Blacktech Pizza

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Introduction

Blacktech Pizza is a leading pizza restaurant with a rapidly growing customer base. The company focuses on serving premium menu options at an affordable rate to its customers.

The company's key differentiators are its

- Menu options
- Prompt service
- Portion sizes and
- Affordability.

Executive summary

Business problem

I was assigned the duty of discovering chances for BlackTech Pizza to improve its operations, sales, goods, and revenue by gleaning relevant insights from the data provided.

These insights included answering the following problem statements:

1. What is the overall financial performance of the company?
2. What are the highest and lowest-performing products based on pizza name, category and size?
3. What day of the week has the highest and least revenue?

4. Pinpoint the Peak period using month, time of day and quarter.

5. What is the total number of orders for the year?

6. What is the total number of orders by category, pizza name and size?

7. Are there changes to be made to our menu or any promotions that can be leveraged?

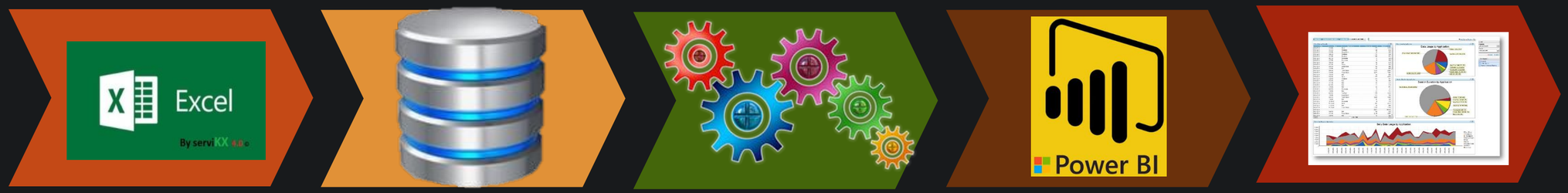
Methodology

I utilized the ETL (Extraction, Transformation and Load) Process in our data analysis.

I initially **extracted** the data from 4 CSV files supplied by BlackTech Pizza to conduct the analysis. These files were verified to ensure the data was consistent, accurate and free from missing data.

The data was subsequently ***transformed*** in Power BI using the Power Query Editor to further clean and validate the data.

The cleaned data was ***loaded*** into Power BI Query Editor where Data Analysis Expressions (DAX) were used to create Measures that formed the basis of the Dashboard.

