



# PIZZA SALES ANALYSIS PROJECT





# HELLO!

- Name : Priya Kamble
- Subtitle: Analyzing Pizza Sales Data  
Using SQL





- OBJECTIVE: ANALYZE PIZZA SALES DATA TO IDENTIFY TRENDS AND INSIGHTS.
- Scope: Utilize SQL queries to extract, manipulate, and analyze data.





TOOLS/TECHNOLOGIES USED:  
MySQL Workbench



I HAVE DONE SOME BASIC,  
INTERMEDIATE, ADVANCED LEVEL  
QUERIES IN THIS PROJECT

D A T A B A S E  
U S E D : P I Z Z A H U T

T A B L E S   U S E D :

```
SELECT * FROM pizzahut.pizzas;
```

pizza_id	pizza_type_id	size	price
bbq_ckn_s	bbq_ckn	S	12.75
bbq_ckn_m	bbq_ckn	M	16.75
bbq_ckn_l	bbq_ckn	L	20.75
cali_ckn_s	cali_ckn	S	12.75
cali_ckn_m	cali_ckn	M	16.75
cali_ckn_l	cali_ckn	L	20.75
ckn_alfredo_s	ckn_alfredo	S	12.75
ckn_alfredo_m	ckn_alfredo	M	16.75
ckn_alfredo_l	ckn_alfredo	L	20.75
ckn pesto_s	ckn pesto	S	12.75
ckn pesto_m	ckn pesto	M	16.75
ckn pesto_l	ckn pesto	L	20.75
southw_ckn_s	southw_ckn	S	12.75
southw_ckn_m	southw_ckn	M	16.75
southw_ckn_l	southw_ckn	L	20.75
thai_ckn_s	thai_ckn	S	12.75
thai_ckn_m	thai_ckn	M	16.75
thai_ckn_l	thai_ckn	L	20.75
big_meat_s	big_meat	S	12
big_meat_m	big_meat	M	16
big_meat_l	big_meat	L	20.5

```
SELECT * FROM pizzahut.orders;
```

order_id	order_date	order_time
1	2015-01-01	11:38:36
2	2015-01-01	11:57:40
3	2015-01-01	12:12:28
4	2015-01-01	12:16:31
5	2015-01-01	12:21:30
6	2015-01-01	12:29:36
7	2015-01-01	12:50:37
8	2015-01-01	12:51:37
9	2015-01-01	12:52:01
10	2015-01-01	13:00:15
11	2015-01-01	13:02:59
12	2015-01-01	13:04:41
13	2015-01-01	13:11:55
14	2015-01-01	13:14:19
15	2015-01-01	13:33:00
16	2015-01-01	13:34:07
17	2015-01-01	13:53:00
18	2015-01-01	13:57:08
19	2015-01-01	13:59:09
20	2015-01-01	14:03:08
21	2015-01-01	14:14:29

```
SELECT * FROM pizzahut.order_details;
```

order_details_id	order_id	pizza_id	quantity
1	1	hawaiian_m	1
2	2	classic_dlx_m	1
3	2	five_cheese_l	1
4	2	ital_supr_l	1
5	2	mexicana_m	1
6	2	thai_ckn_l	1
7	3	ital_supr_m	1
8	3	prsc_argla_l	1
9	4	ital_supr_m	1
10	5	ital_supr_m	1
11	6	bbq_ckn_s	1
12	6	the_greek_s	1
13	7	spinach_supr_s	1
14	8	spinach_supr_s	1
15	9	classic_dlx_s	1
16	9	green_garden_s	1
17	9	ital_cpdlo_l	1
18	9	ital_supr_l	1
19	9	ital_supr_s	1
20	9	mexicana_s	1
21	9	spicy_ital_l	1

```
SELECT * FROM pizzahut.pizza_types;
```

