PIZZAHUT SALES ANALYSIS

DONE BY
M.S.L.NEEHARIKA

CONTENTS

01. INTRODUCTION

02. PROBLEM STATEMENT

03. DATA SET OVERVIEW

04. TOOLS USED

05. ANALYSIS

06. INSIGHTS

07. RECOMMENDATIONS

INTRODUCTION

Pizza Hut is a global leader in the quick-service restaurant industry, specializing in pizzas, pastas, and side dishes. This analysis examines sales trends, customer preference s, and revenue performance to identify growth opportuni ties and operational improvements.

PROBLEM STATEMENT

1. Sales Performance Evaluation

Assess overall sales trends over time to identify growth and decline periods.

2. Product Popularity Analysis

Determine best-selling and least-selling pizzas in terms of quantity and revenue.

3. Category-wise Contribution

Measure revenue contribution from each pizza category (Classic, Supreme, Veggie, etc.).

4. Customer Purchase Behavior

Analyze order patterns by time of day, day of week, and pizza size preference.

5. Revenue Optimization

Identify high-profit items and explore strategies to boost low-performing products.

6. Seasonal and Promotional Impact

Evaluate the effect of holidays, weekends, and promotions on sales.

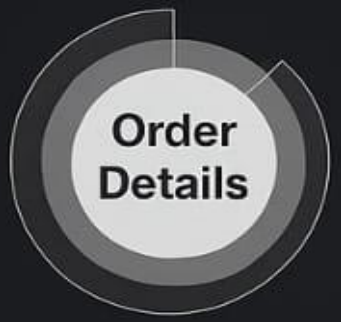
7. Inventory & Operational Efficiency

Predict demand for better ingredient management and reduced waste.

Data Set Overview

Columns in Orders Table

- order_id: Unique identifier for each order
- date: Date when the order was placed
- time: Time when the order was placed



Columns in Order Details Table

- order_details_IdUnique identifier for the detail entity
- order_id: Foreign key from ord: rc
- pizza_id:_Foreign key from pizzas
- quantity: Number of pizzas ordered

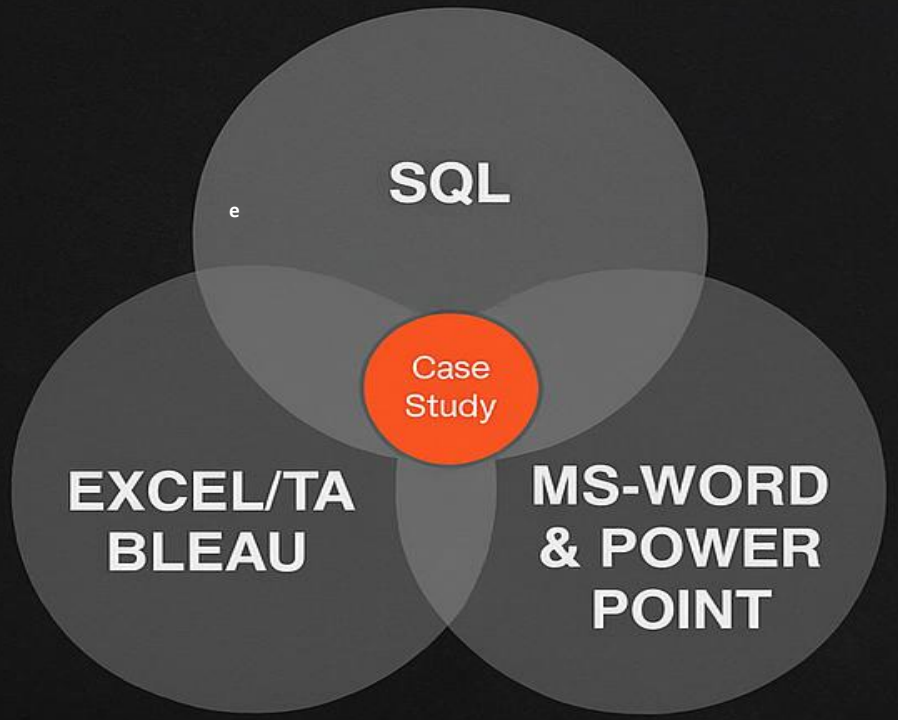
Columns in Pizzas Table

- pizza_id: Unique identifier for a specific pizza veriant
- pizza_type_id: Foreign key from pizza_types
- size: Size of the pizza (S, M. L)
- price: Price based on size

Columns in Pizza Types Tabe

- pizza_type_id: Unique identifier for a pizza type
- name: Pizza name (e,g.; “Margherita”))
- category: Category like. Veggic, Chicken.
- ingredients: List of ingredients used

Tools Used



Data querying and analysis-

- Joins: Used INNER JOI-acros 4 tables
- Aggregations: COUNT. SUM. AVG
- Window Functions: ROW_NUMBER
- Sorting & Filtering: ORDER BY. LIMIT
- Grouping; GROUP BY category, type, date
- Subqueries: For average, contribution %

EXCEL/TABLEAU

Visualization

- Vertical Columm Chart
- Horizontal Bar Chart
- Pie Chart
- Line Chart

MS-WORD & POWER POINT

Documentation & presentation

ANALYSIS

Total Orders Count

```
1  SELECT * FROM pizzahut.orders;
2  select count(order_id) as total_orders
3  from orders;
```