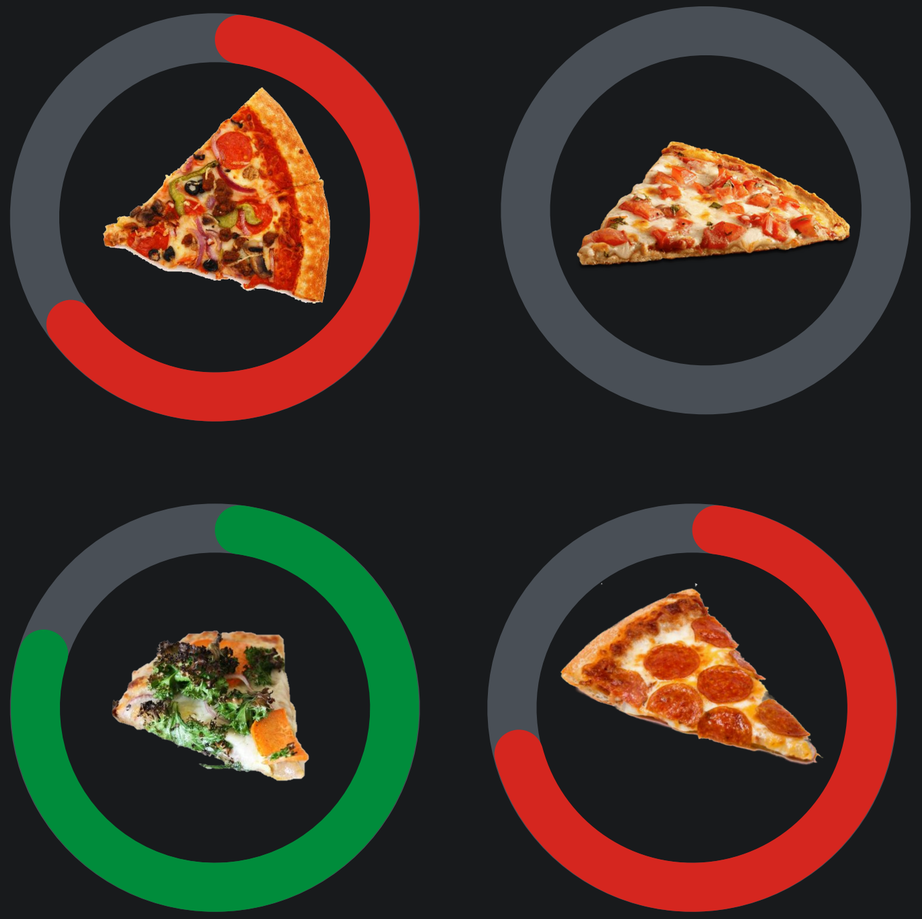


EXTRACT

TRANSFORM

LOAD

ANALYSIS



Dashboard

EXECUTIVE SUMMARY: BLACKTECH PIZZA

BlackTECH

category
All

size
All

$818K	32	$16.44	$38.31
Total Revenue	Pizza Names	Average Price	Average Revenue Per Customer

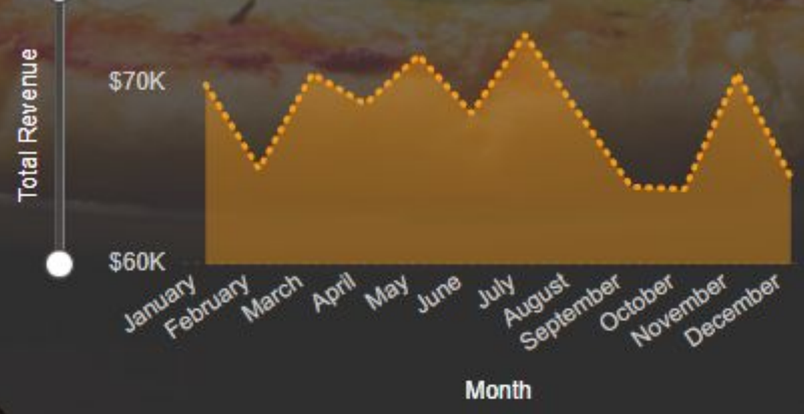
Top 5 Pizza by Revenue

Bottom 5 Pizza by Revenue

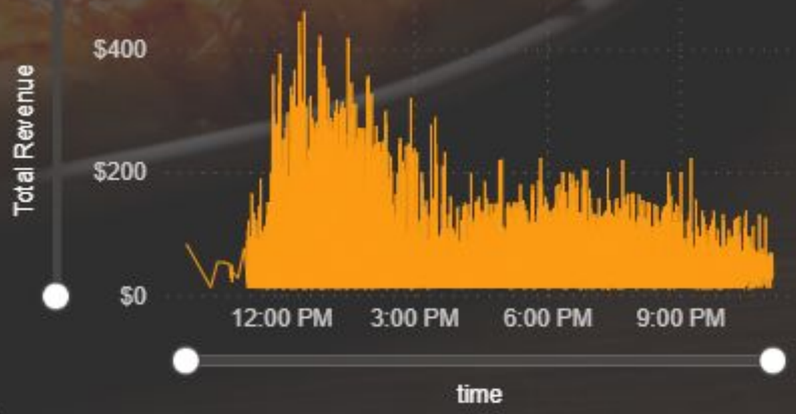
Total Revenue by Quarter

Total Revenue by Week Day

Total Revenue by Month



Peak Hours



EXECUTIVE SUMMARY: BLACKTECH PIZZA

BlackTECH

Ingredients

Tomatoes, Red Peppers, Jalapeno Peppers, Red Onions, Cilantro, Corn, Chipotle Sauce, Garlic

