



# PIZZA HUT SALES ANALSYS 🍕

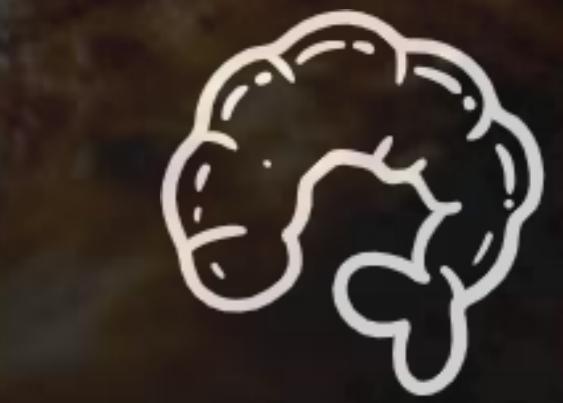
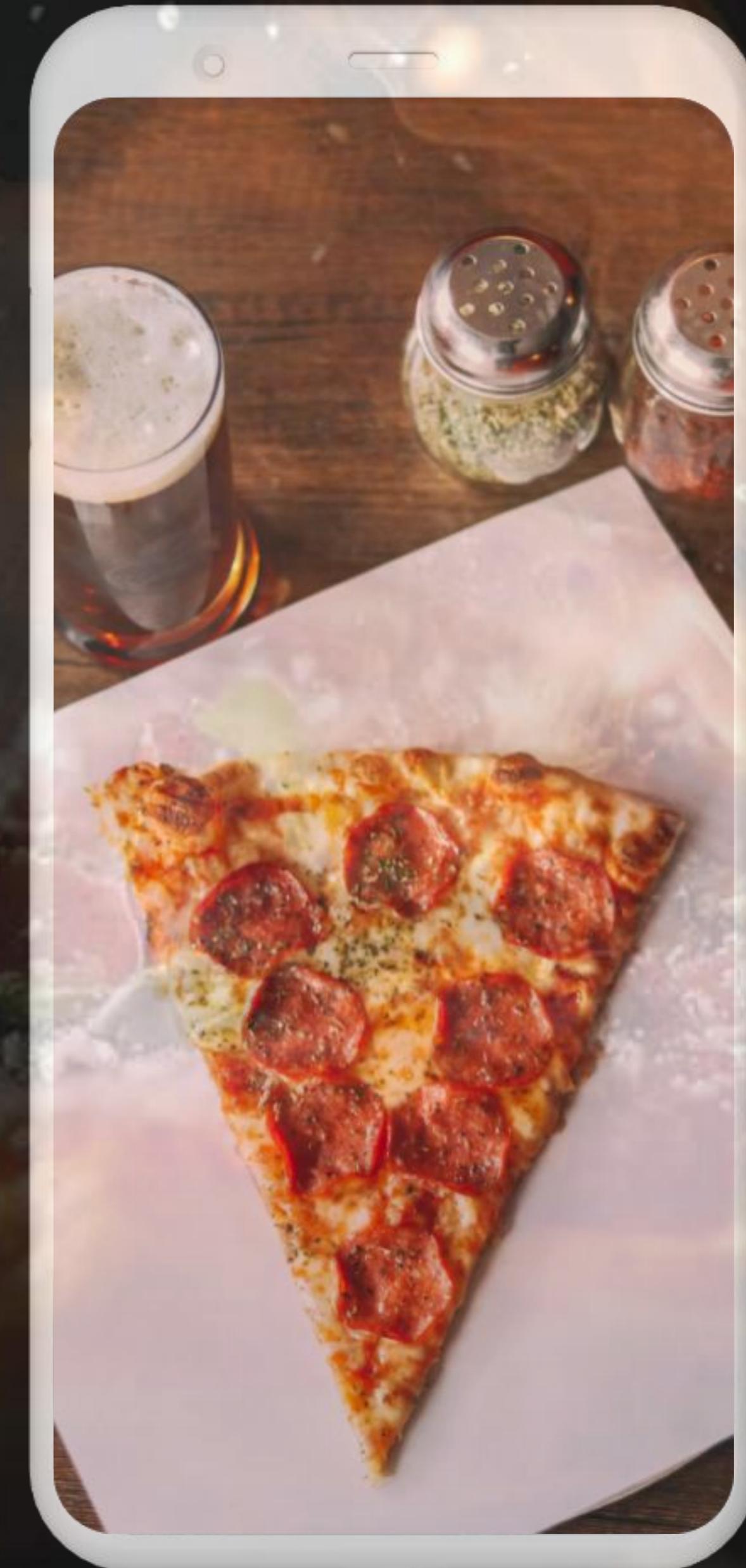
Done By Tejaswini

