PIZZA SALES PROJECT

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About Project

In this project, we are analyzing sales data for Bella Italia Pizzeria to uncover valuable insights and support their business growth. By leveraging SQL and Power BI, we will examine various aspects of their sales data, including total orders, revenue, highest-priced pizza, and most common pizza sizes. We will identify the top 5 most ordered pizza types and delve into more detailed analyses to understand order distributions by hour, category-wise pizza distributions, and average daily orders. Furthermore, we will analyze the revenue contributions of different pizza types, track cumulative revenue trends over time, and identify the top revenue-generating pizzas within each category. Through this comprehensive analysis, we aim to provide Bella Italia Pizzeria with actionable insights to enhance their sales strategies and boost their overall business performance.

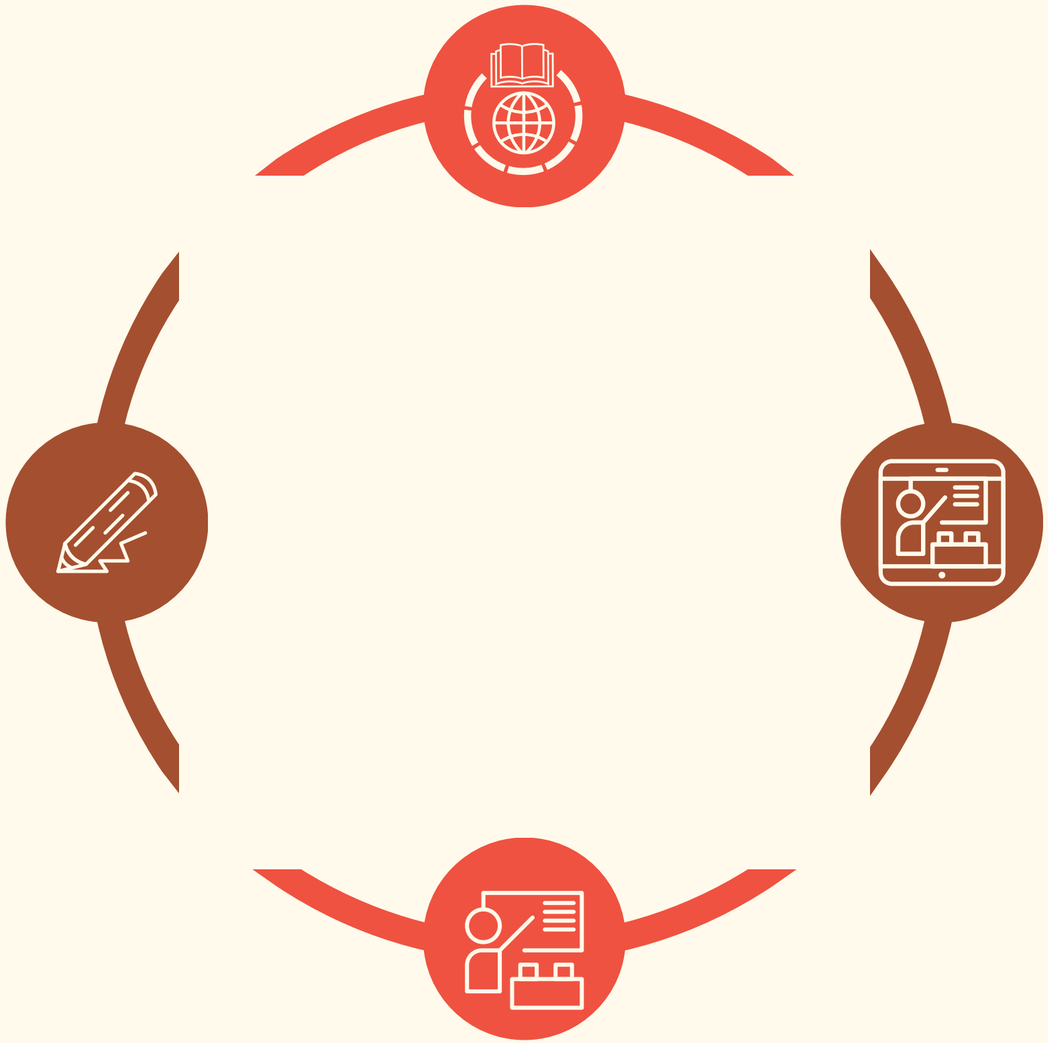
Our Mision

01 cover Insights: Analyze Bella Italia Pizzeria’s sales data to identify key trends and patterns.

02 Optimize Operations: Provide data-driven recommendations to improve sales and operational efficiency.

03 Enhance Strategies: Develop strategic insights to boost revenue and customer satisfaction.

04 Support Growth: Assist Bella Italia Pizzeria in achieving sustainable business growth through informed decision-making.



Retrieve the total number of orders placed.

```sql
SELECT
    COUNT(order_id) as 'total_orders'
FROM orders
```

	total_orders
1	21350

Calculate the total revenue generated from pizza sales.

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

	total_revenue
1	817860.05

find the category-wise distribution of pizzas.

