

# PIZZA SALES ANALYSIS



# PIZZA SALES ANALYSIS USING SQL AND POWER BI

## INTRODUCTION

HELLO! I'M RITIK RAHI, AN ASPIRING DATA ANALYST SHOWCASING MY SQL & POWER BI SKILLS THROUGH THIS PROJECT.

## OBJECTIVE

TO ANALYZE PIZZA SALES USING SQL AND DERIVE ACTIONABLE INSIGHTS FOR UNDERSTANDING CUSTOMER PREFERENCES, IDENTIFYING SALES PATTERNS, AND OPTIMIZING INVENTORY MANAGEMENT.

## KEY ACTIVITIES

DATA ANALYSIS WITH SQL: EXTRACTED AND ANALYZED DATA FROM FOUR DATASETS: ORDERS, ORDER\_DETAILS, PIZZAS, AND PIZZA\_TYPES.

## DYNAMIC QUERYING

USED JOINS, AGGREGATIONS, AND FILTERING TO UNCOVER TRENDS AND CORRELATIONS.

## INSIGHT GENERATION:

IDENTIFIED TOP-SELLING PIZZAS, PEAK SALES TIMES, AND INGREDIENT DEMAND PATTERNS.

OUTCOME SQL'S DYNAMIC CAPABILITIES ENABLED EFFICIENT DATA MANIPULATION, PATTERN RECOGNITION, AND ACTIONABLE REPORTING, DEMONSTRATING ITS ROLE IN SOLVING REAL-WORLD BUSINESS CHALLENGES.

## BUSINESS IMPACT

THIS PROJECT HIGHLIGHTS HOW SQL-DRIVEN INSIGHTS CAN OPTIMIZE INVENTORY, REDUCE WASTE, AND ENHANCE OPERATIONAL EFFICIENCY. UNDERSTANDING SALES TRENDS AND CUSTOMER PREFERENCES HELPS BUSINESSES IMPROVE SATISFACTION AND BOOST PROFITABILITY.

# 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.
- JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS.
- DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

## INTERMEDIATE:

- JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.
- DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.
- LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES.
- GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

## ADVANCED:

- CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.
- ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

# BUSINESS INSIGHTS

## TOP-SELLING PIZZAS:

- THE THAI CHICKEN PIZZA, BARBECUE CHICKEN PIZZA, AND CALIFORNIA CHICKEN PIZZA ARE THE TOP 3 SELLING PIZZAS, GENERATING THE HIGHEST REVENUE.

## PEAK SALES PERIODS:

- MOST ORDERS OCCUR DURING AFTERNOON (12-1 PM) AND EVENING (6-7 PM), MARKING THE PEAK SALES HOURS.

## TOTAL PIZZA CATEGORY ORDERED:

- THE CLASSIC CATEGORY HAS THE HIGHEST ORDERS, OUTPERFORMING OTHER CATEGORIES LIKE SUPREME, VEGGIE, AND CHICKEN.

## REVENUE CONTRIBUTION BY CHICKEN PIZZAS:

- THE CHICKEN CATEGORY GENERATED THE HIGHEST REVENUE, WITH ITS TOP 3 PIZZA TYPES CONTRIBUTING APPROXIMATELY 23.96%.

## TOTAL ORDERS AND REVENUE:

- A TOTAL OF 21,350 ORDERS WERE PLACED, GENERATING ₹8,17,860 IN REVENUE.

## AVERAGE PIZZAS ORDERED PER DAY:

- AN AVERAGE OF 138 PIZZAS WERE ORDERED DAILY.

## MOST PREFERRED PIZZA SIZE:

- LARGE-SIZED PIZZAS WERE THE MOST PREFERRED, WITH 18,526 UNITS SOLD.

# RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
1  -- Retrieve the total number of orders placed  
2 • select count(Order_Id) as Total_Orders  
3   from order_details  
4  
-
```

	Total_Orders
▶	48620

# CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

```
1  -- Calculate the total revenue generated from pizza sales
2 • select round( sum(order_details.quantity * pizzas.price),0) As Total_Revenue
3   from order_details
4   inner join pizzas
5   on pizzas.pizza_id= order_details.pizza_id
```

Total_Revenue
817860

# IDENTIFY THE HIGHEST-PRICED PIZZA.