pizza_type_id	name	category	ingredients
bbq_ckn	The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Pepp...
cali_ckn	The California Chicken Pizza	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno P...
ckn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms...
ckn pesto	The Chicken Pesto Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garl...
southw_ckn	The Southwest Chicken Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions, ...
thai_ckn	The Thai Chicken Pizza	Chicken	Chicken, Pineapple, Tomatoes, Red Peppers, T...
big_meat	The Big Meat Pizza	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sau...
classic_dlx	The Classic Deluxe Pizza	Classic	Pepperoni, Mushrooms, Red Onions, Red Pepp...
hawaiian	The Hawaiian Pizza	Classic	Sliced Ham, Pineapple, Mozzarella Cheese
ital_cpdlo	The Italian Capocollo Pizza	Classic	Capocollo, Red Peppers, Tomatoes, Goat Chee...
napolitana	The Napolitana Pizza	Classic	Tomatoes, Anchovies, Green Olives, Red Onion...
pep_msh_pep	The Pepperoni, Mushroom, ...	Classic	Pepperoni, Mushrooms, Green Peppers
pepperoni	The Pepperoni Pizza	Classic	Mozzarella Cheese, Pepperoni
the_greek	The Greek Pizza	Classic	Kalamata Olives, Feta Cheese, Tomatoes, Garli...
brie_carre	The Brie Carre Pizza	Supreme	Brie Carre Cheese, Prosciutto, Caramelized Oni...
calabrese	The Calabrese Pizza	Supreme	'Nduja Salami, Pancetta, Tomatoes, Red Onions...
ital_supr	The Italian Supreme Pizza	Supreme	Calabrese Salami, Capocollo, Tomatoes, Red O...
pepr_salami	The Pepper Salami Pizza	Supreme	Genoa Salami, Capocollo, Pepperoni, Tomatoes,...
prsc_argla	The Prosciutto and Arugula ...	Supreme	Prosciutto di San Daniele, Arugula, Mozzarella C...
sicilian	The Sicilian Pizza	Supreme	Coarse Sicilian Salami, Tomatoes, Green Olives, ...
soppressata	The Soppressata Pizza	Supreme	Soppressata Salami, Fontina Cheese, Mozzarell...



# BASIC SQL QUERIES

```
-- Retrieve the total number of orders placed.
```

```
SELECT  
    COUNT(order_id) AS total_orders  
FROM  
    orders;
```

Result Grid	
	total_orders
▶	21350

```
-- 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	
	TOTAL_REVENUE
▶	817913.75





```
-- 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		
	name	price
▶	The Greek Pizza	35.95

```
-- Identify the most common pizza size ordered.
```

```
SELECT  
    pizzas.size,  
    COUNT(order_details.order_details_id) AS order_count  
FROM  
    pizzas  
        INNER JOIN  
    order_details ON pizzas.pizza_id = order_details.pizza_id  
GROUP BY pizzas.size  
ORDER BY order_count desc;
```

Result Grid		
	size	order_count
▶	L	18538
	M	15376
	S	14135
	XL	543
	XXL	28



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

```
SELECT
    pizza_types.name,
    SUM(order_details.quantity) AS order_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 order_quantity DESC
LIMIT 5;
```

name	order_quantity
The Classic Deluxe Pizza	2450
The Barbecue Chicken Pizza	2431
The Hawaiian Pizza	2424
The Pepperoni Pizza	2416
The California Chicken Pizza	2373



## INTERMEDIATE SQL QUERIES

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

```
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS order_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 order_quantity desc;
```

category	order_quantity
Classic	14883
Supreme	11992
Veggie	11652
Chicken	11048





```
-- Determine the distribution of orders by hour of the day.
```

```
SELECT  
    HOUR(order_time) AS order_hours,  
    COUNT(order_id) AS order_count  
FROM  
    orders  
GROUP BY HOUR(order_time)  
ORDER BY COUNT(order_id) DESC;
```

	order_hours	order_count
12	2520	
13	2455	
18	2399	
17	2336	
19	2009	
16	1920	
20	1642	
14	1472	
15	1468	
11	1231	
21	1198	
22	663	
23	28	
10	8	
9	1	



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

```
SELECT  
    category, COUNT(name) AS CountOfVariety  
FROM  
    pizza_types  
GROUP BY category;
```

	category	CountOfVariety
Chicken	6	
Classic	8	
Supreme	9	
Veggie	9	



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

```
SELECT
```

```
    ROUND(AVG(Pizzaquantity), 0) AS AVGPIZZA
```

```
FROM
```

```
(SELECT
```

```
    orders.order_date, SUM(order_details.quantity) AS PizzaQuantity
```

```
FROM
```

```
    orders
```

```
JOIN order_details ON orders.order_id = order_details.order_id
```

```
GROUP BY orders.order_date) AS orderdates;
```

Result Grid	
	AVGPIZZA
	138



-- 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 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 revenue DESC
```

```
LIMIT 3;
```

Result Grid	
	Filter Rows:
name	revenue
The Thai Chicken Pizza	43447
The Barbecue Chicken Pizza	42755.25
The California Chicken Pizza	41451.75



# ADVANCED SQL QUERIES

```
-- Calculate the percentage contribution of each pizza type to total revenue.

