Pizza Sales

The aim of the project is to provide insights into customer behaviour and preferences. This project will inform the business owner about which days are most profitable and whether there are any seasonal or monthly trends. The insights gained will support business decision-making and improve customer satisfaction. Identifying the most popular pizzas will also assist with planning and managing stock more effectively.

Dataset

Below is a table of the original dataset received with detailed information about every column.

Column Name	Data Type	Description
pizza_id	float	A unique identifier assigned to each distinct pizza variant available for ordering.
order_id	float	A unique identifier for each order made, which links to multiple pizzas.
pizza_name_id	nvarchar(50)	An identifier linking to a specific name of the pizza.
quantity	float	The number of units of a specific pizza variant ordered within an order.
order_date	date	The date when the order was placed.
order_time	time(7)	The time when the order was placed.
unit_price	float	The cost of a single unit of the specific pizza variant.
total_price	float	The aggregated cost of all units of a specific pizza variant in an order.
pizza_size	nvarchar(50)	Represents the size of the pizza (e.g., small, medium, large).
pizza_category	nvarchar(50)	Indicates the category of the pizza, such as vegetarian, non-vegetarian, etc.
pizza_ingredients	nvarchar(100)	Provides a list or description of the ingredients used in the pizza.
pizza_name	nvarchar(50)	Specifies the name of the specific pizza variant ordered.

KPI's:

Analysis of the key performance indicators give us an insight on how the business is doing.

- Total Revenue
- Total Orders
- Total Pizzas Sold
- Average Order Value
- Average Pizzas per Order

Analysis Methods:

- SQL
- Power BI

SQL:

- Total Revenue

```
SELECT
	SUM(total_price)
AS
	Total_Revenue
FROM
	pizza_sales_converted;
```

Total_Revenue
817860.05083847

- Total Orders

```
SELECT
	COUNT(DISTINCT(order_id))
AS
	Total_Orders
FROM
	pizza_sales_converted;
```

Total_Orders
21350

- Total Pizzas Sold

```
SELECT
	SUM(quantity)
AS
	Total_pizza_sold
FROM
	pizza_sales_converted;
```

Total_pizza_sold
49574

- Average Order Value

```
SELECT
	(SUM(total_price) / COUNT(DISTINCT order_id))
AS
	Avg_order_Value
FROM
	pizza_sales_converted;
```

Avg_order_Value
38.3072623343546

- Average Pizzas per Order

```
SELECT
	ROUND(CAST(SUM(quantity) AS FLOAT) /
CAST(COUNT(DISTINCT order_id) AS FLOAT),2)
AS
	Avg_Pizzas_per_order
FROM
	pizza_sales_converted;
```

Avg_Pizzas_per_order
2.32

- Total Orders by Month

```
SELECT
	DATENAME(MM, order_date) AS order_month,
	COUNT(DISTINCT(order_id)) AS total_orders
FROM
	pizza_sales_converted
GROUP BY
	DATENAME(MM, order_date)
ORDER BY
	total_orders DESC
```

	order_month	total_orders
1	July	1935
2	May	1853
3	January	1845
4	August	1841
5	March	1840
6	April	1799
7	November	1792
8	June	1773
9	February	1685
10	December	1680
11	September	1661
12	October	1646

- Revenue of Orders by Month

```
SELECT
	DATENAME(MM, order_date) AS order_month,
	ROUND(SUM(total_price),2) AS Total_Revenue
FROM
	pizza_sales_converted
GROUP BY
	DATENAME(MM, order_date)
ORDER BY
	Total_Revenue DESC
```

	order_month	Total_Revenue
1	July	72557.9
2	May	71402.75
3	March	70397.1
4	November	70395.35
5	January	69793.3
6	April	68736.8
7	August	68278.25
8	June	68230.2
9	February	65159.6
10	December	64701.15
11	September	64180.05
12	October	64027.6

- Total Pizzas Orders per Weekday

```
SELECT
	DATENAME(W, order_date) AS order_day,
COUNT(DISTINCT(order_id)) AS total_orders
FROM
	pizza_sales_converted
GROUP BY
	DATENAME(W, order_date)
ORDER BY
	total_orders DESC;
```

	order_day	total_orders
1	Friday	3538
2	Thursday	3239
3	Saturday	3158
4	Wednes...	3024
5	Tuesday	2973
6	Monday	2794
7	Sunday	2624