```
1  -- Identify the highest-priced pizza.  
2 • select pizza_types.name, pizzas.price  
3   from pizza_types  
4   inner join pizzas  
5   on pizza_types.pizza_type_id = pizzas.pizza_type_id  
6   order by pizzas.price desc  
7   limit 1
```

	name	price
▶	The Greek Pizza	35.95

# IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```
1    -- Identify the most common pizza size ordered
2 • select size,count(size) as Frequency
3   from pizzas
4   inner join order_details
5     on pizzas.pizza_id= order_details.pizza_id
6   group by size
7   order by Frequency desc
8   limit 1
```

	size	Frequency
	L	18526

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

```
1 -- Determine the distribution of orders by hour of the day
2 • select hour(order_time) As hour, count(order_id) As order_count from orders
3 group by hour(order_time)
```

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.

```
1      -- Join relevant tables to find the category-wise distribution of pizzas.  
2 •  select category, count(name) from pizza_types  
3    group by category
```

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

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

```
1  -- Join the necessary tables to find the total quantity of each pizza category ordered.  
2 • select pizza_types.category,  
3   sum(order_details.quantity) As Quantity  
4   from pizza_types  
5   inner join pizzas  
6   on pizza_types.pizza_type_id= pizzas.pizza_type_id  
7   inner join order_details  
8   on order_details.pizza_id= pizzas.pizza_id  
9   group by pizza_types.category  
10  order by Quantity desc
```

	category	Quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

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

```
1  -- List the top 5 most ordered pizza types along with their quantities
2 • select pizza_types.name, sum(order_details.quantity) As Quantity
3   from pizza_types
4   inner join pizzas
5   on pizza_types.pizza_type_id= pizzas.pizza_type_id
6   inner join order_details
7   on order_details.pizza_id= pizzas.pizza_id
8   group by pizza_types.name
9   order by Quantity desc
10  limit 5
```

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

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

```
1 -- Group the orders by date and calculate the average number of pizzas ordered per day.  
2 • select round(avg(Quantity),0) As Avg_Pizza_Ordered_Per_Day from  
3   (select orders.order_date, sum(order_details.quantity) As Quantity  
4   from orders  
5   inner join order_details  
6   on orders.order_id= order_details.order_id  
7   group by orders.order_date) As Order_Quantity
```

Avg_Pizza_Ordered_Per_Day
138

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

```
1  -- Determine the top 3 most ordered pizza types based on revenue.  
2 • select pizza_types.name,sum( order_details.quantity * pizzas.price) As Revenue  
3   from pizza_types  
4   inner join pizzas  
5   on pizzas.pizza_type_id= pizza_types.pizza_type_id  
6   inner join order_details  
7   on order_details.pizza_id=pizzas.pizza_id  
8   group by pizza_types.name  
9   order by Revenue desc  
10  limit 3
```

	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.

```
-- 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_Sales
from order_details
inner join pizzas
on pizzas.pizza_id= order_details.pizza_id) * 100,2) As Revenue
from pizza_types
inner join pizzas
on pizza_types.pizza_type_id= pizzas.pizza_type_id
inner join order_details
on order_details.pizza_id= pizzas.pizza_id
group by pizza_types.category
order by Revenue desc
```