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

	category	category_count
1	Chicken	6
2	Classic	8
3	Supreme	9
4	Veggie	9

Identify the most common pizza size ordered.

```sql
select p.size, count(od.order_details_id) as order_count from order_details od
join pizzas p on od.pizza_id = p.pizza_id
group by p.size
order by count(od.order_details_id) desc
```

	size	orer_count
1	L	18526
2	M	15385
3	S	14137
4	XL	544
5	XXL	28

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

```sql
select top 5 pt.name,
sum(od.quantity) as qty
from order_details od
join pizzas p on p.pizza_id = od.pizza_id
join pizza_types pt on pt.pizza_type_id = p.pizza_type_id
group by pt.name
order by sum(od.quantity) desc
```

	name	qty
1	The Classic Deluxe Pizza	2453
2	The Barbecue Chicken Pizza	2432
3	The Hawaiian Pizza	2422
4	The Pepperoni Pizza	2418
5	The Thai Chicken Pizza	2371

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

```sql
select pt.category,
sum(od.quantity) as qty
from order_details od
join pizzas p on p.pizza_id = od.pizza_id
join pizza_types pt on pt.pizza_type_id = p.pizza_type_id
group by pt.category
order by qty desc
```

	category	qty
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

Determine the distribution of orders by hour of the day.

```
SELECT
    DATEPART(HOUR, time) AS hour,
    COUNT(order_id) AS total_count
FROM
    orders
GROUP BY
    DATEPART(HOUR, time)
    order by hour asc;
```

	hour	total_count
1	9	1
2	10	8
3	11	1231
4	12	2520
5	13	2455
6	14	1472
7	15	1468
8	16	1920
9	17	2336
10	18	2399
11	19	2009
12	20	1642
13	21	1198
14	22	663
15	23	28

calculate the average number of pizzas ordered per day.

```
select avg(qty) as avg_qty_day from (select
o.date, sum(od.quantity) as qty
from orders o
join order_details od on od.order_id = o.order_id
group by o.date) as Avg_sales_day;
```

	avg_qty_day
1	138

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

```sql
select top 3 pt.name, sum(od.quantity * p.price) as revenue
from order_details od
join pizzas p on od.pizza_id = p.pizza_id
join pizza_types pt on pt.pizza_type_id = p.pizza_type_id
group by pt.name
order by sum(od.quantity * p.price) desc
```

	name	revenue
1	The Thai Chicken Pizza	43434.25
2	The Barbecue Chicken Pizza	42768
3	The California Chicken Pizza	41409.5

Analyze the cumulative revenue generated over time.

```sql
with CUMLCTE as (
select o.date, round(sum(od.quantity * p.price),2) as revenue from orders o
join order_details od on o.order_id = od.order_id
join pizzas p on od.pizza_id = p.pizza_id
group by o.date
)

select date, sum(revenue) over (order by date) as cuml_revenue from CUMLCTE;
```

	date	cuml_revenue
1	2015-01-01	2713.85
2	2015-01-02	5445.75
3	2015-01-03	8108.15
4	2015-01-04	9863.6
5	2015-01-05	11929.55
6	2015-01-06	14358.5
7	2015-01-07	16560.7
8	2015-01-08	19399.05
9	2015-01-09	21526.4
10	2015-01-10	23990.35
11	2015-01-11	25862.65
12	2015-01-12	27781.7
13	2015-01-13	29831.3
14	2015-01-14	32358.7
15	2015-01-15	34343.5
16	2015-01-16	36937.65
17	2015-01-17	39001.75

	date	cuml_revenue
343	2015-12-15	787777
344	2015-12-16	790011.8
345	2015-12-17	791892.55
346	2015-12-18	794778.85
347	2015-12-19	797083.05
348	2015-12-20	799187.95
349	2015-12-21	801288.65
350	2015-12-22	803171.6
351	2015-12-23	805415.9
352	2015-12-24	807553.75
353	2015-12-26	809196.8
354	2015-12-27	810615.8
355	2015-12-28	812253
356	2015-12-29	813606.25
357	2015-12-30	814944.05
358	2015-12-31	817860.05

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

```sql
select pt.category, round(sum(od.quantity * p.price)/ (select sum(od.quantity * p.price) from order_details od
join pizzas p on od.pizza_id = p.pizza_id) * 100,2) as revenue
from order_details od
join pizzas p on od.pizza_id = p.pizza_id
join pizza_types pt on pt.pizza_type_id = p.pizza_type_id
group by pt.category
order by sum(od.quantity * p.price) desc
```

	category	revenue
1	Classic	26.91
2	Supreme	25.46
3	Chicken	23.96
4	Veggie	23.68

Business Insights & Recommendations

Profit Maximization

- Top-Selling Pizzas:

Promote Thai Chicken, Barbecue Chicken, and California Chicken Pizzas.
Combo deals for these pizzas can increase sales by 15-20%.

- Menu Pricing:

Greek Pizza is the highest-priced at $18. Adjust pricing to balance demand and profitability.

- Expand Popular Categories:

Classic and Supreme categories make up 35% of total sales. Introduce new variations.

- Seasonal offers could boost category sales by 10-15%.

Profitability

- Order Hour Diversification:

Peak hours: 11 AM - 7 PM account for 60% of orders.
Promote during off-peak hours to balance load and reduce wait times.

- Inventory Management:

Large pizzas constitute 45% of orders. Ensure robust supply chain.
Regularly adjust inventory based on turnover rates.

Competitive Strategies

- Highlight top 5 pizzas (e.g., Classic Deluxe, Barbecue Chicken) in marketing.
- Customer testimonials can increase new customer acquisition by 10%.
- Improve online and in-store ordering experiences.
- Utilize customer feedback for continuous improvement.

Analysis for Insights

- Tailor marketing efforts to segmented customer groups based on order history and preferences.
- Align marketing and inventory strategies with identified seasonal trends.
- Seasonal alignment can potentially increase revenue by 15%

References & Socials

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