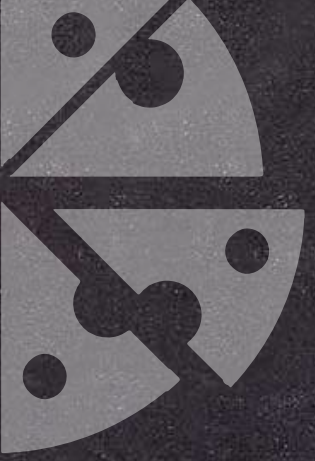
Pizza hut Analysis

Presented By Sravani

Table Of Contents



RECOMMENDATION

INTRODUCTION

ANALYSIS

PROBLEM STATEMENT

TOOLS USED

DATASET OVERVIEW

INTRODUCTION

- Pizza Hut is one of the leading global pizza brands, known for offering a wide range of pizzas and fast-food items. In today's competitive food industry, analyzing sales and customer data is important to understand what products perform best and how customer preferences are changing.
- This analysis is carried out to study Pizza Hut's sales records, identify top-selling pizzas, understand revenue patterns, and evaluate customer demand trends. Using tools like SQL for data handling and Tableau for visualization, the goal is to uncover insights that can help improve business strategies, boost sales, and deliver better customer satisfaction.

PROBLEM STATEMENT

- Pizza Hut has a wide range of pizzas and receives thousands of customer orders.
- The main problem is to study the sales data and find answers to questions like:
- What are the best-selling pizzas and categories?
- Which time periods show the highest demand?
- How much revenue does each product contribute?
- What improvements can be made to increase sales and customer satisfaction?
- This analysis helps turn raw data into useful insights that guide Pizza Hut in making better business decisions and improving overall performance.

DATASET OVERVIEW

	FILE NAME	KEY COLUMNS	DESCRIPTION
1.	PIZZA.CSV	Details unique pizzas :ID , type ,size s and prices.	Pizza_ id , pizza_ type _id ,size , price
2.	PIZZA_TYPES.CSV	Describes each pizza type:ID,name, category and ingredients	Pizza_type_id,name,category,ingredients
3.	ORDERS.CSV	Records each customer order:ID, date and time	Order_id,date,time
4.	ORDERS_DETAILS.CSV	Links orders of pizzas:details ID,order ID,pizza ID and quantity.	Order_details_id,order_id,pizza_id, quantity

TOOLS USED

• **SQL (MySQL / PostgreSQL):**

Used to query, filter, and analyze Pizza Hut’s large sales data efficiently. It helps in identifying revenue patterns, top-selling pizzas, and customer trends through structured queries.

• **CSV Files (Datasets):**

The raw sales data is stored in CSV format, including information on pizzas, pizza types, customer orders, and order details. These files serve as the foundation for the entire analysis.

• **Tableau:**

A powerful visualization tool used to create interactive dashboards and charts. Tableau helps in representing insights such as sales performance, category contribution, and customer demand visually and clearly.

• **Word / PDF:**

Useful for documenting SQL queries, outputs, and interpretations. Final reports, insights, and recommendations are compiled in these formats for sharing with stakeholders.

• **PowerPoint:**

A presentation tool to showcase key findings, insights, and recommendations in a clear and engaging way for business decision-makers.

BASIC ANALYSIS

Total Orders Count :

```
use pizzahut;
select count(order_id) as "no of orders"
from orders;
```

Result Grid | Filter Rows: | Export:

no of orders
21350

Revenue Calculation :

```
select
    round(SUM(od.quantity * p.price),3)as total_revenue
from order_details as od join pizzas as p on od.pizza_id = p.pizza_id;
```