49,574 Total Orders

21350 No.Of Orders

1779 Orders per month

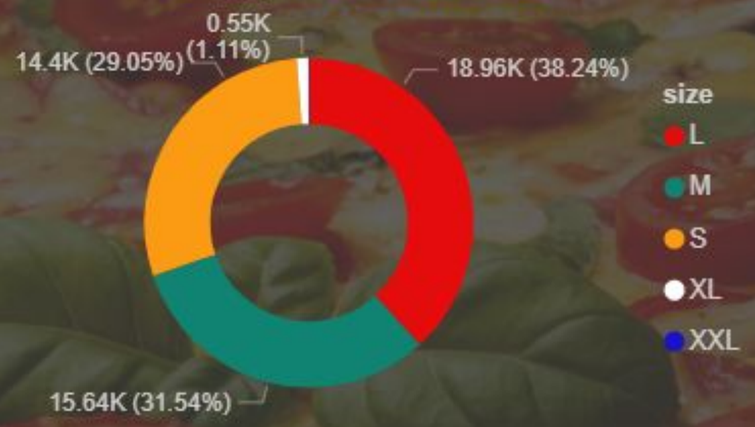
2.32 Average Order per person

Pizza Name: All

category: All

name	Total Orders	Order Tar
The Classic Deluxe Pizza	2453	
The Barbecue Chicken Pizza	2432	
The Hawaiian Pizza	2422	
The Pepperoni Pizza	2418	
The Thai Chicken Pizza	2371	
The California Chicken Pizza	2370	
The Sicilian Pizza	1938	
The Spicy Italian Pizza	1924	
The Southwest Chicken Pizza	1917	
The Big Meat Pizza	1914	
The Four Cheese Pizza	1902	
The Italian Supreme Pizza	1884	
The Vegetables + Vegetables Pizza	1526	
The Mexicana Pizza	1484	
The Napolitana Pizza	1464	
The Prosciutto and Arugula Pizza	1457	
The Pepper Salami Pizza	1446	
The Spinach and Feta Pizza	1446	
The Italian Capocollo Pizza	1438	
The Greek Pizza	1420	
The Five Cheese Pizza	1409	
The Pepperoni, Mushroom, and Peppers Pizza	1359	
The Green Garden Pizza	997	
The Chicken Alfredo Pizza	987	
The Italian Vegetables Pizza	981	
The Chicken Pesto Pizza	973	
The Spinach Pesto Pizza	970	
The Soppressata Pizza	961	
Total	**49574**	

Total Orders by size



Top 5 Pizza Ordered

Total Orders by Quarter

Total Orders by Month

Key findings & insights

- The total revenue realized in 2015 was $817,860 with **Thai chicken pizza** topping the chart as the best seller in terms of revenue and **Brie Carre Pizza** as the least-selling pizza.
- **The Classic category** had the highest revenue while the **Veggie category** generated the least revenue.
- **The Large (L) size Pizza** generated the highest revenue while the **XXL size** was the least.
- The highest revenue on **Fridays** while **Sundays** had the least.

- The highest revenue was generated in the month of **July** . Despite this, Quarter 2 emerged as the lowest quarter while the month of October has the least revenue
- From our analysis, the peak period was between 11:50 am and 3:30 pm

Interpretation & Analysis

Pizza performance by revenue & orders

HIGHEST REVENUE

THE THAI CHICKEN

$43K

LOWEST REVENUE

BRIE CARRE

$12K

HIGHEST ORDERED

THE CLASSIC DELUXE

2453

LOWEST ORDERED

BRIE CARRE

480

Revenue By Size

MOST PROFITABLE SIZE	REVENUE	ORDER
LARGE	$375,000	12736

LEAST PROFITABLE SIZE	REVENUE	ORDER
XXL	$1007	28

Ingredients Analysis

INGREDIENTS

The Thai Chicken Pizza which generated the highest revenue of $43,434 has Chicken, Pineapple, Tomatoes, Red Peppers, and Thai Sweet Chilli Sauce as ingredients.

Keeping a close watch on inventory for these fresh ingredients is paramount to ensure that BlackTech meets customer demands and are never out of stock. This also requires cultivating strong long- term business relationships with suppliers to ensure consistent and readily available fresh ingredients at reasonable prices.

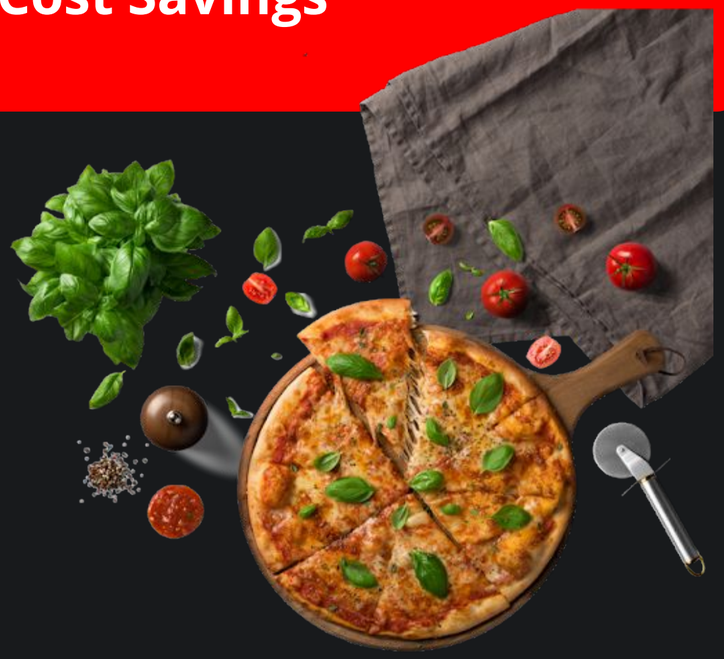
Mitigating risks tied to improper inventory management is also critical to ensure profits.

