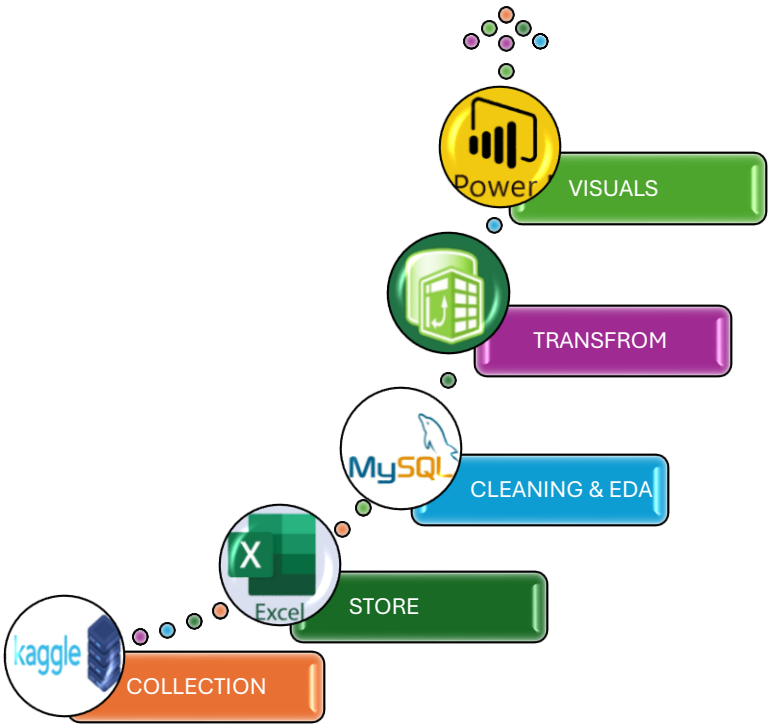
PIZZA SALES ANALYSIS REPORT



Introduction

The Pizza Sales Report was developed to analyze sales performance, customer preferences, and key trends using data visualization techniques in Power BI. This report aims to provide actionable insights that can enhance decision-making processes and optimize business operations. The analysis covers various aspects such as revenue generation, ordering patterns, and product popularity, offering a comprehensive view of the business's performance.

Analysis Using SQL Queries

- KPI Requirements:

1) **Total Revenue :**

```
select sum(total_price) as Total_Revenue from pizza_sales;
```

2) **Average Order Value :**

```
select round(sum(total_price)/count(distinct(order_id)),2) as avg_order_value from pizza_sales;
```

3) **Total Order Places** :

```
select count(distinct(order_id)) as total_orders from pizza_sales;
```

4) **Average Pizza Per Order :**

```sql
select
round( cast(sum(quantity) as decimal(10,2))/cast(count(distinct (order_id)) as decimal(10,2)),2)as avg_pizzas_per_order
from pizza_sales;
```

➢ CHART Requirement:

1) **Daily Trend for Total Orders:**

```sql
SELECT
DAYNAME(STR_TO_DATE(order_date, '%d-%m-%Y')) AS order_day,
COUNT(DISTINCT order_id) AS total_orders
FROM pizza_sales
WHERE order_date IS NOT NULL
GROUP BY DAYNAME(STR_TO_DATE(order_date, '%d-%m-%Y'));
```

2) **Monthly Trends for Total Orders:**

```sql
SELECT
MONTHNAME(STR_TO_DATE(order_date, '%d-%m-%Y')) AS month_name,
COUNT(DISTINCT order_id) AS total_orders
FROM
pizza_sales
WHERE
order_date IS NOT NULL
GROUP BY
MONTHNAME(STR_TO_DATE(order_date, '%d-%m-%Y'))
order by
total_orders desc;
```

3) **Percentage Of Sales By Pizza Category :**

```sql
select pizza_category,
round(sum(total_price)*100/(select sum(total_price) from pizza_sales),2) as PCT
from pizza_sales
group by pizza_category;
```