Result Grid | Filter Rows: | Export:

total_orders
21350

The total number of orders placed : 21350

REVENUE CALCULATION

```
1  SELECT * FROM pizzahut.pizzas;
2  Select round(sum(od.quantity * p.price),2) as ' total_revenue '
3  from order_details od
4  join pizzas p on od.pizza_id = p.pizza_id;
5
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_revenue
817860.05

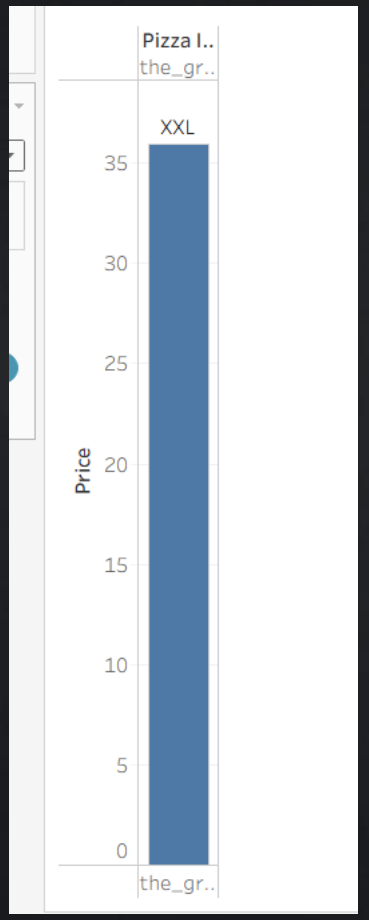
The total revenue from pizza sales : 817860.05

Most Expensive Pizza :