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

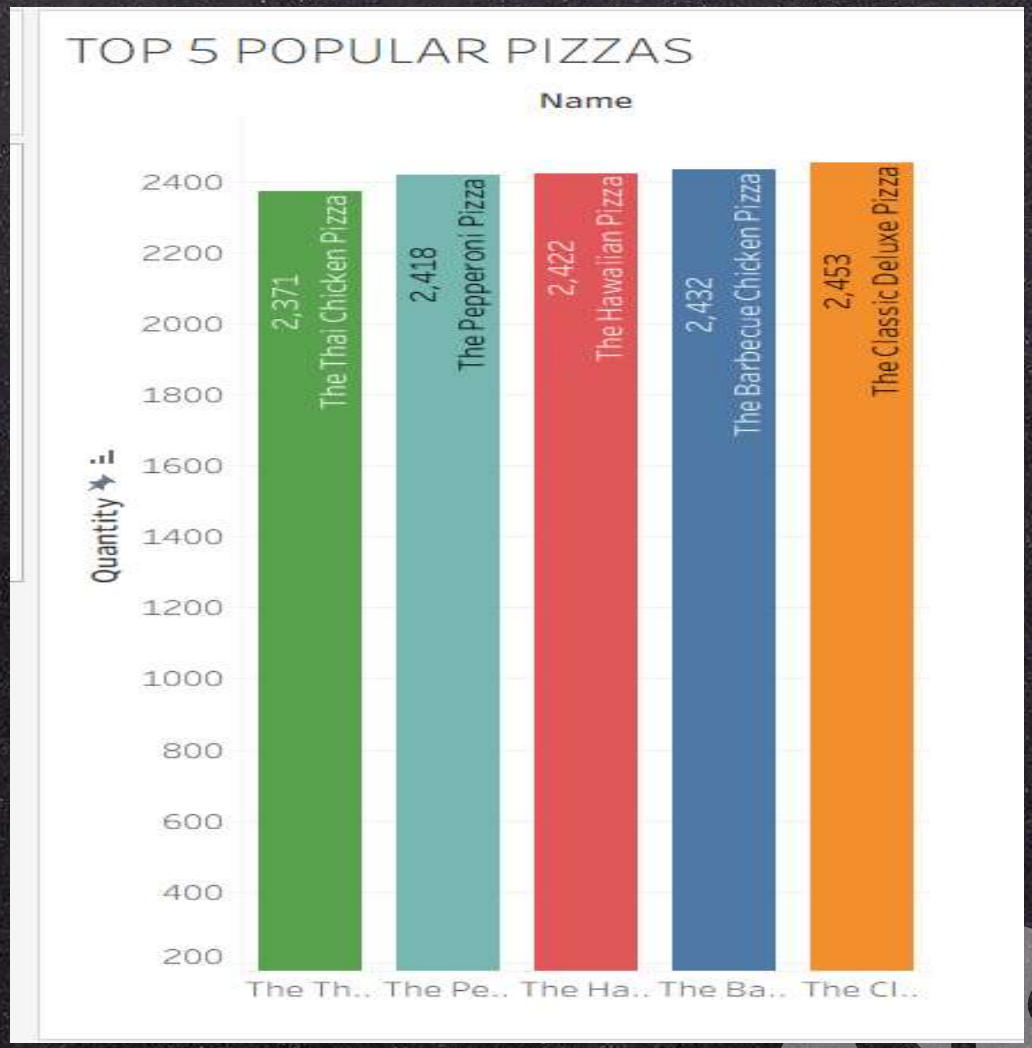
total_revenue
817860.05

Top 5 Popular Pizzas :

```sql
select pt.name AS pizza_name, SUM(od.quantity) as total_ordered
from order_details as od join pizzas as p on od.pizza_id = p.pizza_id
join pizza_types as 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



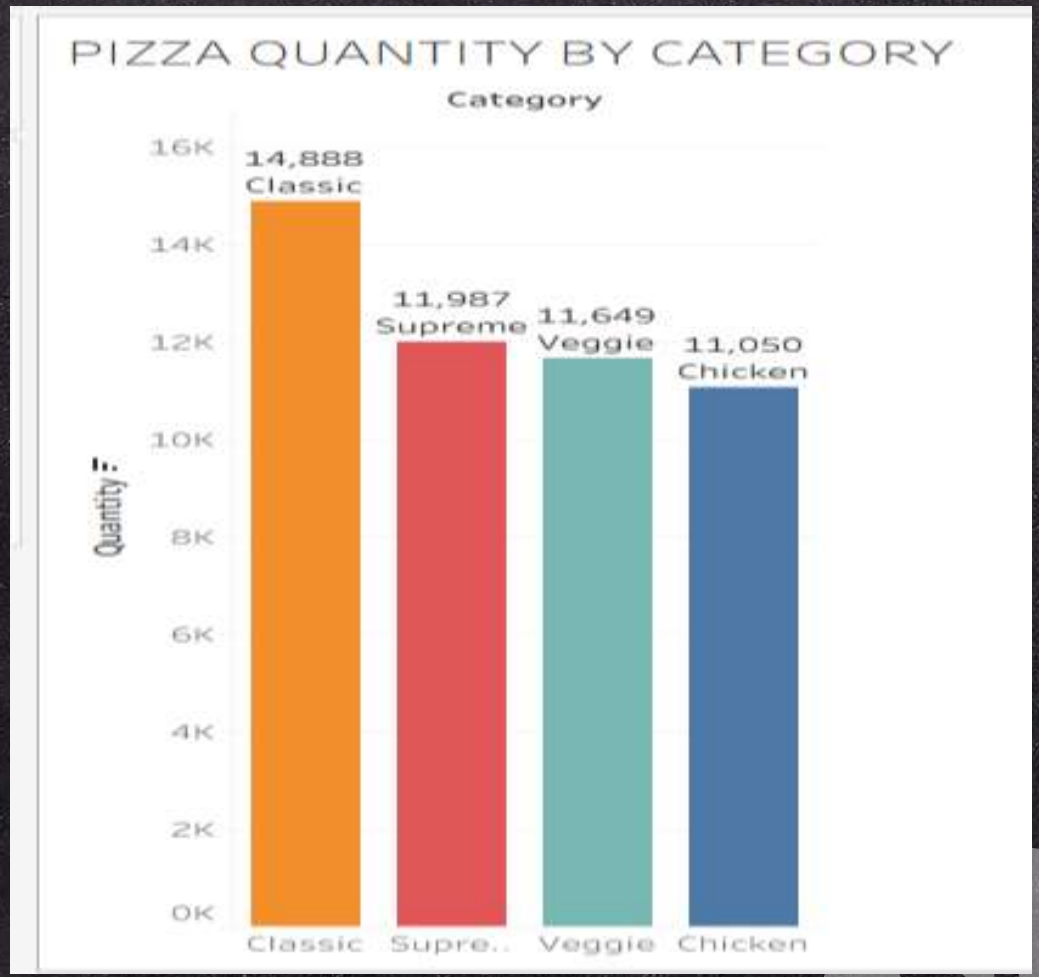
Intermediate Analysis

Pizza Qunatity By Category :

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

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

category	total_quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050



Order Trends By Hour :

```sql
select
    hour(time) as order_hour,
    count(order_id) as total_orders
from orders
group by order_hour
order by order_hour;
```

Result Grid | Filter Rows: | Expor

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

Average Daily Pizza Orders :

```sql
select avg(daily_total) as avg_daily_pizzas
from (select date(o.date) as order_date, sum(od.quantity) as daily_total
    from orders as o join order_details od on o.order_id = od.order_id