4) **Percentage Of Sales By Pizza Size :**

```sql
select pizza_size,
round(sum(total_price)*100/(select sum(total_price) from pizza_sales),2) as PCTs
from pizza_sales
group by pizza_size
order by PCTs desc;
```

5) **TOP 5 Best Sellers by Revenue , Total Quantity And Total Orders:**

- Revenue:

```
select pizza_name,sum(total_price) as Total_Revenue
from pizza_sales
group by pizza_name
order by Total_Revenue desc limit 5;
```

- Total Quantity:

```
select pizza_name,sum(quantity) as Total_Quantity
from pizza_sales
group by pizza_name
order by Total_Quantity desc limit 5;
```

- Total Orders:

```
select pizza_name, count(distinct(order_id) )as total_orders
from pizza_sales
group by pizza_name
order by total_orders desc limit 5;
```

Analysis Using POWER BI

Data Cleaning and Transformation:

- Imported the raw dataset into Power BI.
- Checked for null values, duplicates, and inconsistent data.
- Used Power Query to clean and transform the data for analysis.

Data Modeling:

- Defined calculated columns and measures using DAX (e.g., Total Revenue, Avg Order Value, etc.).

Dashboard Creation:

- Designed a user-friendly layout with a focus on key metrics.
- Incorporated slicers for filtering by pizza category and other dimensions.
- Created visuals such as bar charts, line graphs, and pie charts for better data interpretation.

Customization:

- Applied a dark-themed design for aesthetic appeal and improved readability.
- Used custom visuals and icons (e.g., pizza icon) to align with the theme.

➢ **Calculated Metrics:**

- Total Revenue = Sum of all order values.
- Average Order Value = Total Revenue / Total Orders.
- Total Pizza Sold = Sum of all pizza quantities ordered.
- Avg Pizzas Per Order = Total Pizza Sold / Total Orders.

Insights and Conclusions

1. **Revenue and Sales Performance:**
   - Total revenue generated: **$817.86K**.
   - Total pizzas sold: **49,574**, with an average of **2.32 pizzas per order**.
2. **Peak Ordering Times:**
   - Orders are highest on **weekends (Friday and Saturday evenings)**.
   - Monthly peak orders occur in **July** and **January**.
3. **Sales by Pizza Category:**
   - The **Classic category** contributes to the highest sales and total orders.
   - Other popular categories include Supreme, Chicken, and Veggie.
4. **Sales by Pizza Size:**
   - The **Large size** contributes to **45.89%** of total sales, making it the most preferred size.
   - Other sizes such as Medium and X-Large also have significant contributions.
5. **Trends and Patterns:**
   - A consistent increase in orders during weekends is observed.
   - Monthly trends show significant spikes during July and slight dips in December.
6. **Best Sellers:**
   - Identified top 5 best sellers by revenue, total quantity, and total orders.
7. **Unexpected Findings:**
   - Despite December being a festive month, a slight dip in orders was observed. This could be explored further to identify potential causes.

Future Recommendations

1. **Focus on Peak Sales Periods:**
    - Launch promotions and offers on weekends and during July and January to capitalize on high demand.
2. **Optimize Inventory for Popular Sizes and Categories:**
    - Ensure sufficient stock for large-size pizzas and the Classic category.
3. **Customer Engagement:**
    - Use insights from data to target customers with personalized offers based on their preferences.
4. **Improve Low-Selling Areas:**
    - Investigate reasons for lower sales in certain months and categories and implement corrective actions.
5. **Enhance Visual Reporting:**
    - Continuously update and refine the dashboard based on user feedback to improve decision-making.

Conclusion

The Pizza Sales Report provides valuable insights into sales performance, customer preferences, and ordering trends. By leveraging these findings, the business can optimize operations, enhance customer satisfaction, and drive revenue growth. The recommendations outlined above serve as a roadmap for continuous improvement and sustained success.