- Total Pizzas Orders per Hour

```
SELECT
	DATENAME(hh, order_time) AS order_time,
COUNT(DISTINCT(order_id)) AS total_orders
FROM
	pizza_sales_converted
GROUP BY
	DATENAME(hh, order_time)
ORDER BY
	total_orders DESC;
```

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

- Total Orders per Pizza Category

```
SELECT
	pizza_category AS category,
COUNT(DISTINCT(order_id)) AS total_orders
FROM
	pizza_sales_converted
GROUP BY
	pizza_category
ORDER BY
	total_orders DESC
```

	category	total_orders
1	Classic	10859
2	Supreme	9085
3	Veggie	8941
4	Chicken	8536

- Quantity of Pizzas sold per Category

```
SELECT
	pizza_category AS Category,
SUM(quantity) AS Total_quantity_sold
FROM
	pizza_sales_converted
GROUP BY
	pizza_category
ORDER BY
	Total_quantity_sold DESC
```

	Category	Total_quantity_sold
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

- Pizza popularity by size

```
SELECT
	pizza_size AS Pizza_Size,
COUNT(quantity) AS Quantity
FROM
	pizza_sales_converted
GROUP BY
	Pizza_Size
ORDER BY
	Quantity DESC
```

	Pizza_Size	Quantity
1	L	18526
2	M	15385
3	S	14137
4	XL	544
5	XXL	28

- Pizza popularity by Revenue

```
SELECT
	pizza_category,
CAST(SUM(total_price) AS DECIMAL(10,2)) as
Total_Revenue,
	CAST(SUM(total_price) * 100 /
(SELECT SUM(total_price) from
pizza_sales_converted) AS DECIMAL(10,2)) AS
Percentage
FROM
	pizza_sales_converted
GROUP BY
	pizza_category
```

	pizza_category	Total_Revenue	Percentage
1	Chicken	195919.50	23.96
2	Supreme	208197.00	25.46
3	Classic	220053.10	26.91
4	Veggie	193690.45	23.68

- Top 5 Pizzas by Revenue

```
SELECT
	Top 5
	pizza_name,
	SUM(total_price) AS Total_Revenue
FROM
	pizza_sales_converted
GROUP BY
	pizza_name
ORDER BY
	Total_Revenue DESC
```

	pizza_name	Total_Revenue
1	The Thai Chicken Pizza	43434.25
2	The Barbecue Chicken Pizza	42768
3	The California Chicken Pizza	41409.5
4	The Classic Deluxe Pizza	38180.5
5	The Spicy Italian Pizza	34831.25

- Bottom 5 Pizzas by Revenue

```
SELECT
	Top 5
	pizza_name,
	ROUND(SUM(total_price),2) AS
Total_Revenue
FROM
	pizza_sales_converted
GROUP BY
	pizza_name
ORDER BY
	Total_Revenue ASC
```

	pizza_name	Total_Revenue
1	The Brie Carre Pizza	11588.5
2	The Green Garden Pizza	13955.75
3	The Spinach Supreme ...	15277.75
4	The Mediterranean Piz...	15360.5
5	The Spinach Pesto Pizza	15596

- Top 5 Pizzas by Quantity

```
SELECT
	Top 5
	pizza_name,
	SUM(quantity) AS Quantity
FROM
	pizza_sales_converted
GROUP BY
	pizza_name
ORDER BY
	Quantity DESC
```

	pizza_name	Quantity
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

- Bottom 5 Pizzas by Quantity

```
SELECT
	Top 5
	pizza_name,
	SUM(quantity) AS Quantity
FROM
	pizza_sales_converted
GROUP BY
	pizza_name
ORDER BY
	Quantity ASC
```

	pizza_name	Quantity
1	The Brie Carre Pizza	490
2	The Mediterranean Pizza	934
3	The Calabrese Pizza	937
4	The Spinach Supreme ...	950
5	The Soppressata Pizza	961

- Top 5 Pizzas by Total Orders

```
SELECT
	Top 5
	pizza_name,
	SUM(DISTINCT(order_id)) AS
Total_orders
FROM
	pizza_sales_converted
GROUP BY
	pizza_name
ORDER BY
	Total_orders DESC
```

	pizza_name	Total_orders
1	The Classic Deluxe Pizza	25466343
2	The Hawaiian Pizza	24688815
3	The Thai Chicken Pizza	24225562
4	The Pepperoni Pizza	24138671
5	The Barbecue Chicken ...	23888817