	category	Revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

# ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```
1  -- Analyze the cumulative revenue generated over time
2 • select order_date,round(sum(revenue) over (order by order_date),0) as cum_revenue
3  from
4  ( select orders.order_date,sum(order_details.quantity * pizzas.price) As revenue
5   from order_details inner join pizzas
6   on order_details.pizza_id=pizzas.pizza_id
7   inner join orders
8   on orders.order_id = order_details.order_id
9   group by orders.order_date) As Sales
```

	order_date	cum_revenue
▶	2015-01-01	2714
	2015-01-02	5446
	2015-01-03	8108
	2015-01-04	9864
	2015-01-05	11930
	2015-01-06	14358
	2015-01-07	16561
	2015-01-08	19399
	2015-01-09	21526
	2015-01-10	23990
	2015-01-11	25863
	2015-01-12	27782
	2015-01-13	29831
	2015-01-14	32359
	2015-01-15	34344

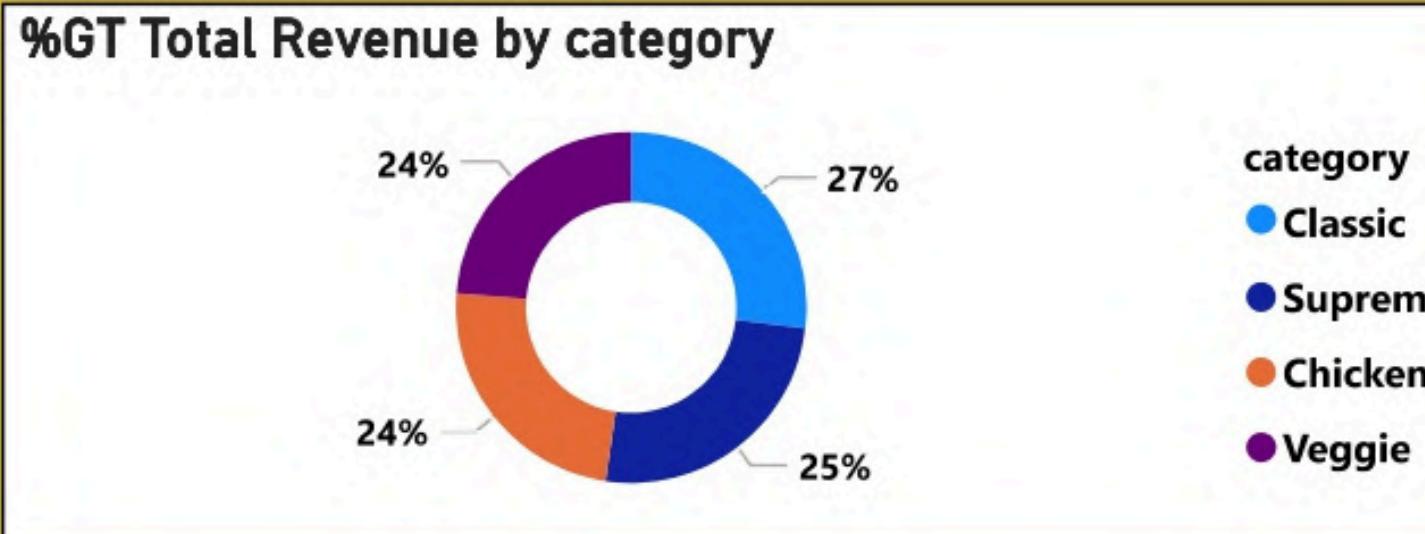
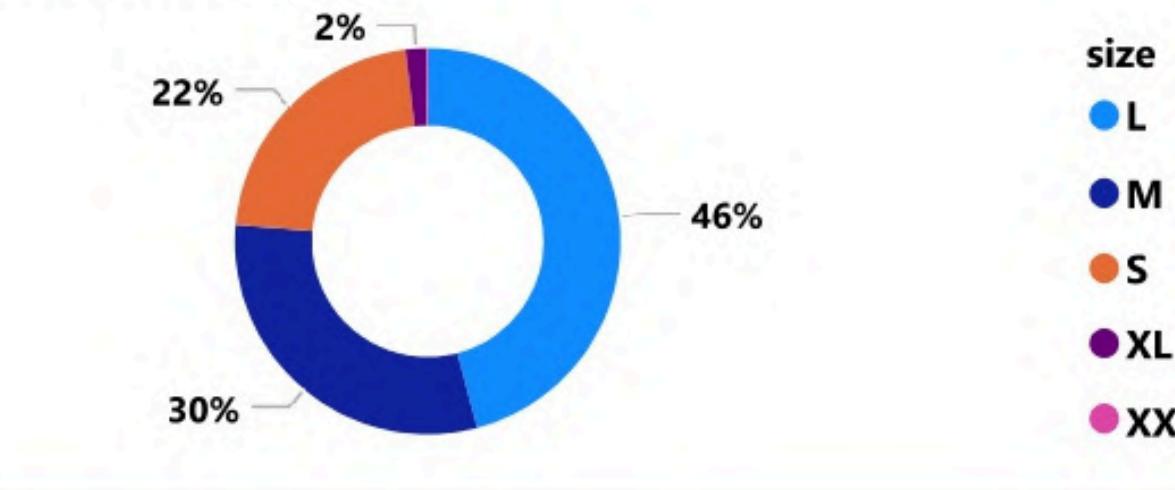
# PIZZA SALES REPORT

## SALES PERFORMANCE

The Highest sales in a single day occurred on November 15, generating a revenue of 4,422 Rs.