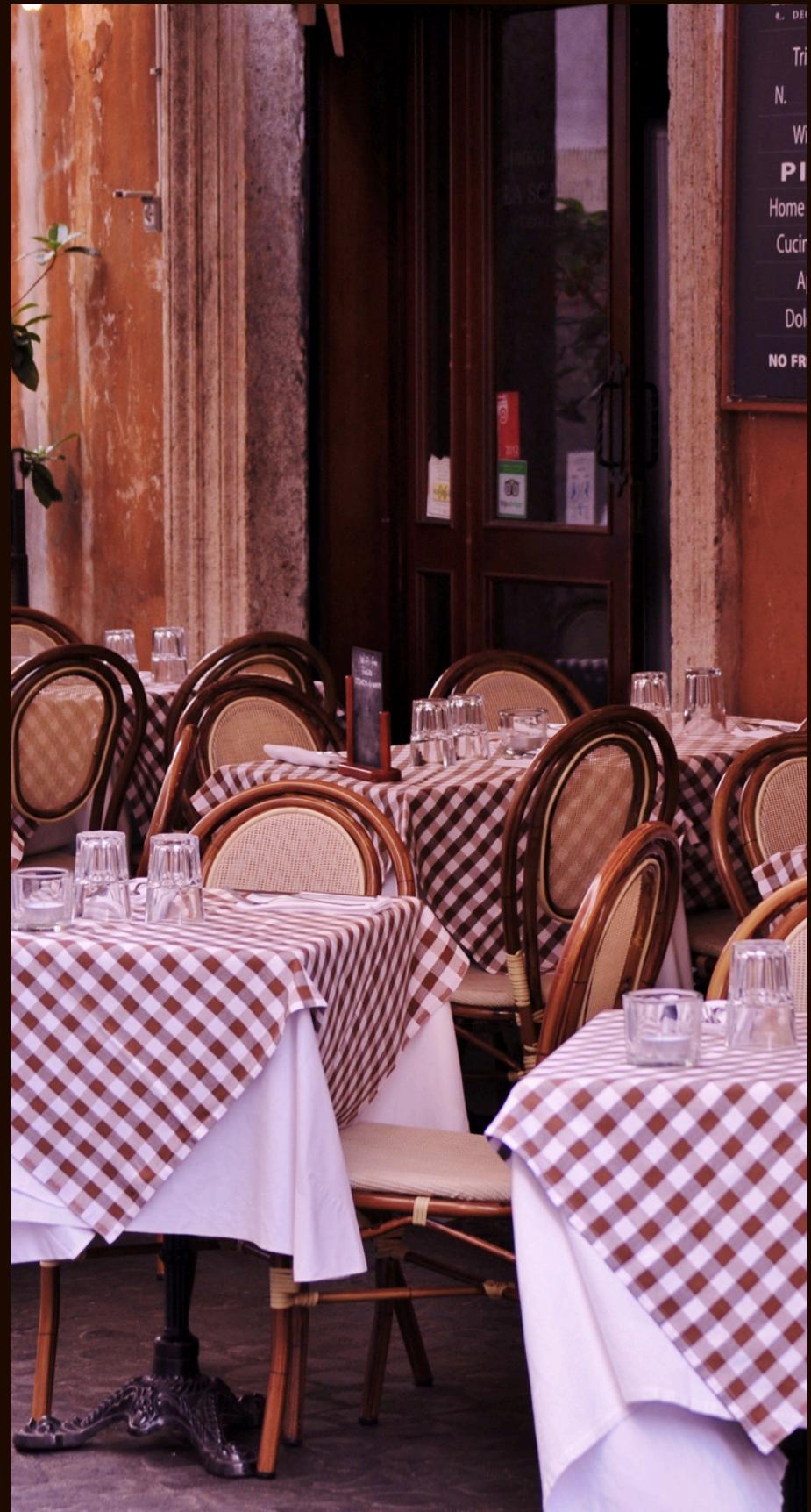
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (SELECT
        ROUND(SUM(order_details.quantity * pizzas.price),
        2) AS TOTAL_REVENUE
    )
    FROM
        order_details
        JOIN
            pizzas ON pizzas.pizza_id = order_details.pizza_id) * 100,
    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;