```sql
SELECT * FROM pizzahut.pizzas;
Select *
from pizzas
order by price DESC
limit 1;
```

Result Grid | Filter Rows: | Export:

pizza_id	pizza_type_id	size	price
the_greek_xxl	the_greek	XXL	35.95



The most expensive pizza from the pizzas table by ordering the results in descending order of price and limiting the output to one record. It shows the pizza ID, type, size, and price of the highest-priced pizza. The result indicates that " **the_greek_xxl** " pizza, size **XXL**, is priced at **35.95**.

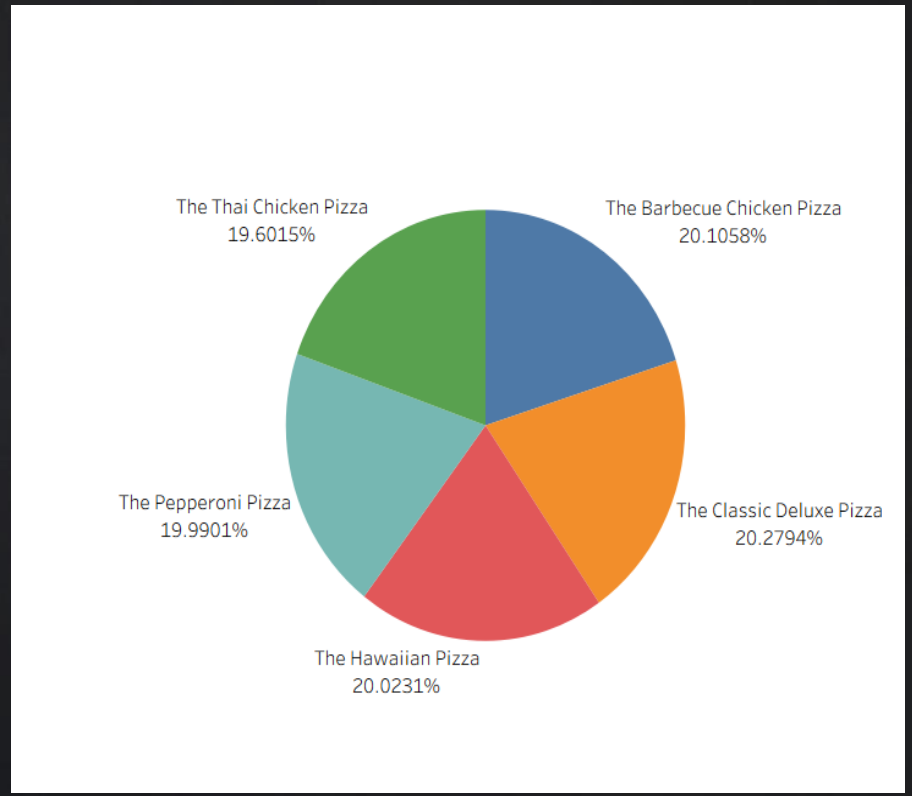
Top 5 Popular Pizzas :

The top 5 pizzas by order quantity are the classic deluxe pizza, the barbecue chicken pizza, the hawaiian pizza, the pepperoni pizza, the thai chicken pizza.