**CATEGORY-** Classic category contributes to maximum Sales, Total Orders and Total Pizzas sold.

**SIZE-** Large Size, contributes to maximum Total Sales.



**50K**

Sum of quantity

**818K**

Total Revenue

**21K**

Total Orders

**38**

AOV

CATEGORY ▾

- Chicken
- Classic
- Supreme

SIZE ▾

- L
- M
- S

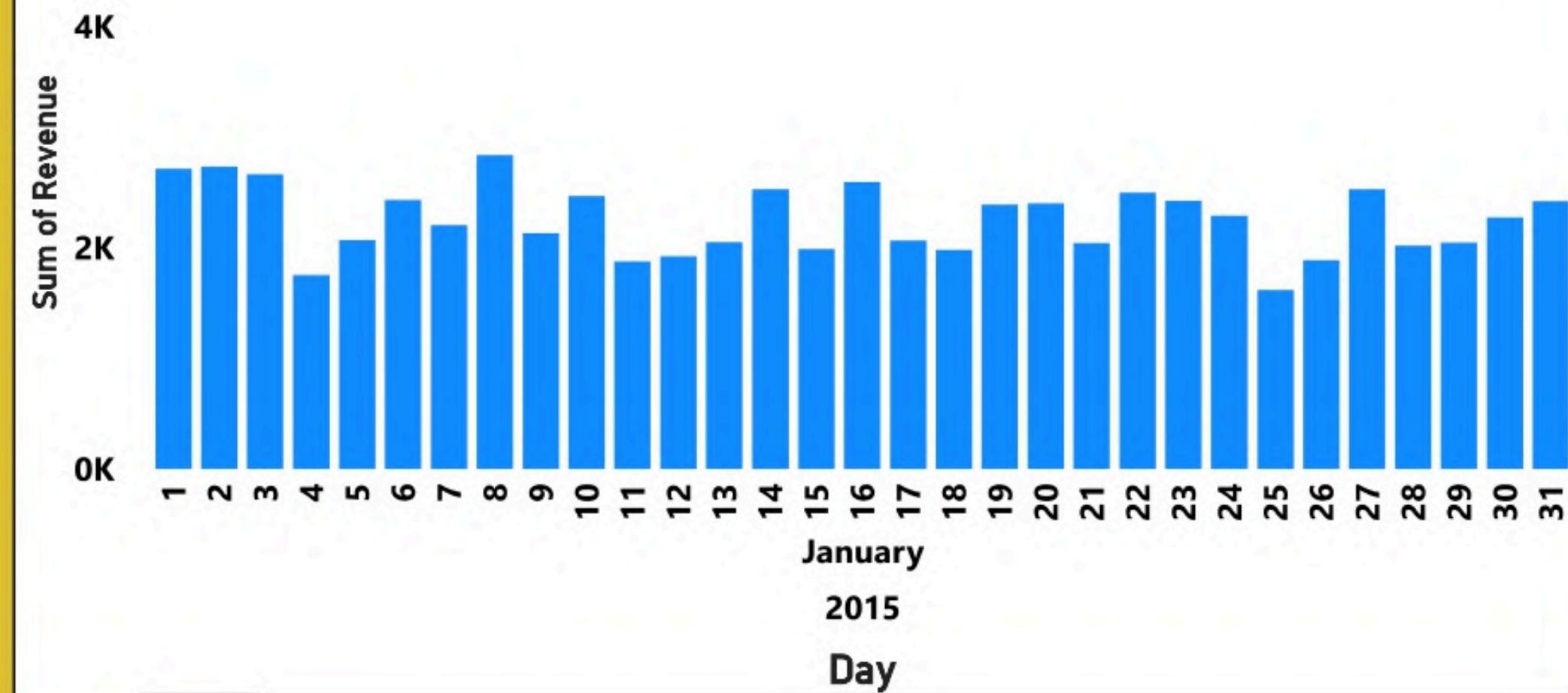
DATE ▾

- 1/1/2015
- 1/2/2015
- 1/3/2015

PRICE ▾

- 9.75
- 10.50
- 11.00