    group by date(o.date)) as daily_orders;
```

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

avg_daily_pizzas
138.4749

Advance Analysis

Revenue Contribution By Pizza Type :

```sql
select
    pt.name as pizza_name,
    round(sum(od.quantity * p.price), 2) as type_revenue,
    round(
        sum(od.quantity * p.price) /
        (select sum(od2.quantity * p2.price)
         from order_details as od2 join pizzas as p2 on od2.pizza_id = p2.pizza_id) * 100,
    2) as revenue_percentage
from order_details as od join pizzas as p on od.pizza_id = p.pizza_id
join pizza_types as pt on p.pizza_type_id = pt.pizza_type_id
group by pt.name
order by revenue_percentage desc;
```

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

pizza_name	type_revenue	revenue_percentage
The Thai Chicken Pizza	43434.25	5.31
The Barbecue Chicken Pizza	42768	5.23
The California Chicken Pizza	41409.5	5.06
The Classic Deluxe Pizza	38180.5	4.67
The Spicy Italian Pizza	34831.25	4.26
The Southwest Chicken Pizza	34705.75	4.24
The Italian Supreme Pizza	33476.75	4.09
The Hawaiian Pizza	32273.25	3.95
The Four Cheese Pizza	32265.7	3.95

Cummulative Revenue Over Time :