- Bottom 5 Pizzas by Total Orders

```
SELECT
	Top 5
	pizza_name,
	SUM(DISTINCT(order_id)) AS
Total_orders
FROM
	pizza_sales_converted
GROUP BY
	pizza_name
ORDER BY
	Total_orders ASC
```

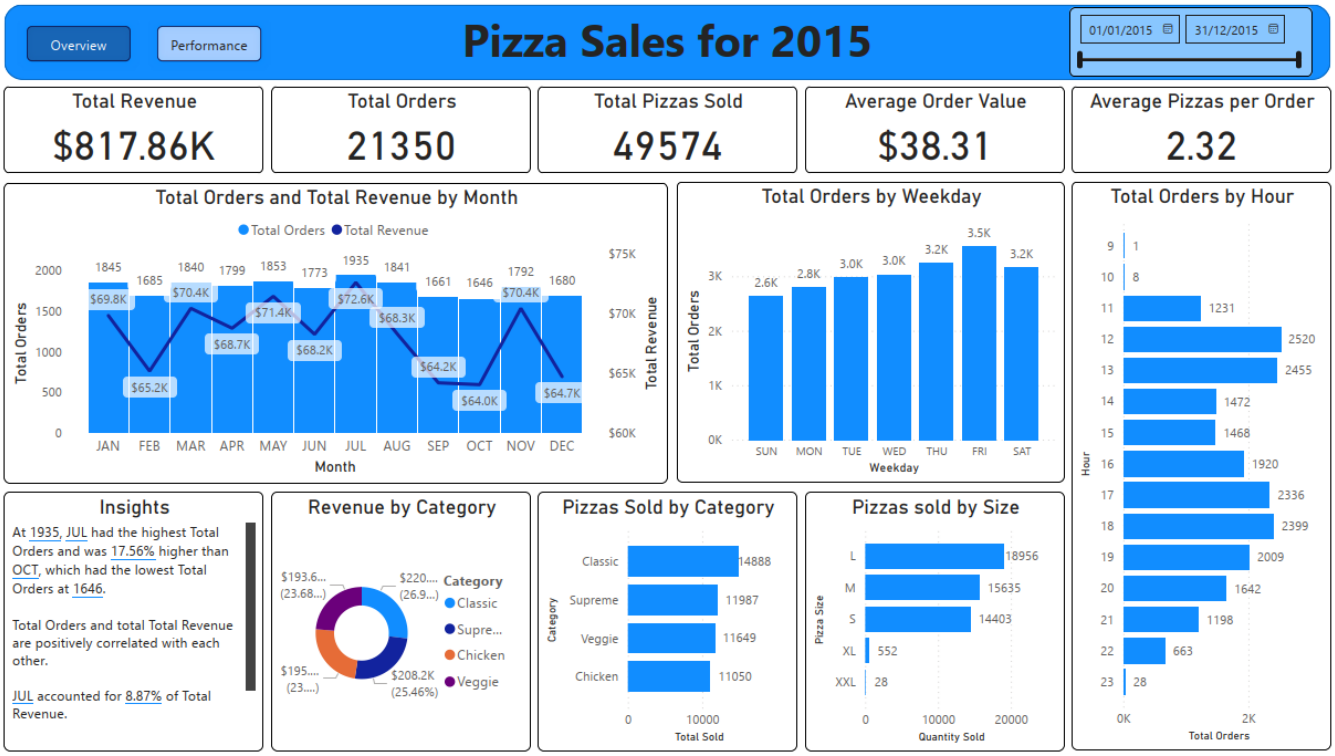
	pizza_name	Total_orders
1	The Brie Carre Pizza	5158921
2	The Spinach Supreme Pizza	9657885
3	The Italian Vegetables Pizza	9891646
4	The Calabrese Pizza	9960556
5	The Soppressata Pizza	9960970

Visualizations:

The pizza sales database can be found at:

https://app.powerbi.com/view?r=eyJrIjoiYzE2Mzg1NGMtZWFhZS00YzAxLTkyMzEtYjRmYzk0MjJlZjc2IiwidCI6ImNhOWE4YjhjLTNlYTMtNDc5OS1hNDNlLTU1MTAzOThlN2EzYiIsImMiOjh9

Power BI is used to make an interactive dashboard with an overview tab and a performance tab. Each tab gives the KPI's so that every selection clearly shows the influence on the KPI's.



The second performance tab shows the 5 best and worst performing pizzas by revenue, quantity and total orders.