## Sum of Revenue by Year, Month and Day



#### PIZZA NAME

- The Barbecue Chicken Pizza
- The Big Meat Pizza
- The Brie Carre Pizza
- The Calabrese Pizza
- ...

#### INGREDIENTS

- 'Nduja Salami, Pancetta, Tom...
- Bacon, Pepperoni, Italian Sau...
- Barbecued Chicken, Red Pep...
- Brie Carre Cheese, Prosciutto,...
- ...

#### DATE

- 1/1/2015
- 1/2/2015
- 1/3/2015
- 1/4/2015
- ...

#### MONTH

- January
- February
- March
- April
- ...

### SALES PERFORMANCE

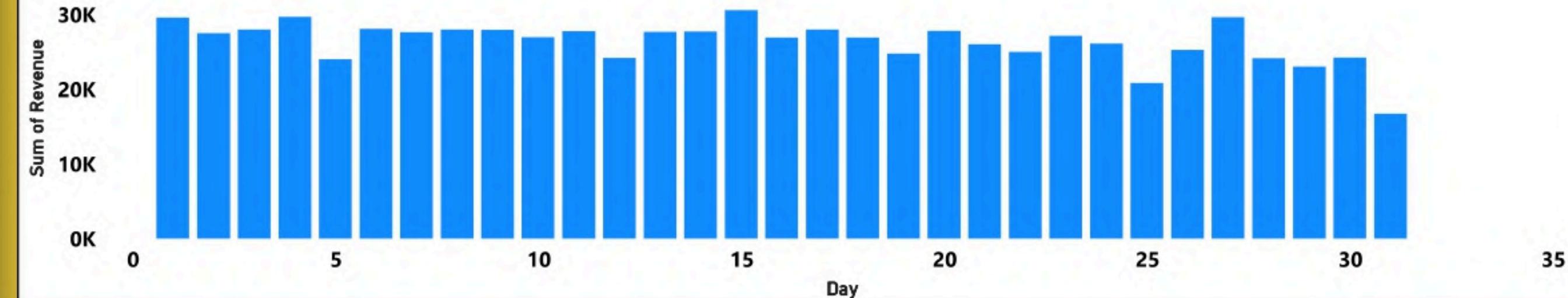