```sql
SELECT
    o.date,
    ROUND(SUM(od.quantity * p.price),2) AS daily_revenue,
    ROUND(SUM(SUM(od.quantity * p.price))
        OVER (ORDER BY o.date ROWS UNBOUNDED PRECEDING),2) AS cumulative_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
ORDER BY o.date;
```

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

date	daily_revenue	cumulative_revenue
2015-01-01	2713.85	2713.85
2015-01-02	2731.9	5445.75
2015-01-03	2662.4	8108.15
2015-01-04	1755.45	9863.6
2015-01-05	2065.95	11929.55
2015-01-06	2428.95	14358.5
2015-01-07	2202.2	16560.7
2015-01-08	2838.35	19399.05
2015-01-09	2127.35	21526.4

Dash Board


Dashboard
Layout
Default
Phone
Device Preview
Size
Automatic
Sheets
TOTAL ORDERS...
TOP 5 POPULA...
PIZZA QUANTIT...
TOP PIZZA ...
Top 3 Pizzas ...
Objects
Horizontal Container
Vertical Container
Text
Extension
Pulse Metric
Image
Tiled
Floating
Show dashboard title
TOTAL ORDERS COUNT
Date
21,350
Count of orders.csv
2015
PIZZA QUANTITY BY CATEGORY
Category
14,888
Classic
11,987
Supreme
11,649
Veggie
11,050
Chicken
Quantity
TOP 5 POPULAR PIZZAS
Name
Quantity
The Classic Deluxe Pizza 2,453
The Barbecue Chicken Pizza 2,432
The Hawaiian Pizza 2,422
The Pepperoni Pizza 2,418
The Thai Chicken Pizza 2,371
TOP PIZZA TYPES BY REVENUE
Pizza Id
29,258
thai_ckn_l
26,067
five_cheese_l
23,622
four_cheese_l
total revenue
Top 3 Pizzas types by Revenue in Each Category
Name / Category
order revenue
43,434 Chicken
42,768 Chicken
41,410 Chicken
38,181 Classic
34,831 Supreme
34,706 Chicken
32,273 Classic
32,266 Veggie
30,941 Supreme
30,162 Classic
Name
The Barbecue Chicken Pi..
The Classic Deluxe Pizza
The Hawaiian Pizza
The Pepperoni Pizza
The Thai Chicken Pizza
Data Source
TOTAL ORDE...
TOP 5 POPUL...
PIZZA QUAN...
TOP PIZZA T...
Top 3 Pizzas t...
Dashboard...
haripriya chinta...

INSIGHTS

- 🍕 **Top-Selling Pizzas:** A few specific pizza types generate the highest number of sales and revenue compared to others.
- 📊 **Category Contribution:** Certain pizza categories (like Classic or Supreme) contribute significantly more to total revenue than others.
- 🕒 **Peak Order Times:** Most customer orders are placed during lunch and dinner hours, especially on weekends.
- 💰 **Revenue Trends:** Revenue steadily increases during weekends and special occasions, showing strong customer demand patterns.

RECOMMENDATIONS

- 📣 **Promote Best-Sellers:** Highlight and promote the top-selling pizzas through special offers and combo deals to maximize revenue.
- 🛍️ **Optimize Low-Performers:** Consider revising, improving, or replacing pizzas/categories with consistently low sales.
- □ **Leverage Peak Hours:** Introduce time-based discounts or campaigns during peak ordering times to boost customer engagement.
- 🎯 **Category Focus:** Invest more in popular categories (like Classic/Supreme) that contribute significantly to overall revenue.
- 💳 **Upselling & Combos:** Encourage customers to purchase larger sizes or add sides/drinks through attractive bundles.


THANK YOU