-- Analyze the cumulative revenue generated over time.
```

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

	category	revenue
	Classic	26.9
	Supreme	25.46
	Chicken	23.95
	Veggie	23.69

	order_date	cum_revenue
	2015-01-01	2837.8
	2015-01-02	5709.2
	2015-01-03	8412.349999999999
	2015-01-04	10270.8
	2015-01-05	12411.25
	2015-01-06	14956.2
	2015-01-07	17224.4
	2015-01-08	20216.7
	2015-01-09	22381.550000000003
	2015-01-10	24897.500000000004
	2015-01-11	26860.800000000003
	2015-01-12	28837.850000000002
	2015-01-13	30907.950000000004
	2015-01-14	33435.350000000006
	2015-01-15	35420.15000000001
	2015-01-16	38014.30000000001
	2015-01-17	40078.40000000001
	2015-01-18	42055.25000000001
	2015-01-19	44442.40000000001
	2015-01-20	46840.30000000001
	2015-01-21	48880.85000000001
	2015-01-22	51377.55000000001
	2015-01-23	53801.25000000001
	2015-01-24	56090.50000000001
	2015-01-25	57708.05000000001
	2015-01-26	59592.45000000001
	2015-01-27	62120.500000000015
	2015-01-28	64136.500000000015
	2015-01-29	66181.80000000002
	2015-01-30	68452.10000000002
	2015-01-31	70869.95000000003





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

```
select category, name, revenue from
(select category, name, revenue, rank() over(partition by category order by revenue desc) as rank_revenue
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 all_revenue) as last_output
where rank_revenue <= 3;
```

Result Grid			
	Category	name	revenue
Chicken	The Thai Chicken Pizza	43447	
Chicken	The Barbecue Chicken Pizza	42755.25	
Chicken	The California Chicken Pizza	41451.75	
Classic	The Classic Deluxe Pizza	38140.5	
Classic	The Hawaiian Pizza	32306.25	
Classic	The Pepperoni Pizza	30136.75	
Supreme	The Spicy Italian Pizza	34906	
Supreme	The Italian Supreme Pizza	33547.25	
Supreme	The Sicilian Pizza	30936.5	
Veggie	The Four Cheese Pizza	32295.20000000065	
Veggie	The Mexicana Pizza	26780.75	
Veggie	The Five Cheese Pizza	26048	



# SOME OF MY FINDINGS FROM THE SOLUTIONS OF THE QUERIES:

- Total no. of orders are 21,350
- Total revenue generated from pizza sales is Rs.8,17,913.
- The highest priced pizza is ‘The greek pizza’ with the cost of Rs.35.97.
- Most commonly ordered pizza size is Large ‘L’.
- Top most ordered pizza type is ‘The classic deluxe pizza’ . It’s order quantity is 2450.
- Top most ordered pizza category is ‘Classic’ . It’s order quantity is 14883.
- On the 12 hour of the day ,orders are maximum i.e 2520.
- Supreme & Veggie category’s pizza has 9 varieties, Classic has 8 while Chicken has 6.
- Average no. of pizzas ordered per day is 138.
- ‘The Thai Thai Chicken pizza’ generated the highest revenue of Rs. 43,447.
- Classic category’s pizza generated highest revenue with 26.9%.
- By the end of the month, cumulative revenue geneated is Rs. 8,17,913.
- In ‘Chicken’ category, ‘The Thai Chicken pizza’ generated Rs.43447 of revenue. In ‘Classic’, ‘The Classic deluxe pizza’ generated revenue of Rs. 38140, In ‘Supreme’, ‘The Spicy Italian pizza’ generated revenue of Rs. 34906. In ‘Veggie’ category, ‘The four cheeze pizza’ generated revenue of Rs. 322954.



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# THANK YOU