The Highest Revenue for Pizza was in the month of JULY, amounting to ₹ 72,557.

The Lowest Revenue for Pizza was in the month of SEPTEMBER, amounting to ₹ 64,180.

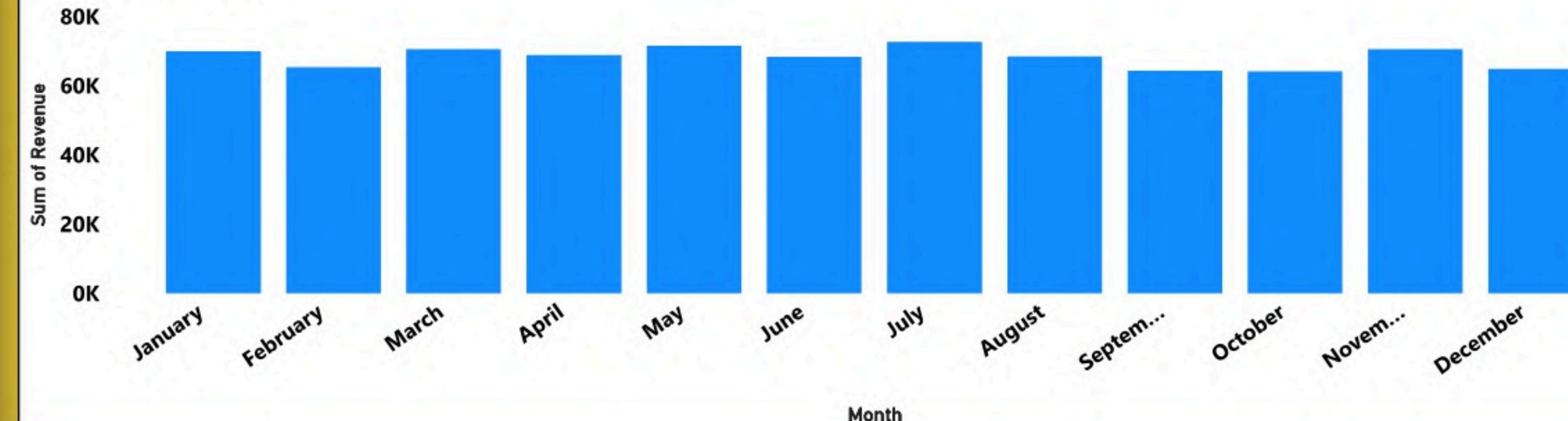
The Highest Sales were recorded on the 15th day of the month.

The Lowest Sales occurred on the last day of month, that is, the 31st.

#### Sum of Revenue by Day



#### Month Wise Sales



## SALES PERFORMANCE

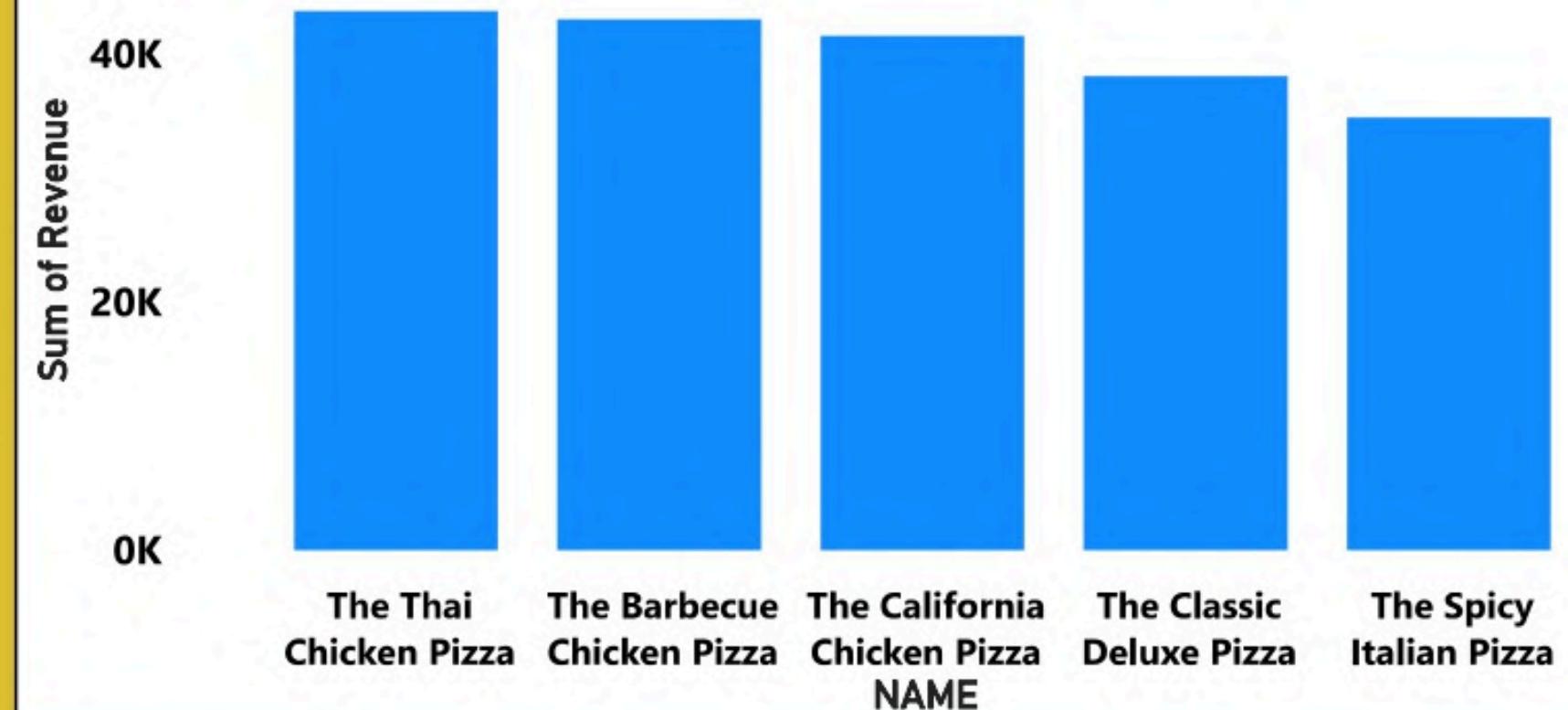
The Thai Chicken Pizza Has generated the Highest Revenue of ₹ 43,434.