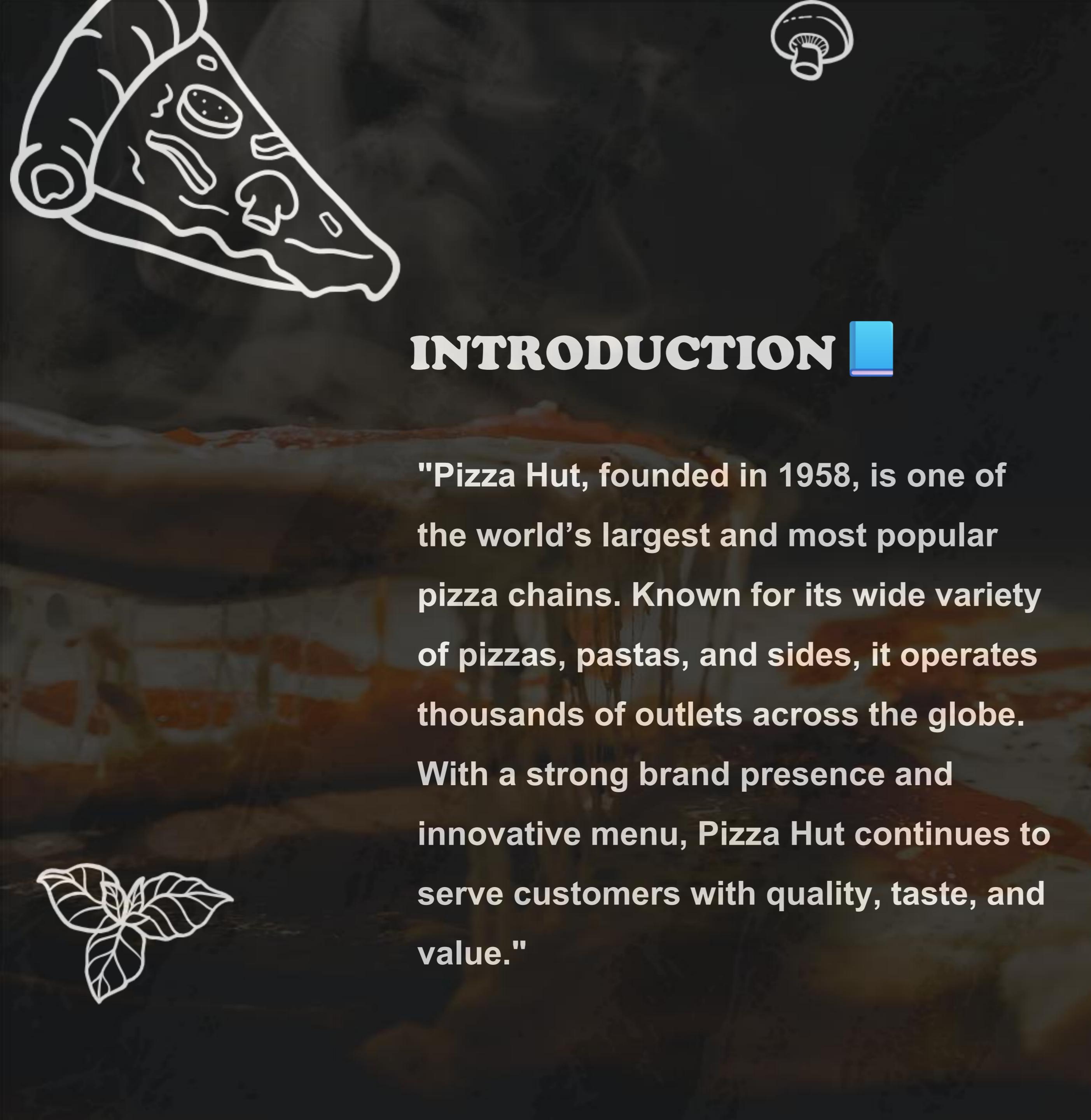




# LIST OF CONTENTS

- **Introduction**
- **Problem Statement**
- **Dataset Overview**
- **Tools**
- **Analysis**
- **Dashboard**
- **Insights**
- **Recommendations**





## INTRODUCTION

**"Pizza Hut, founded in 1958, is one of the world's largest and most popular pizza chains. Known for its wide variety of pizzas, pastas, and sides, it operates thousands of outlets across the globe."**

**With a strong brand presence and innovative menu, Pizza Hut continues to serve customers with quality, taste, and value."**



# PROBLEM STATEMENT ?

"Pizza Hut is facing challenges in identifying which products perform the best and which locations generate the most profit. Customer preferences are changing, and it is difficult to track peak sales hours and popular menu choices. Without clear insights, decision-making becomes harder and may affect sales growth. To overcome this, Pizza Hut needs a better understanding of sales performance, customer behavior, and overall market trends."