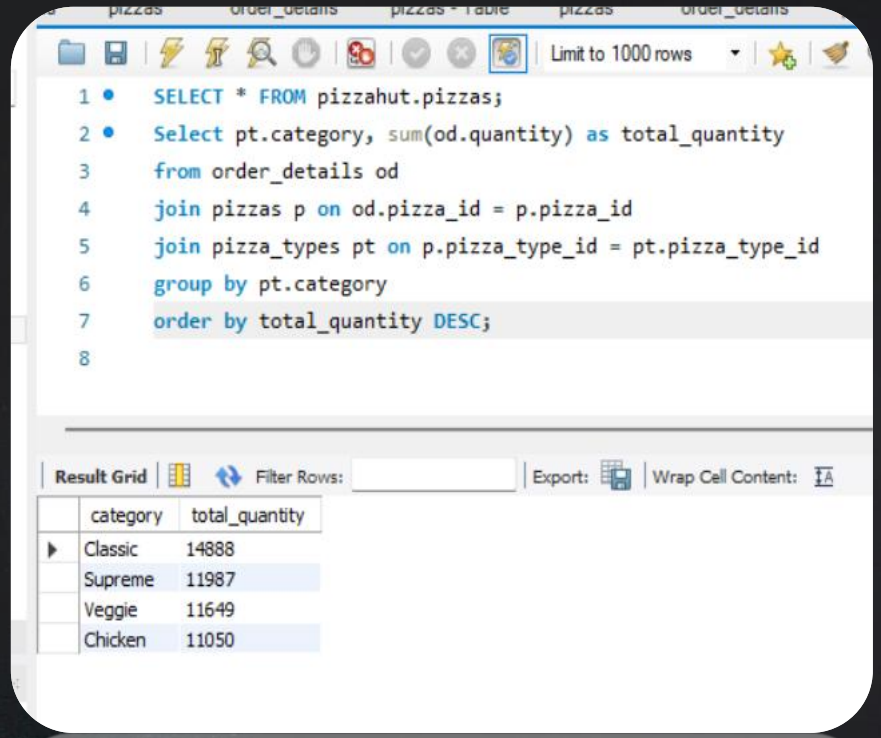
```sql
SELECT * FROM pizzahut.pizza_types;
Select pt.name as pizza_name, SUM(od.quantity) as total_ordered
from order_details od
join pizzas p on od.pizza_id = p.pizza_id
join pizza_types pt on p.pizza_type_id = pt.pizza_type_id
group by pt.name
order by total_ordered desc
limit 5;
```

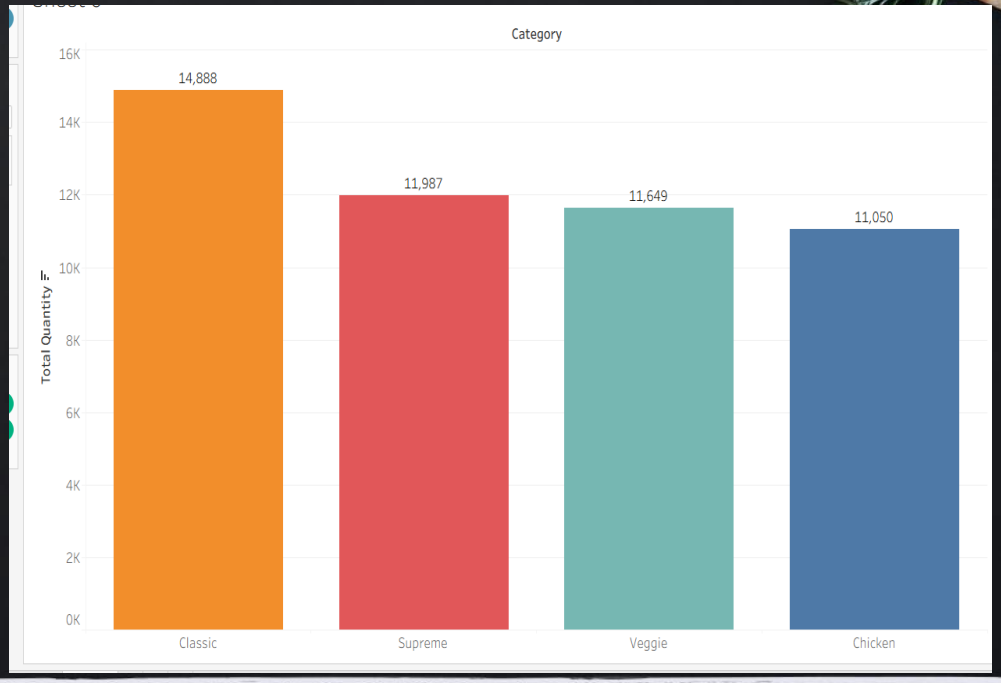
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

pizza_name	total_ordered
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371



Pizza Quantity by Category :





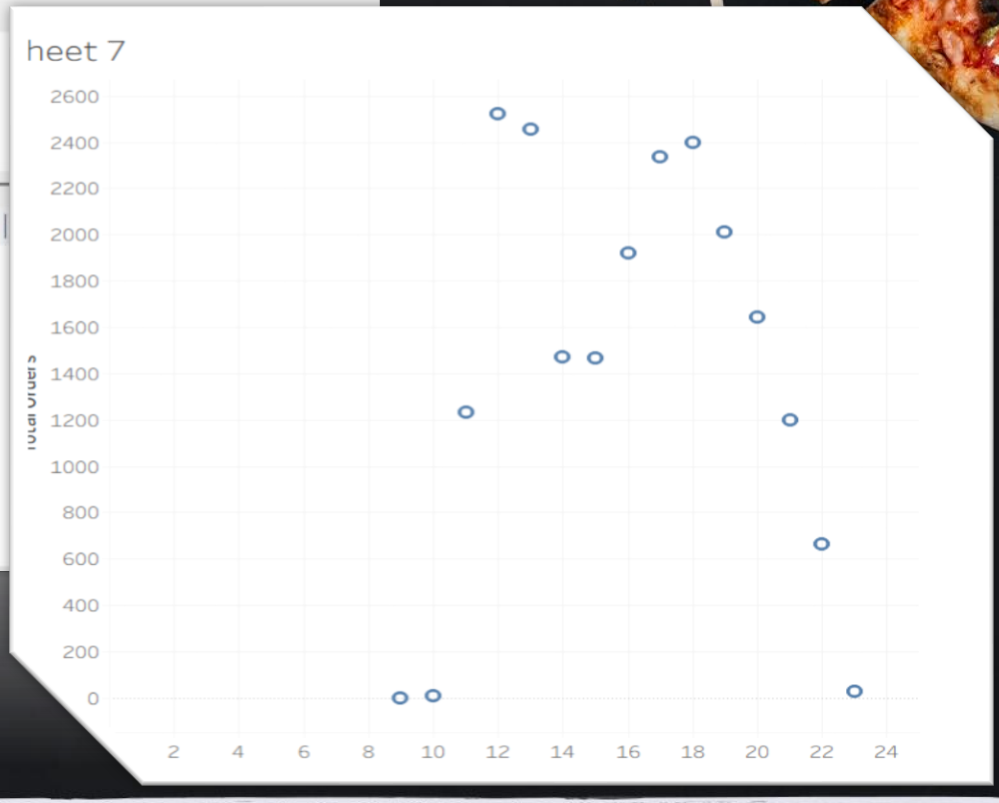
Order Trends by Hour :

Analyzing the distribution of orders by hour of day.