The Brie Carre Pizza has generated the Lowest Revenue of ₹ 11,588.

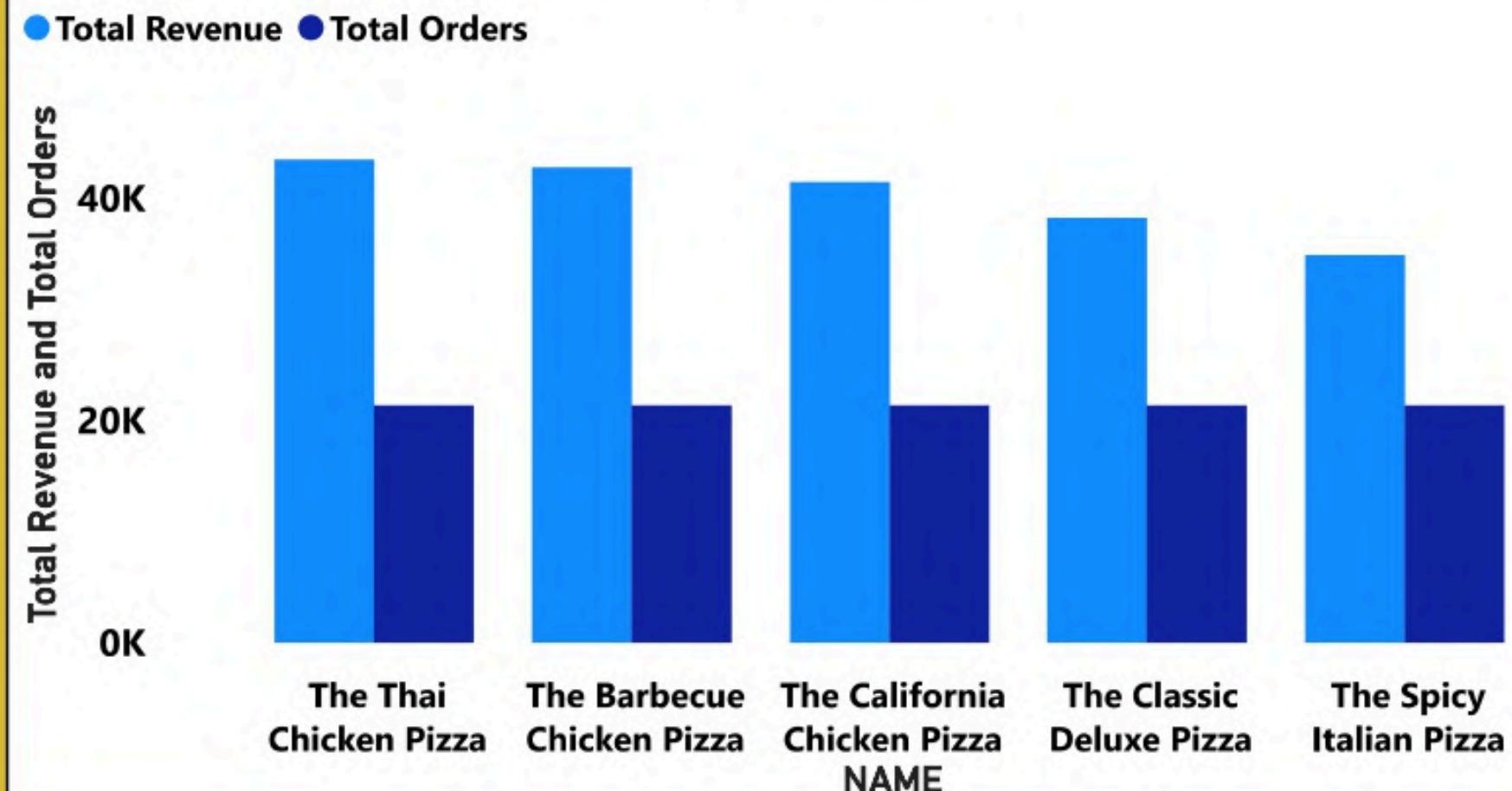
The Classic Deluxe Pizza has the Highest Quantity sold, with 2,453 units.

The Brie Carre Pizza has the Lowest Quantity sold, with 490 units.

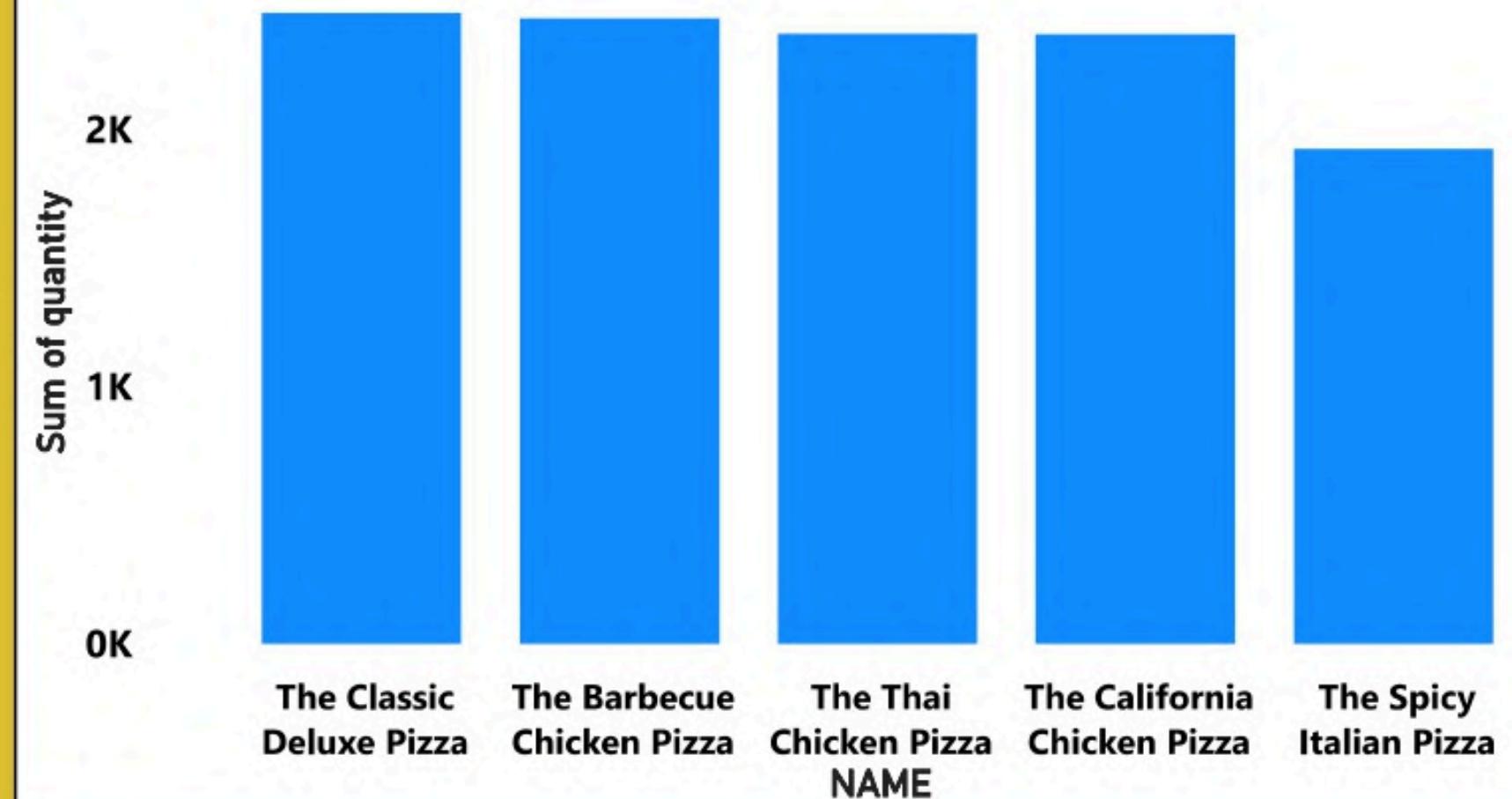
## Top 5 Pizzas by Revenue



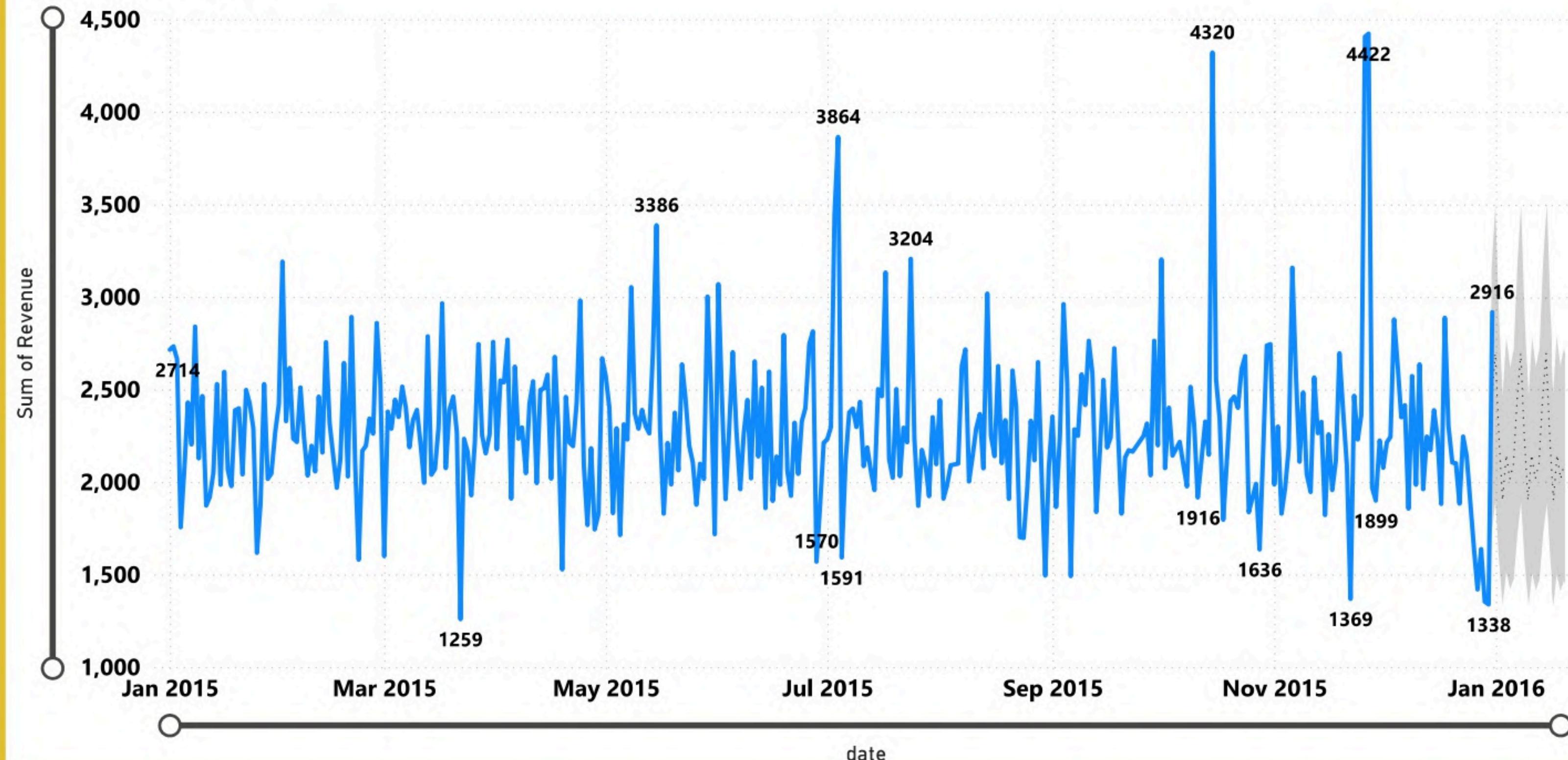
## Top 5 Pizzas by Revenue and Number of Orders



## Top 5 Pizzas by Quantity



### Sum of Revenue by date



# THANK YOU!