# DATASET OVERVIEW

## Pizzas

- pizza id: Unique identifier for a specific pizza variant
- pizza type id: Foreign key from pizza types
- size: Size of the pizza (S, M, L)
- price: Price based on size

## Pizza Details

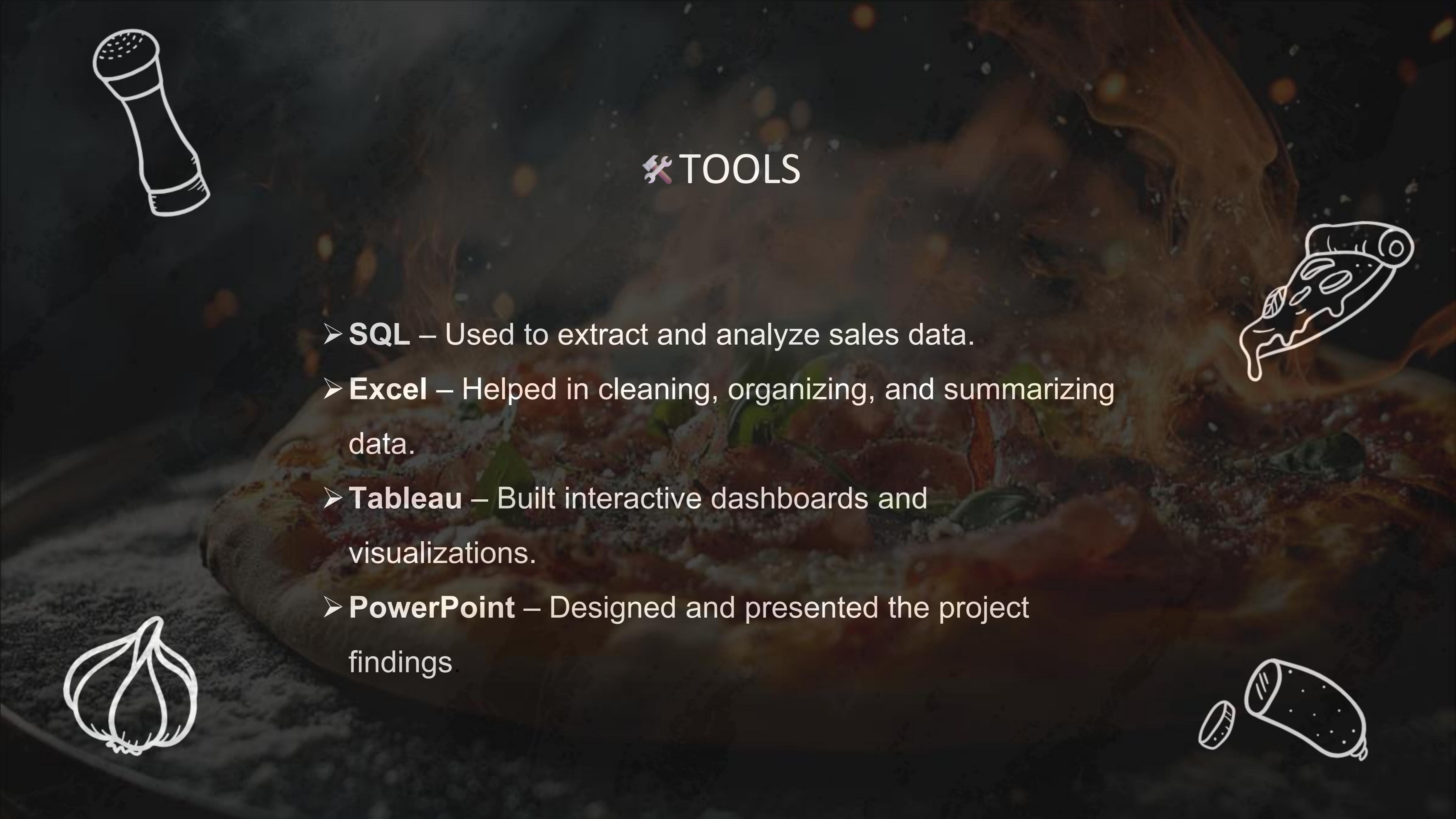
- pizza type id: Unique identifier for a pizza type
- name: Pizza name (e.g., "Margherita")
- category: Category like Veggie, Chicken, etc.
- ingredients: List of ingredients used

## Orders

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

## Order Details

- order details id: Unique identifier for the detail entry
- order id: Foreign key from orders
- pizza id: Foreign key from pizzas
- quantity: Number of pizzas ordered



## 🛠 TOOLS

- **SQL** – Used to extract and analyze sales data.
- **Excel** – Helped in cleaning, organizing, and summarizing data.
- **Tableau** – Built interactive dashboards and visualizations.
- **PowerPoint** – Designed and presented the project findings.

# ANALYSIS



## BASIC

- Total Orders Count
- Revenue Calculation
- Most Expensive Pizza
- Most Ordered Pizza Size
- Top 5 Popular Pizzas



## INTERMEDIATE

- Pizza Quantity by Category
- Order Trends by Hour
- Pizza Distribution by Category
- Average Daily Pizza Orders
- Top Pizza Types by Revenue



## ADVANCED

- Revenue Contribution by Pizza Type
- Cumulative Revenue Over Time
- Top 3 Pizza Types by Revenue in Each

# BASIC ANALYSIS



Total orders count:

```
4 • USE PIZZAHUT;  
5 • select count(order_id)  
6   from orders;
```

Result:

	count(order_id)
▶	21350

Insight:

Pizza Hut has received **21,350 total orders**, showing a good customer base and consistent order volume.