```sql
SELECT * FROM pizzahut.orders;
SELECT hour(order_time) as order_hour, COUNT(order_id) as total_orders
from orders
group by order_hour
order by order_hour;
```

Result Grid | Filter Rows: | Export:

order_hour	total_orders
9	1
10	8
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336
18	2399



Average Daily Pizza Orders :

```sql
SELECT * FROM pizzahut.orders;
select avg(daily_total) AS avg_daily_pizzas
FROM (
    select o.order_date, SUM(od.quantity) as daily_total
    from orders o
    join order_details od on o.order_id = od.order_id
    group by o.order_date
) as daily_orders;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

avg_daily_pizzas
138.4749

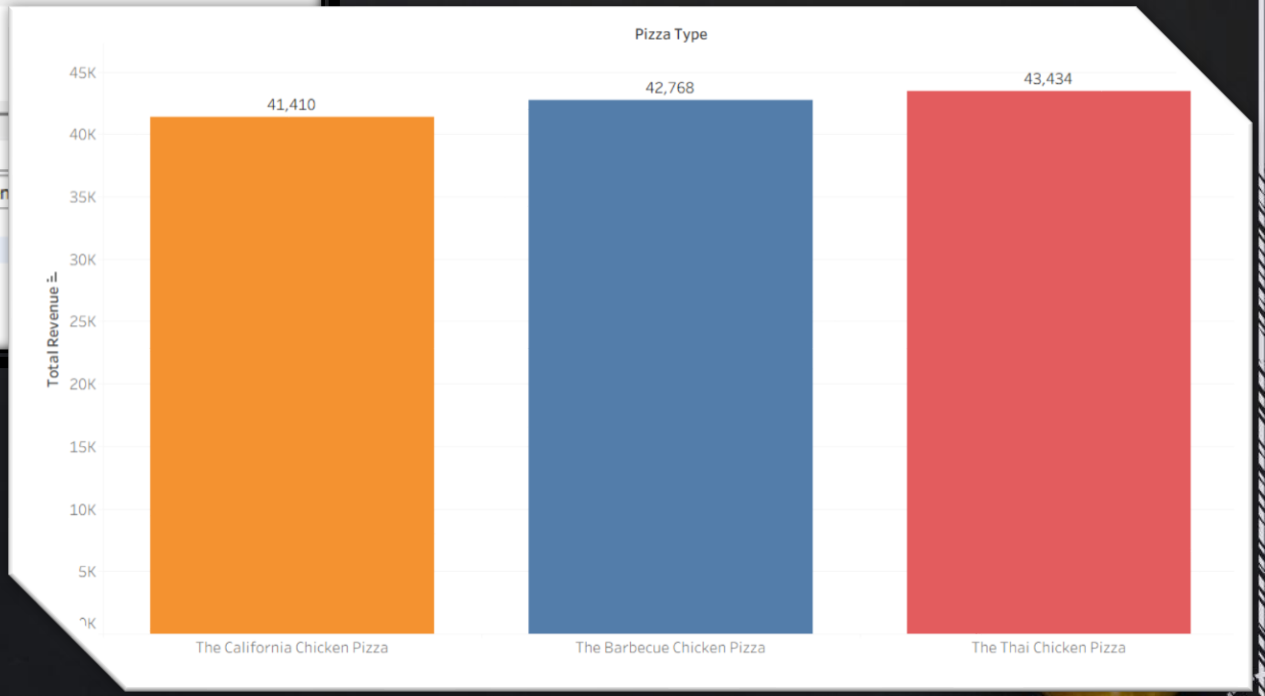
The average number of pizzas ordered each day :138.4749

