantity*price) as total_sales  
105      from order_details join pizzas on pizzas.pizza_id=order_details.pizza_id))*100,2) as percent_revenue  
106      from pizza_types  
107      join pizzas on pizza_types.pizza_type_id=pizzas.pizza_type_id  
108      join order_details on pizzas.pizza_id=order_details.pizza_id  
109      group by category  
110      order by percent_revenue desc;
```

Result Grid | Filter Rows:

	category	percent_revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

# ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```
113 • select order_date, sum(revenue) over (order by order_date) as cum_revenue  
114   from  
115   (select order_date , sum(quantity*price) as revenue  
116     from orders  
117    join order_details on order_details.order_id=orders.order_id  
118    join pizzas on pizzas.pizza_id=order_details.pizza_id  
119   group by order_date) as rev_table;
```

Result Grid		Filter Rows:
	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
	2015-01-14	32358.700000000004
	2015-01-15	34343.50000000001
	2015-01-16	36937.65000000001
	2015-01-17	39001.75000000001
	2015-01-18	40978.60000000006
	2015-01-19	43365.75000000001
	2015-01-20	45763.65000000001
	2015-01-21	47804.20000000001
	2015-01-22	50300.90000000001

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

```
122 • select category, name, total_revenue  
123   from  
124   (select category, name, total_revenue, rank () over(partition by category order by total_revenue desc) as rn  
125     from  
126   (select category, name, sum(quantity*price) as total_revenue  
127     from pizza_types join pizzas on pizza_types.pizza_type_id = pizzas.pizza_type_id  
128     join order_details on order_details.pizza_id=pizzas.pizza_id  
129     group by category, name) as a) as b  
130   where rn<=3;
```

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

# RESULTS

- Total Orders : 21350
- Total Revenue : \$817860.05
- Avg pizza ordered per day : 138
- Most expensive : "The Greek Pizza" (\$35.95)
- Revenue & Bestsellers: Classic pizzas are the top revenue generators, with "The Thai Chicken Pizza" being the top-selling item.
- Customer Preferences: Large pizzas are the most popular size.
- Operational Insights: The peak order time is between 12-1 PM.

# RECOMMENDATIONS

- Marketing efforts should focus on bestsellers, and introducing new items based on customer preferences.
- Inventory should be adjusted to accommodate peak order times.
- Should develop targeted marketing campaigns based on customer segments and order history.



# CONTACT

📞 8910660182

🌐 srijaniray99@gmail.com

# THANK YOU!