Revenue calculation:

```
3 • USE PIZZAHUT;  
4 • select  
5   sum(quantity*price)  
6   from order_details as od join pizzas as p  
7   on od.pizza_id=p.pizza_id;
```

Result:

	sum(quantity*price)
▶	817860.049999993

Insight:

The total revenue generated is **\$817K+**, which reflects strong sales performance and customer demand for pizzas.

## Most expensive pizza:

```
7 • select  
8     max(price)  
9  from pizzas;  
10
```

Result:

max(price)
35.95

Insight:

The highest-priced pizza costs \$35.95, suggesting Pizza Hut offers premium products for higher-spending customers.

## Most ordered pizza sale:

```
6 • USE PIZZAHUT;  
7 • SELECT  
8     p.size,  
9     SUM(od.quantity) AS total_ordered  
10    FROM order_details as od JOIN pizzas as p  
11    ON od.pizza_id = p.pizza_id  
12    GROUP BY p.size  
13    ORDER BY total_ordered DESC  
14    LIMIT 1;
```

Result:

size	total_ordered
L	18956

Insight:

The **Large size pizza is the most popular**, with nearly 19K **orders**, showing that customers prefer bigger portions, possibly for sharing.



## Top 5 popular pizzas:

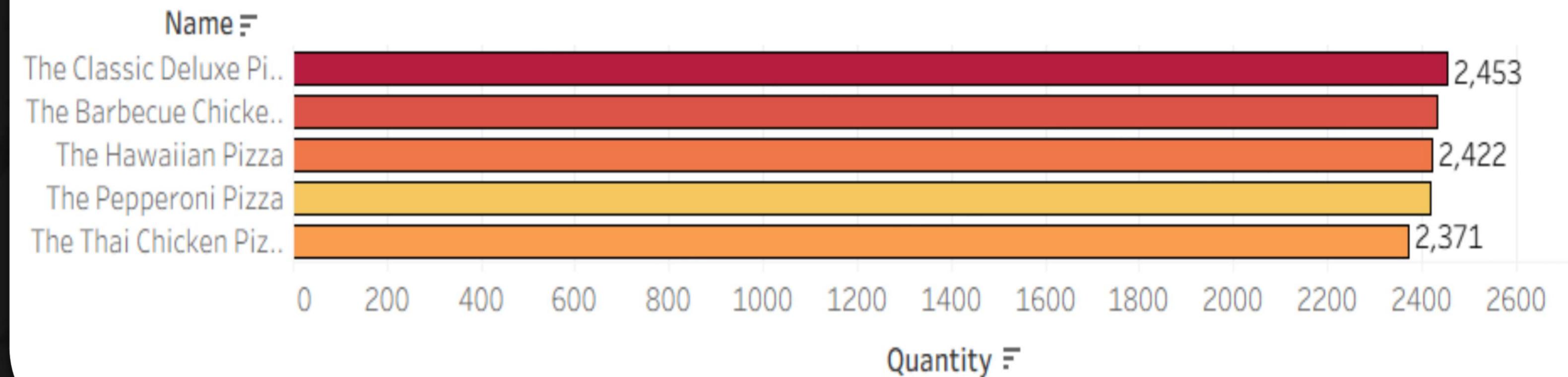
```
1 -- 5) Top 5 Popular Pizzas
2 -- List the top 5 pizzas by order quantity
3 • USE PIZZAHUT;
4 • select * from pizzas;
5 • SELECT
6     pt.name AS pizza_name,
7     SUM(od.quantity) AS tq
8 FROM order_details as od
9 JOIN pizzas as p
10 ON od.pizza_id = p.pizza_id
11 JOIN pizza_types as pt
12 ON p.pizza_type_id = pt.pizza_type_id
13 GROUP BY pt.name
14 ORDER BY tq DESC
15 LIMIT 5;
16
```

Output

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

Horizontal bar chart:

### Top 5 Pizzas



### Insight:

The **Classic Deluxe Pizza** is the top favorite with **2453 orders**, closely followed by Barbecue Chicken and Hawaiian pizzas. The demand is quite balanced across top varieties, indicating customers enjoy a wide range of flavors.



# Intermediate Analysis



Pizza Quantity by Order:

```
1 •  use pizzahut;
2 •  SELECT
3      pt.category,
4      SUM(od.quantity) AS tq_ord
5  FROM pizzas AS p JOIN pizza_types AS pt
6  ON p.pizza_type_id = pt.pizza_type_id
7  JOIN order_details AS od
8  ON p.pizza_id = od.pizza_id
9  GROUP BY pt.category
10 ORDER BY tq_ord;
11
```

Result:

Result Grid	
category	tq_ord
Chicken	11050
Veggie	11649
Supreme	11987
Classic	14888

Bar Chart:



**Insight from bar chart:** Classic pizzas clearly dominate sales, followed by Chicken and Supreme. Veggie lags behind.

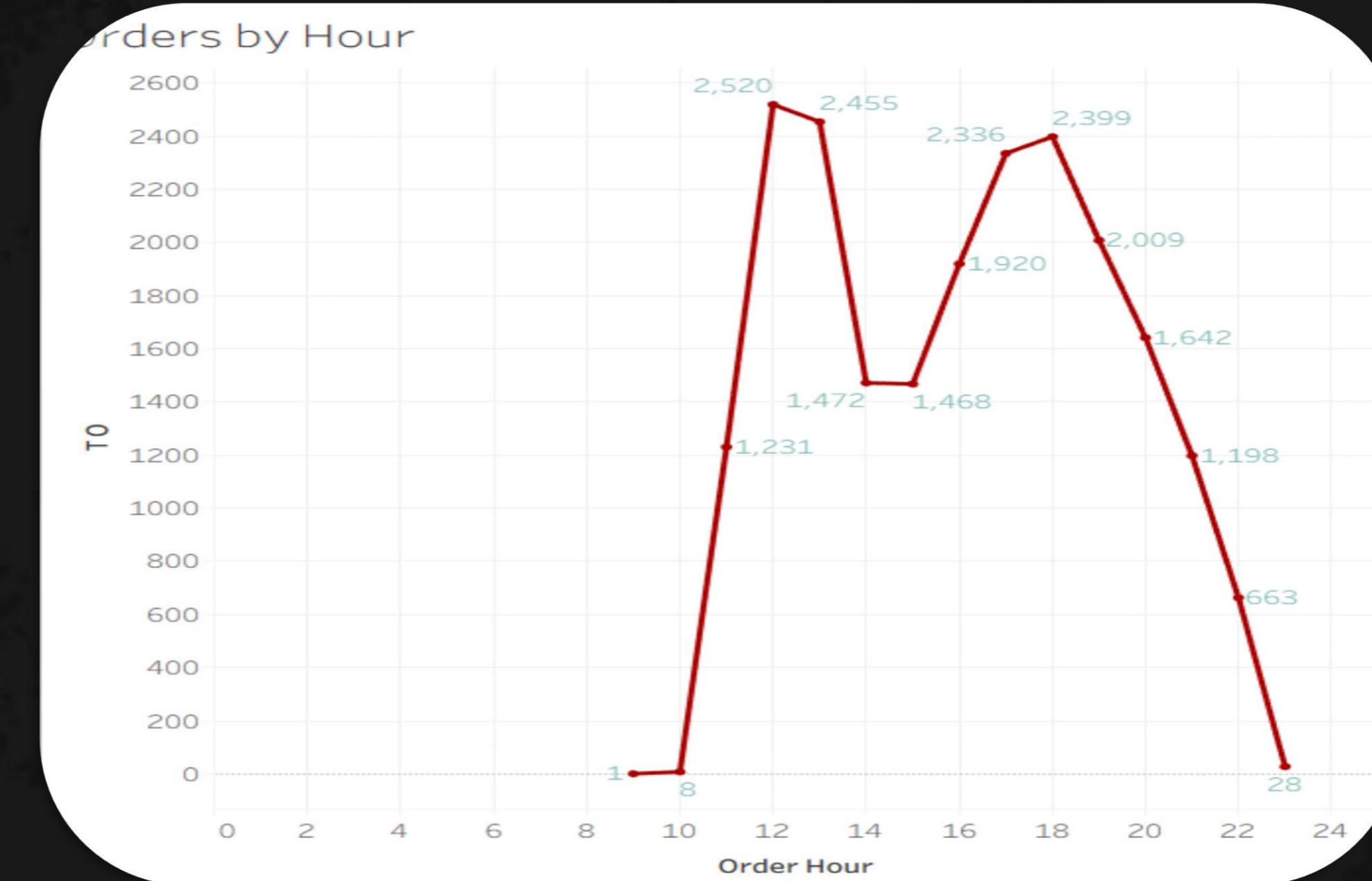
## Orders trends by Hours:

```
3 •  use pizzahut;
4 •  select * from orders;
5
6 •  SELECT
7      HOUR(time) AS order_hour,
8      COUNT(*) AS t_o
9  FROM orders
10 GROUP BY order_hour
11 ORDER BY order_hour;
```

## Result:

order_hour	t_o
9	1
10	8
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

## Scatter plot:



Insight: Orders peak at **12–1 PM (lunch hours)** and again around **5 PM (evening)**, with very low activity before 11 AM and after 9 PM.



