

# Pizza Sales Analysis



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# Introduction

- **Objective:** To analyze pizza sales data to derive insights and improve business strategies.
- **Scope:** Data extraction, transformation, and analysis using SQL queries.

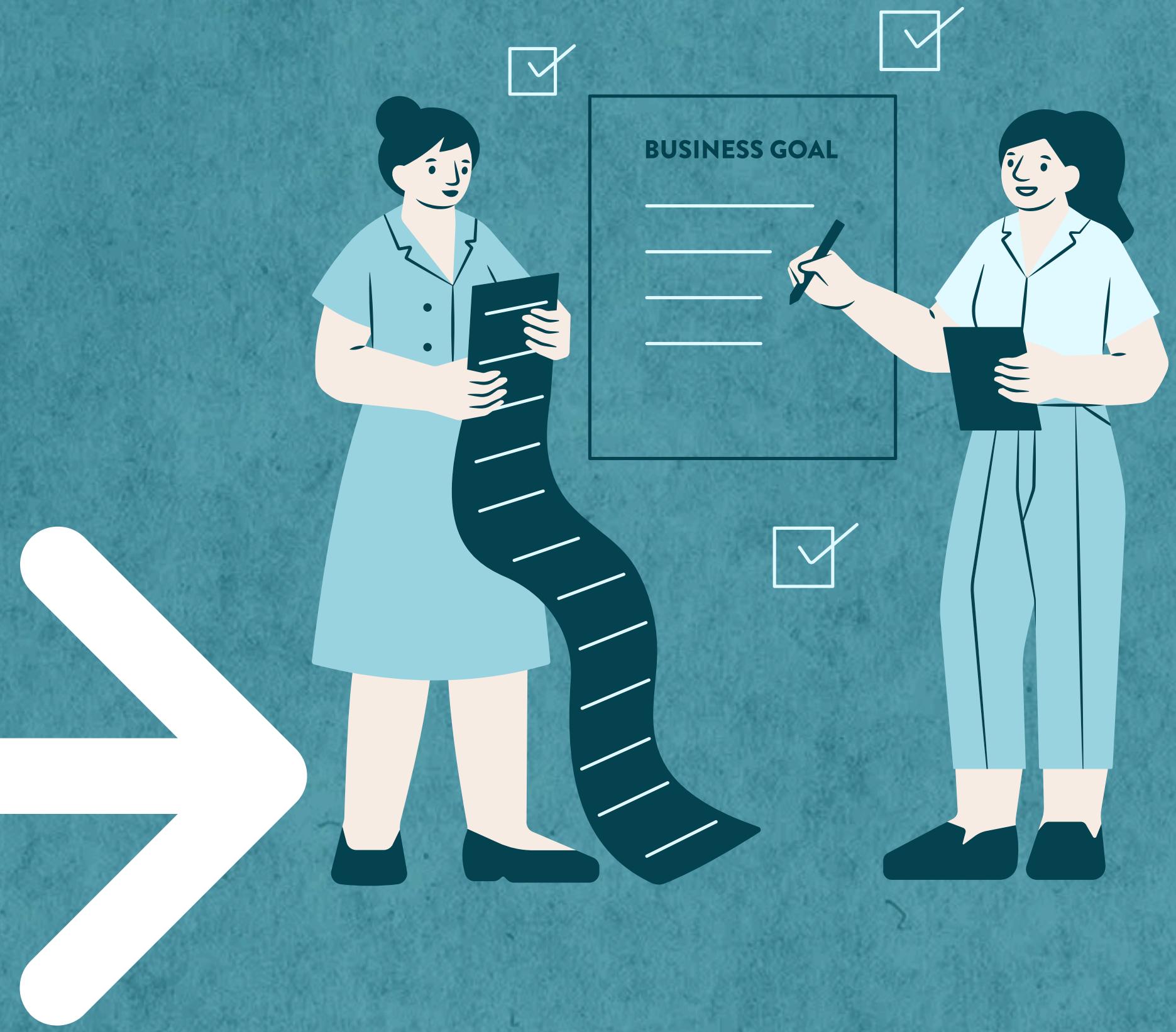


# Tables Involved

- **Pizzas:** Pizza details (Pizza ID, size, type ID, prize).
- **Pizza Types:** Types details (pizza type ID, name, category).
- **Orders:** Order details (Order ID, order date, order time).
- **Order Details:** Order line items (order ID, pizza ID, quantity).



# Data Analysis



-- Total number of orders placed.

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

Result Grid	
	total_order
▶	21350

-- 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
▶	817860.05

# -- Highest-priced pizza.

```
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
ORDER BY price DESC
LIMIT 1;
```

Result Grid | Filter Rows:

	name	price
▶	The Greek Pizza	35.95

## -- The most common pizza size ordered.

```
SELECT
    pizzas.size, COUNT(order_details.order_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
LIMIT 1;
```

Result Grid | Filter

	size	order_count
▶	L	18526

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

```
SELECT
    pizza_types.name,
    SUM(order_details.quantity) AS total_quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizza_types.name
ORDER BY total_quantity DESC
LIMIT 5;
```

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

-- The total quantity of each pizza category ordered.

```
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS total_quantity
FROM
    pizza_types
    JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
    JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizza_types.category
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.

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

	hours	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

## -- Category-wise distribution of pizzas.

```
SELECT  
    category, COUNT(name)  
FROM  
    pizza_types  
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.

```
SELECT  
    ROUND(AVG(total_orders), 0) as avg_pizzas_orderd_per_day  
FROM  
    (SELECT  
        orders.order_date,  
        SUM(order_details.quantity) AS total_orders  
    FROM  
        orders  
    JOIN order_details ON orders.order_id = order_details.order_id  
    GROUP BY order_date) AS order_quantity;
```

Result Grid	
	avg_pizzas_orderd_per_day
▶	138

-- 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 pizzas.pizza_id = order_details.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

# -- The percentage contribution of each pizza type to total revenue.

```
SELECT
    pizza_types.category,
    ((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) 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.category
```

	category	revenue
▶	Classic	26.90596025566967
	Veggie	23.682590927384577
	Supreme	25.45631126009862
	Chicken	23.955137556847287

# -- 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(order_details.quantity*pizzas.price) as revenue
    from orders join order_details on orders.order_id = order_details.order_id
    join pizzas on pizzas.pizza_id = order_details.pizza_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
	2015-01-14	32358.700000000004
	...	...

-- 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 ranking from(
    select pizza_types.category, 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 category, name
) as a
) as b
where ranking <=3 ;
```

	category	name	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



# Thank you!



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