Top Pizza Types by Revenue :

```sql
select
    pt.name as pizza_type,
    SUM(od.quantity * p.price) as total_revenue
from order_details od
join pizzas p
    on od.pizza_id = p.pizza_id
join pizza_types pt
    on p.pizza_type_id = pt.pizza_type_id
group by pt.name
order by total_revenue desc
limit 3;
```

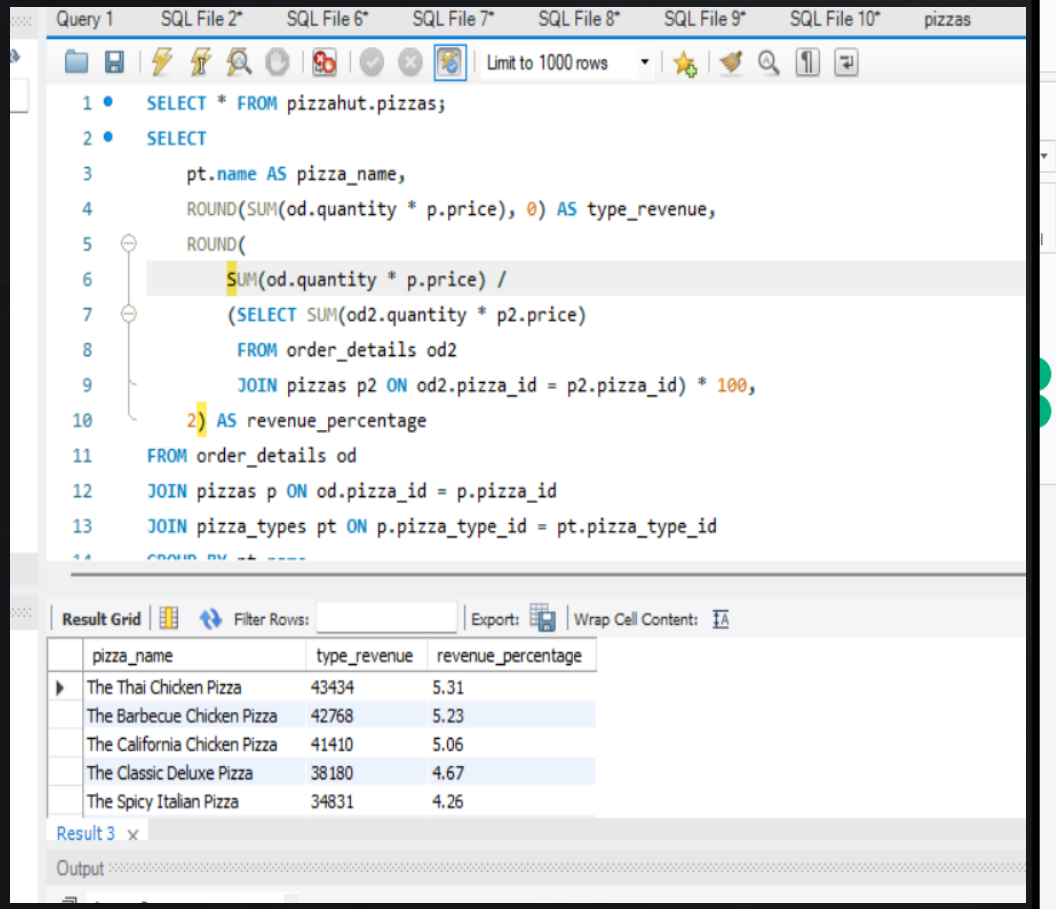
Result Grid | Filter Rows:

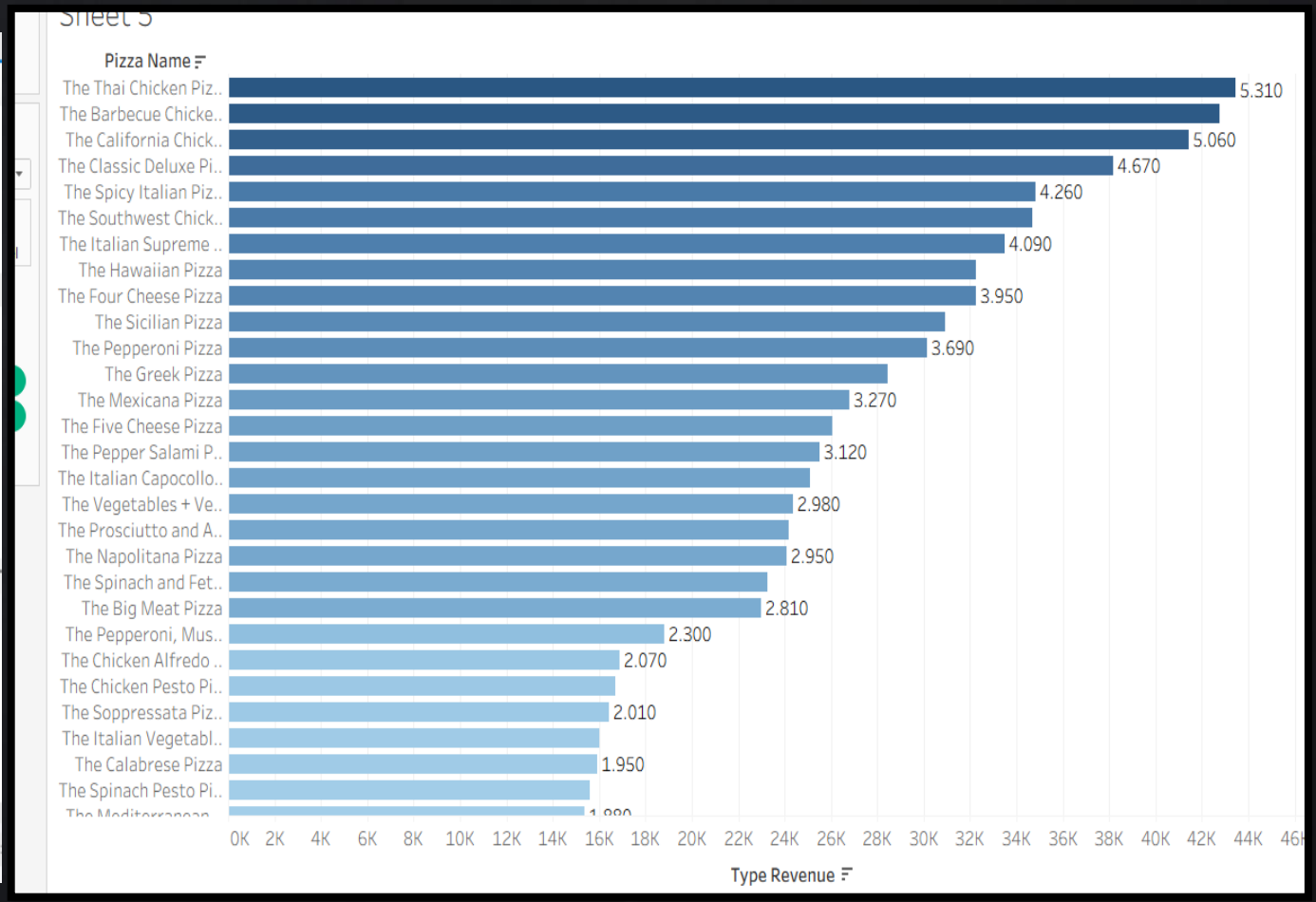
pizza_type	total_reven
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5



Revenue Contribution :

Identifies top-performing pizzas based on their share of total sales revenue. **Highlights high-revenue contributors** to guide marketing and promotions.





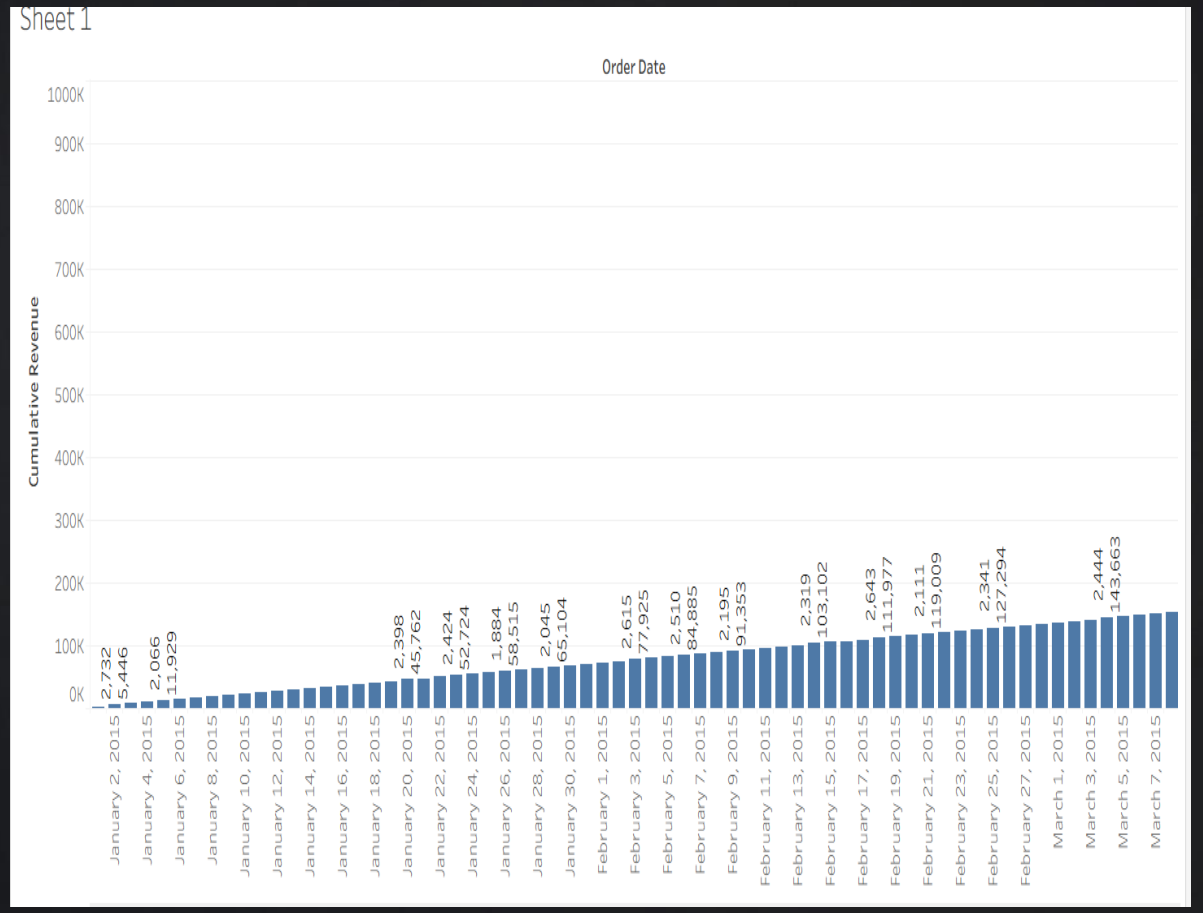
Cumulative Revenue :