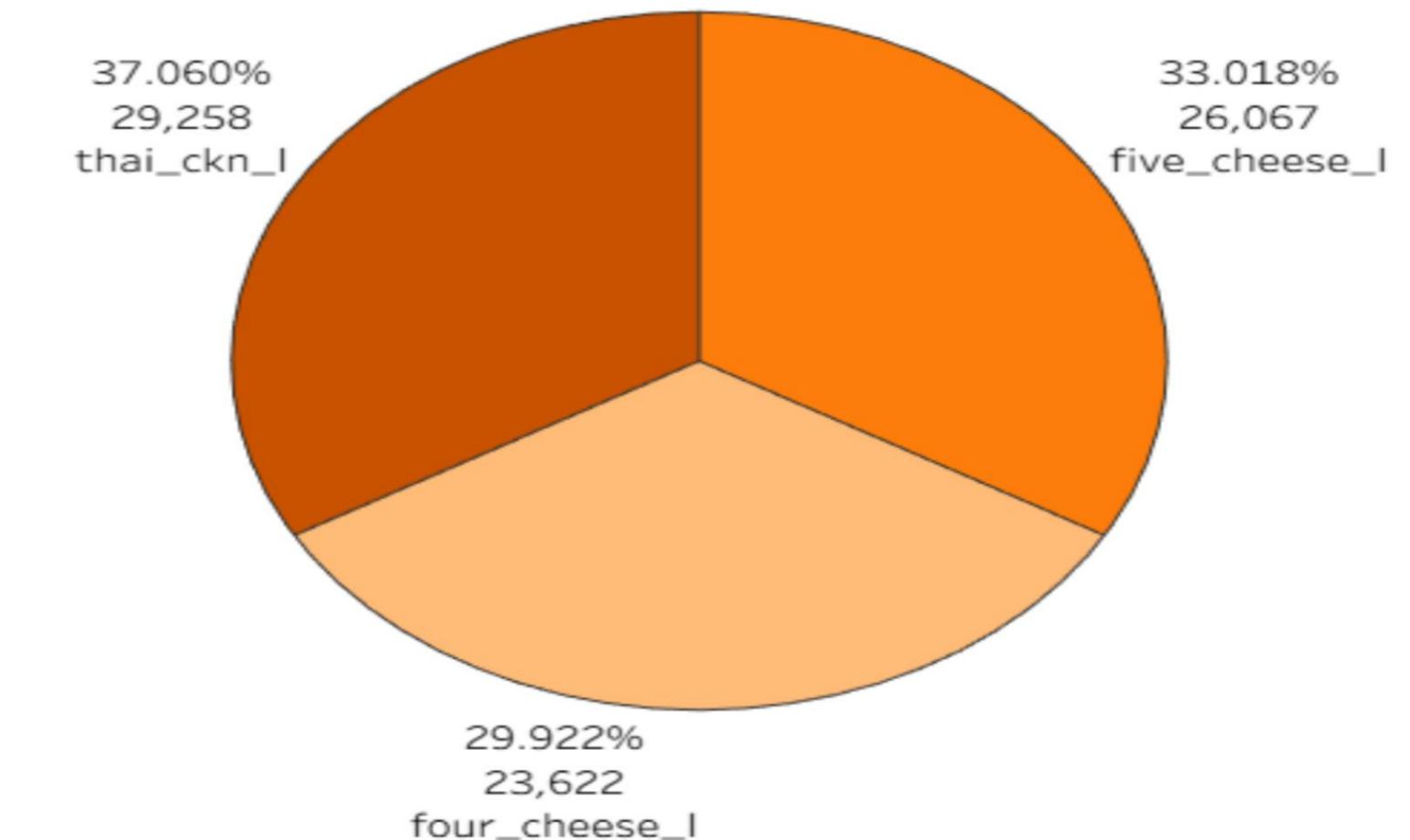
Top pizza types by revenue:

```
1 • USE PIZZAHUT;
2 • select * from pizzas;
3
4 • SELECT
5     p.pizza_id,
6         SUM(od.quantity * p.price) AS total_revenue
7     FROM order_details AS od JOIN pizzas AS p
8     ON od.pizza_id = p.pizza_id
9     GROUP BY
10    p.pizza_id
11    ORDER BY
12    total_revenue DESC
13    LIMIT 3;
```

Result:

pizza_id	total_revenue
thai_ckn_l	29257.5
five_cheese_l	26066.5
four_cheese_l	23622.20000000554

Pie Chart:



➤ Insights:

- **Thai Chicken (L)** → ~37% of top-3 revenue (29,257.5)
- **Five Cheese (L)** → ~33% of top-3 revenue (26,066.5)
- **Four Cheese (L)** → ~29% of top-3 revenue (23,622.2)
- **Takeaway:** Large **Chicken + Cheese pizzas dominate sales**, with cheese varieties alone making up ~63% of top-3 revenue

# ADVANCED ANALYSIS

Top 3 pizza types by revenue in each category:

```
1 WITH PizzaRevenue AS (
2     SELECT
3         pt.category AS pizza_category,
4         pt.name AS pizza_name,
5         p.size,
6         SUM(od.quantity * p.price) AS total_revenue
7     FROM order_details AS od
8     JOIN pizzas AS p
9         ON od.pizza_id = p.pizza_id
10    JOIN pizza_types AS pt
11        ON p.pizza_type_id = pt.pizza_type_id
12    GROUP BY pt.category, pt.name, p.size
13),
14 RankedPizzas AS (
15     SELECT
16         pizza_category,
17         pizza_name,
18         size,
19         total_revenue,
20         RANK() OVER (PARTITION BY pizza_category ORDER BY total_revenue DESC) AS revenue_rank
21     FROM PizzaRevenue
22 )
23 SELECT
24     pizza_category,
25     pizza_name,
26     size,
27     total_revenue
FROM RankedPizzas
WHERE revenue_rank <= 3
```

Result:

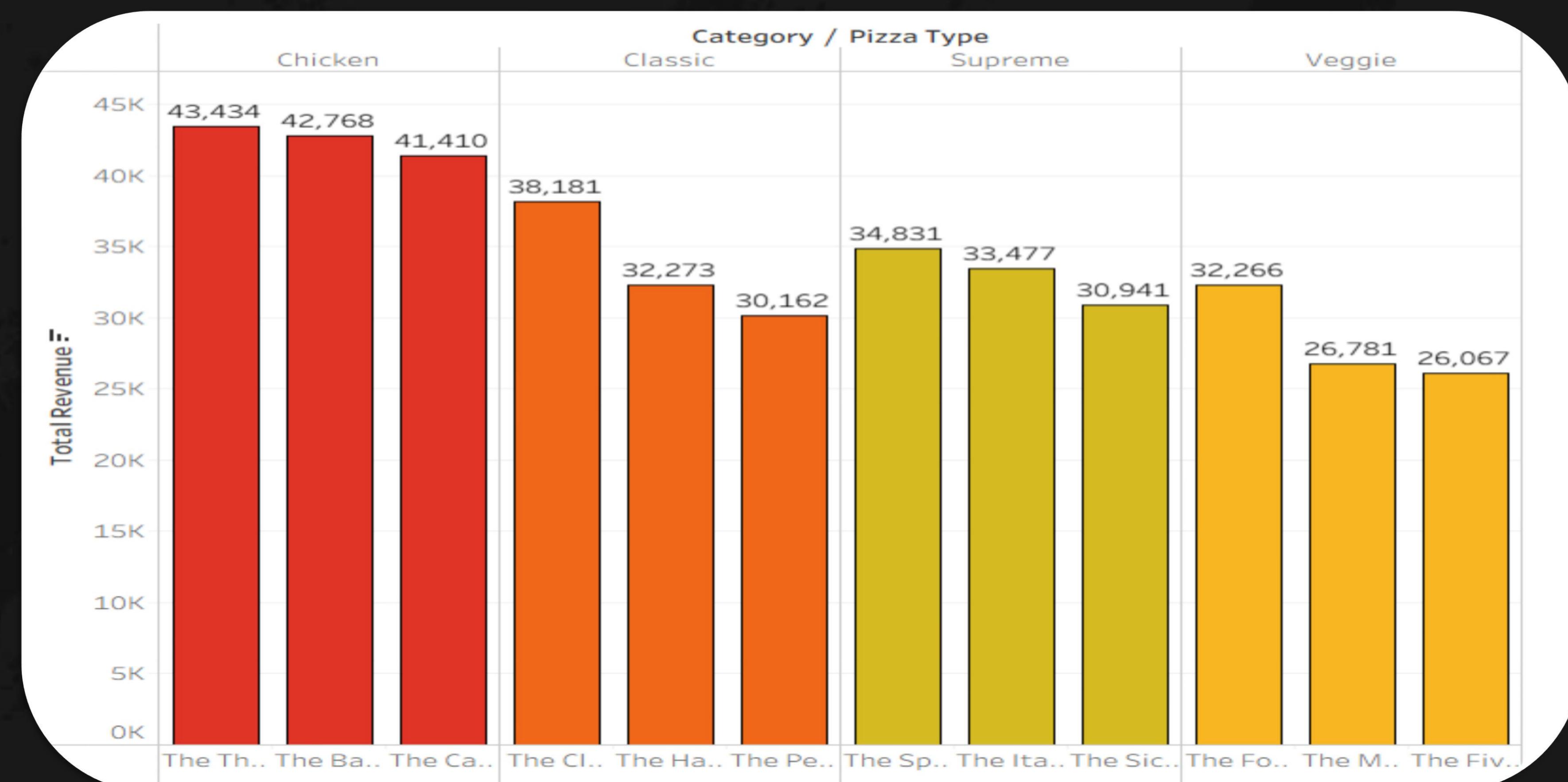
pizza_category	pizza_name	size	total_revenue
Chicken	The Thai Chicken Pizza	L	29257.5
Chicken	The Southwest Chicken Pizza	L	21082
Chicken	The Barbecue Chicken Pizza	L	20584
Classic	The Big Meat Pizza	S	22968
Classic	The Classic Deluxe Pizza	M	18896
Classic	The Hawaiian Pizza	L	15163.5
Supreme	The Spicy Italian Pizza	L	23011.75
Supreme	The Italian Supreme Pizza	M	15526.5
Supreme	The Italian Supreme Pizza	L	15500.25
Veggie	The Five Cheese Pizza	L	26066.5
Veggie	The Four Cheese Pizza	L	23622.20000...
Veggie	The Mexicana Pizza	L	17556.75