INGREDIENTS

Analyzing ingredient usage and costs can help identify cost-saving opportunities without compromising quality. This analysis can assist in managing inventory like the First In First Out (FIFO) and optimizing ingredient sourcing from reliable suppliers.

Operational Efficiency

$ Cost Savings



Order Preparation Time:

Despite not having information on preparation time for the different kinds of Pizza, analyzing the time taken to prepare orders can help identify bottlenecks or inefficiencies in the order preparation process, enabling improvements in operational efficiency and customer satisfaction.

Menu Optimization

INGREDIENTS

The Brie Carre Pizza emerged as the pizza that generated the least amount of revenue. This could be a result of the combination of ingredients or the fact that it is only available in small sizes.

BlackTech Pizza can eliminate unpopular menu options like the Brie Carre or consider menu adjustments based on customer preferences.

Upselling Opportunities: We have identified the month of the July, Fridays, and peak business hours between 11:50 am and 3:30 pm in which the most revenue is generated.

Limitations & Constraints of the Data

One caveat to note in our analysis is the limited data collected. The depth and scope of operational performances could provide robust insights into operational and sales challenges.

Critical data missing included the following:

1. Customer Demographics to determine preferences/ geographic location/ lifestyle habits;
2. Cost of goods to determine profitability and
3. Operational processes to highlight factors that can mitigate inefficiencies/bottlenecks were unavailable .

Additionally, there are key operational data that could potentially underscore key revenue drivers such as :

1. Customer wait times
2. Time taken to prepare the pizza
3. Method of payment - e.g. cash/ credit card
4. Delivery options- online order and pick up / online order and delivery/ in restaurant
5. Lack of supplier information

Assumptions

- The highest revenue was generated in July. This may be due to Canada Day Celebrations and Summer Holidays.
- The October decline may be due to Thanksgiving Holidays where traditionally families tend to cook meals rather than order take out.
- Profitability could not be determined due to limited information. With this in mind, we are measured in our recommendations . It is assumed that other metrics of financial health will be used in tandem with this report.

Conclusions

Large-sized pizzas (L) generated the highest revenue, highlighting customer preference for larger portions. On the other hand, the XXL size had the lowest revenue, suggesting potential adjustments or reconsideration of this size option.

Fridays yielded the highest revenue among the days of the week, indicating a peak in customer demand. Sundays, on the other hand, had the least revenue, potentially signaling a lower customer turnout.

Targeted marketing strategies such as discount codes could be deployed to ensure BlackTech stays top of mind to ultimately increase revenue on slower days.

Despite the highest revenue raised in Quarter 2, month of July stood out with the highest revenue (July is in Quarter 3) while October had the lowest revenue. This indicates the impact of seasonal variations on customer preferences and sales.

Adjustments in marketing, promotions, or menu offerings could be made to capitalize on high-demand periods and stimulate sales during slow months.

Recommendations

Black TECH

MEAT LOVERS FRIDAY

Day of the Week: Fridays

Meat Lover's Friday

Pizza offering: "BBQ Bacon Carnivore Pizza" - A meat lover's delight topped with BBQ sauce, crispy bacon, seasoned ground beef, pepperoni, and a blend of melted cheeses.

Promotion: Buy one large Meat Lover's pizza and get a second one at 50% off

50% off

JULY SUMMER SPECIAL:

Pizza offering: "Sizzling' BBQ Chicken Pizza" - A summertime favorite featuring grilled chicken, red onions, cilantro, and a tangy BBQ sauce drizzle.

10% off any size of the Sizzling' BBQ Chicken Pizza for the entire month of July.

10% off any size

LUNCHTIME SPECIAL (11 AM - 4 PM)

Pizza offering: "Mediterranean Brunch Pizza" - A delightful brunch-inspired pizza topped with scrambled eggs, feta cheese, roasted red peppers, spinach, and a drizzle of garlic-infused olive oil

15% off any size of the Mediterranean Brunch Pizza during lunch hours.

15% off any size

I recommend capturing customer demographic information in order to identify customer preferences so that BlackTech can better leverage data to deep dive to better understand and meet customer needs.

Additionally, information related to operational efficiencies such as the wait time from customer placing the order to delivery and time taken to prepare a pizza can unmask barriers that can directly affect customer satisfaction and in turn the bottom line.

Collating information about Mode of payment, delivery, pickup or dine in can also reveal areas for improvement.

References & Data sources

BlackTech Pizza
ChatGPT
Google

Thank You