Shows how revenue adds up over time, making it easy to id entify overall business growth trends. Can be used to predi ct future sales if growth trends remain consistent.

```sql
SELECT
    daily_revenue.order_date,
    daily_revenue.daily_total,
    round(SUM(daily_revenue.daily_total) over (ORDER BY daily_revenue.order_date),0) as cumulative_revenue
from (
    select o.order_date, round(SUM(od.quantity * p.price),0) as daily_total
    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.order_date
) as daily_revenue
order by daily_revenue.order_date;
```

Filter Rows: | Export: | Wrap Cell Content:

order_date	daily_total	cumulative_revenue
2015-01-01	2714	2714
2015-01-02	2732	5446
2015-01-03	2662	8108
2015-01-04	1755	9863
2015-01-05	2066	11929
2015-01-06	2429	14358
2015-01-07	2202	16560
2015-01-08	2838	19398
2015-01-09	2127	21525
2015-01-10	2464	23989



Top 3 Pizza Types by Revenue in Each Category :

```sql
WITH pizza_revenue AS (
    SELECT
        pt.category,
        pt.name AS pizza_name,
        SUM(od.quantity * p.price) AS total_revenue,
        RANK() OVER (PARTITION BY pt.category ORDER BY SUM(od.quantity * p.price) DESC) AS revenue_rank
    FROM order_details od
    JOIN pizzas p ON od.pizza_id = p.pizza_id
    JOIN pizza_types pt ON p.pizza_type_id = pt.pizza_type_id
    GROUP BY pt.category, pt.name
)
SELECT category, pizza_name, total_revenue
FROM pizza_revenue
WHERE revenue rank <= 3
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

category	pizza_name	total_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

The top 3 pizzas generate the highest revenue in their category, showing customer preference trends. Categories with higher representation in the top 3 could be further expanded to boost sales. These pizzas can be prioritized for promotions, upselling, or featured menu spots to maximize profits.

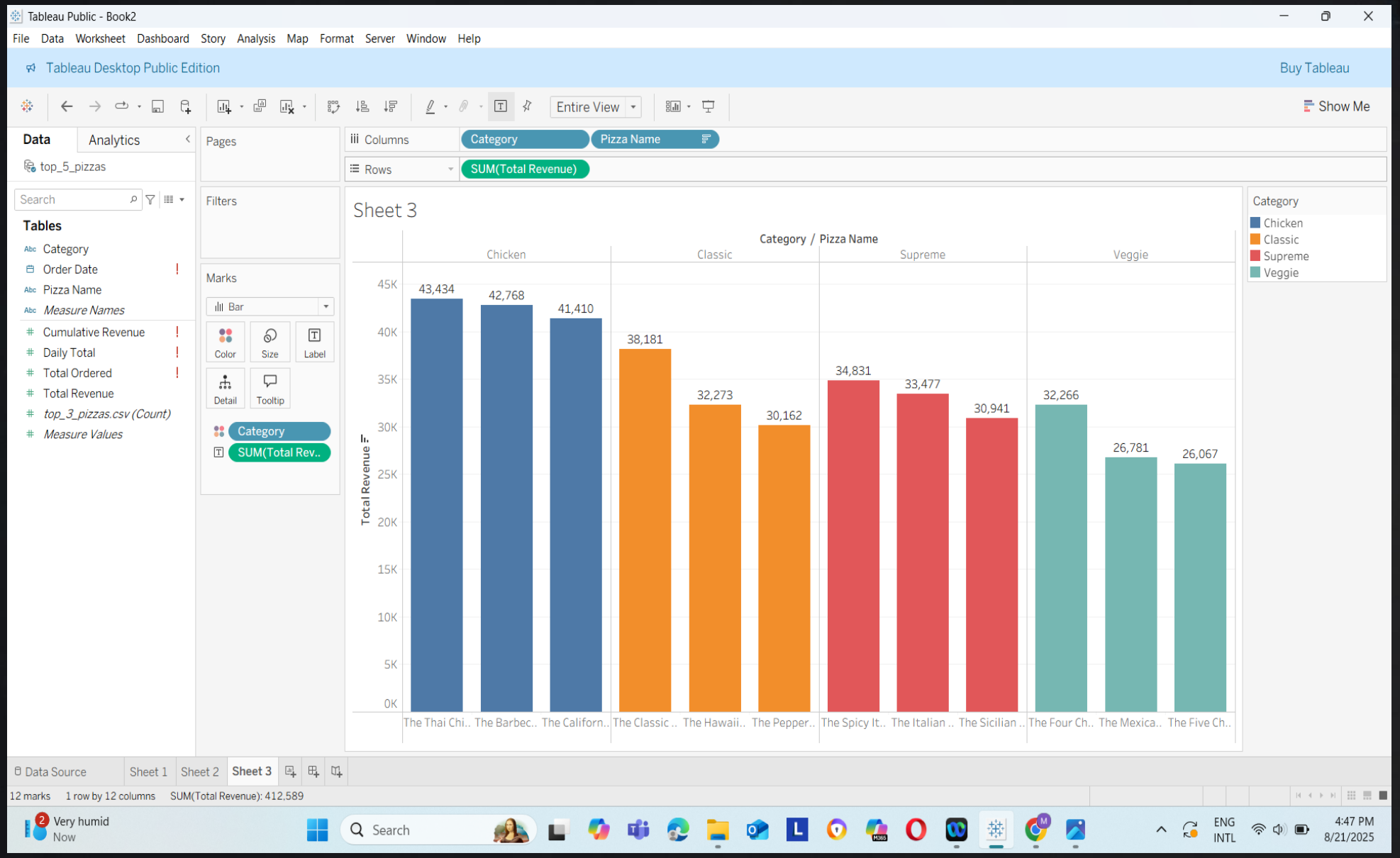


Tableau Public - Book2
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Tableau Desktop Public Edition
Buy Tableau
Entire View
Show Me
Data
Analytics
top_5_pizzas
Search
Tables
Category
Order Date
Pizza Name
Measure Names
Cumulative Revenue
Daily Total
Total Ordered
Total Revenue
top_3_pizzas.csv (Count)
Measure Values
Pages
Filters
Marks
Bar
Color
Size
Label
Detail
Tooltip
Category
SUM(Total Rev..
Columns
Category
Pizza Name
Rows
SUM(Total Revenue)
Sheet 3
Category / Pizza Name
Chicken
Classic
Supreme
Veggie
Total Revenue
45K
40K
35K
30K
25K
20K
15K
10K
5K
0K
43,434
42,768
41,410
38,181
32,273
30,162
34,831
33,477
30,941
32,266
26,781
26,067
The Thai Chi..
The Barbec..
The Californ..
The Classic ..
The Hawaii..
The Pepper..
The Spicy It..
The Italian ..
The Sicilian ..
The Four Ch..
The Mexica..
The Five Ch..
Category
Chicken
Classic
Supreme
Veggie
Data Source
Sheet 1
Sheet 2
Sheet 3
12 marks
1 row by 12 columns
SUM(Total Revenue): 412,589
Very humid
Now
Search
ENG
INTL
4:47 PM
8/21/2025

INSIGHTS

1. High-Revenue Products

A few pizzas generate a large portion of total revenue, indicating strong flagship items.

2. Customer Time Preferences

Orders peak during weekends and dinner hours, showing clear time-based demand patterns.

3. Size Preference Trends

Medium-sized pizzas are the most ordered, balancing price and portion size.

4. Category Demand Patterns

Classic and Supreme categories dominate sales, while some Veggie options underperform.

5. Promotional Effectiveness

Discounts and combo offers increase sales volumes but may reduce per-item profit margins.

6. Seasonal Influence

Festive seasons and holidays see a noticeable spike in orders for premium pizzas.

7. Inventory Utilization

Ingredients for top-selling pizzas often run low during peak periods, requiring better stock planning.

RECOMMENDATIONS

1. Pricing & Promotions
- Offer **combo deals** (pizza + drinks + sides) to increase order value.
- Provide **discounts on slow-moving items** to reduce stock wastage.

2. Operations Improvement
- **Adjust staff schedules** based on peak order times to ensure faster service.
- Monitor **ingredient usage** to minimize waste.

3. Product Strategy
- Focus on **top-selling pizzas** to maximize revenue.
- Introduce **seasonal/limited-edition flavors** to create excitement.

4. Customer Engagement
- Use **loyalty programs** to retain repeat customers.
- Collect and analyze **feedback** to improve taste and quality.
- Engage customers through **social media polls** for new flavor ideas.

5. Data-Driven Decisions
- Track **daily, weekly, and monthly sales** trends for better planning.
- Analyze **category-wise performance** (Veg, Non-Veg, Specials).
- Identify and focus on **high-revenue order times/days**.

THANK
YOU