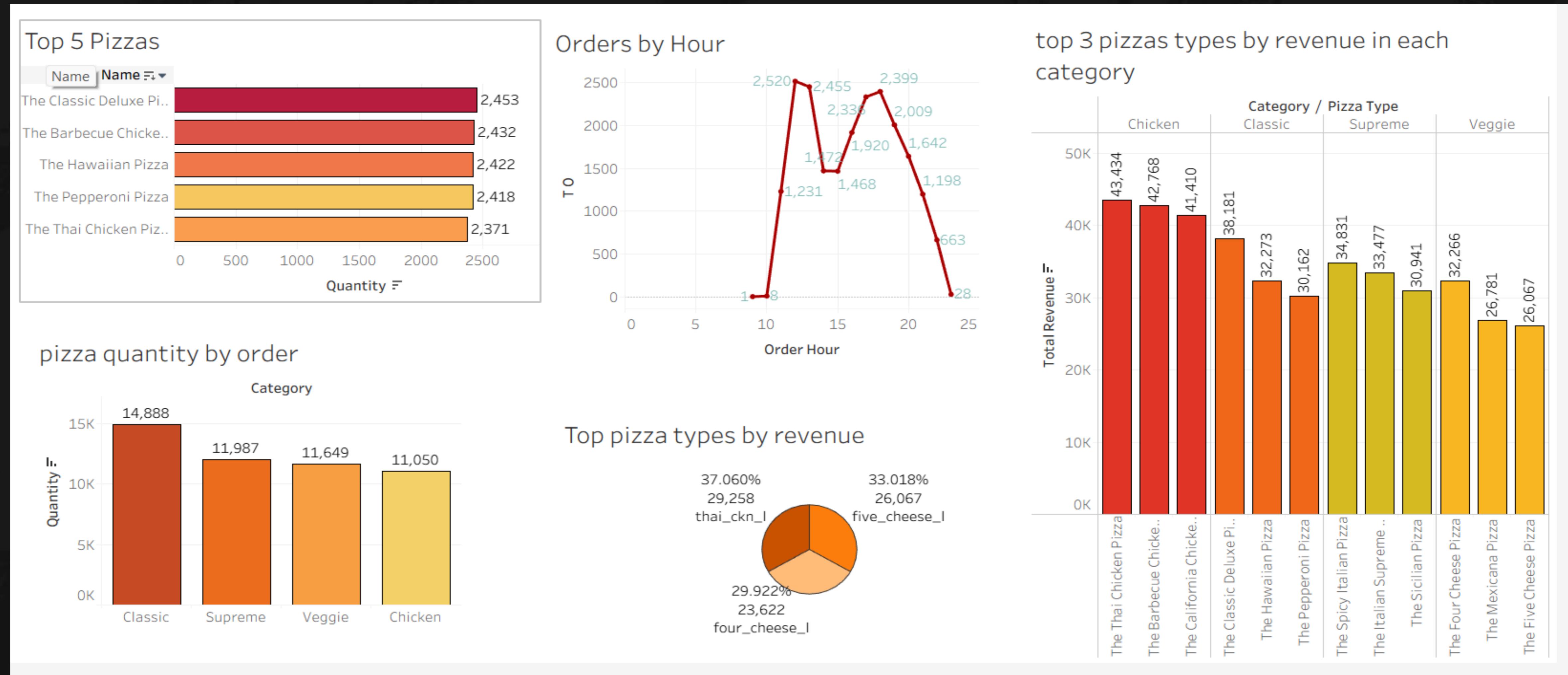
# ADVANCED ANALYSIS



Top 3 pizza types by revenue in each category



# Pizza Hut Sales Dashboard



**Summary:** Classic pizzas dominate sales with the highest revenue share, while Barbecue Chicken and Classic Deluxe lead in popularity; peak orders occur during lunch hours (12–2 PM).



## INSIGHTS



- ▶ **Total Orders & Revenue:** Over **21K+ orders** generated **\$817K+ revenue**, showing strong customer demand.
- ▶ **Pizza Size Preference:** **Large pizzas** dominate sales volume, highlighting customer preference for sharing/ value-for-money options.
- ▶ **Top Flavors:** **Classic & Chicken pizzas** lead in orders, while **Thai Chicken L, Five Cheese L, and Four Cheese L** bring the highest revenue.
- ▶ **Category Demand:** **Classic pizzas** are most popular, while **Veggie pizzas** have the least traction.
- ▶ **Order Timing:** Two clear peaks – **Lunch (12–1 PM)** and **Dinner (6–8 PM)**; also surprising **midnight demand (12–1 AM)**.
- ▶ **Customer Preference Trend:** Customers favour premium, large-sized chicken and cheese pizzas for both lunch and dinner



- ▶ **Business Takeaway:** Focus marketing, staffing, and promotions on **large pizzas, chicken & cheese flavours, and peak lunch/dinner hours** to maximize sales.



# RECOMMENDATIONS

- **Promote Large Pizzas** – Offer combo deals & discounts.
- **Highlight Chicken & Cheese** – Market Thai Chicken & Cheese pizzas.
- **Boost Lunch & Dinner Sales** – Time-based offers (12–1 PM, 6–8 PM).
- **Grow Veggie Category** – Add new toppings & special offers.
- **Leverage Late-Night Demand** – Midnight deals (12–2 AM).
- **Optimize Staffing** – Align staff with peak hours.

**THANK YOU**

