

# ANALYSIS REPORT

This report consists of the analysis of pizza sales data(Jan 2015 to Dec 2015) as directed by the manager of the pizza store 'Pizza Kitchen', located in NY, USA. The store is open from 9:00 to 23:00, throughout the week.

## ANALYSIS

**1. Total Revenue:** The total revenue generated throughout the year is calculated as **\$817.86K**. The month with the **highest** revenue was **July** with revenue of **\$72.56K**, **8.87%** of total revenue. The month with the lowest revenue was **October** with revenue of **\$64.03K**, **7.82%** of total revenue.

**2. Total Orders:** Total orders for the year are **21350**.

**3. Average Order Value(AOV):** The avg. order value for the year is **\$38.31**. The month with the **highest** AOV was **November** with **AOV = \$39.28** and the Month with the **lowest** AOV was **August** with **AOV = \$37.09**. Whereas **July**(Highest revenue and total orders month) has **AOV = \$37.50**, less than **2.11%** from AOV for the year.

**4. Total Pizzas Sold:** Total Pizzas sold in the year are **49574**, with **max** pizzas sold in **July = 4392** (**8.85%** of Total Pizzas Sold) and **min.** in **October = 3883** (**7.83%** of Total Pizzas Sold).

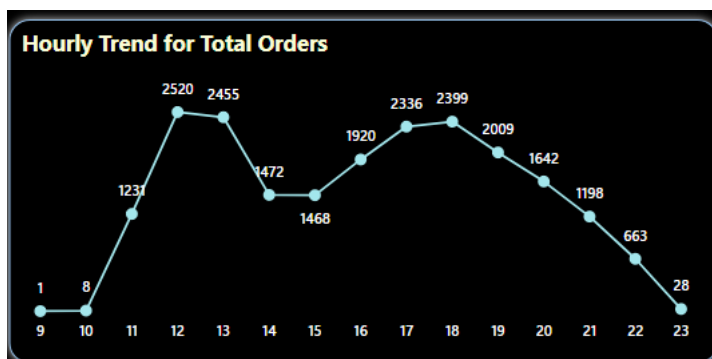
**5. Average Pizzas Per Order(APO):** The avg. pizzas per order for the year is **2.32**. **November** had the **highest APO = 2.38** and **August** had the **lowest APO = 2.26**.

**6. Hourly Trend for Total Orders:** (**Note:** Hour 9 means from 9-10, Hour 10 means from 10-11, and so on. Also this data is in 24-hour format.)

**Peak** order hours were **12(2520 orders)**, **13(2455 orders)** and **17(2336 orders)**, **18(2399 orders)**.

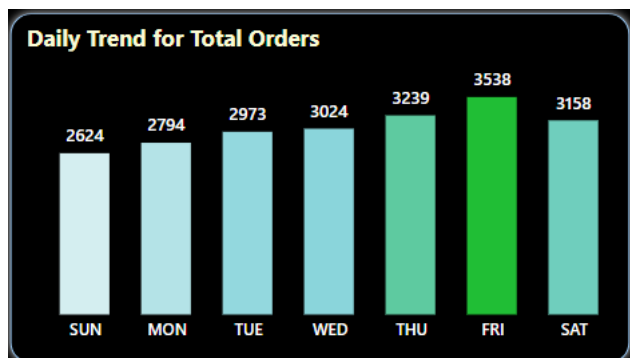
Hours with the **lowest** orders were Morning Hours of **9(1 order)**, **10(8 orders)**, and late-night hour of **23(28 orders)**.

Across all **15 Order Hours**, Total Orders ranged from **1 to 2520**. Orders were highest during noon which is mostly lunchtime for most of the offices and schools, then orders were dropped by **40%** and then during hours 17 and 18, which is the evening time, orders rose again. After that orders started to get drop and dropped to 28 during hour 23.



**7. Daily Trend for Total Orders:** Peak order days were Friday(3538 orders), Thursday(3239 orders) and Saturday(3158 orders). Days with the lowest orders were Sunday(2794 orders) and Monday(2624 orders).

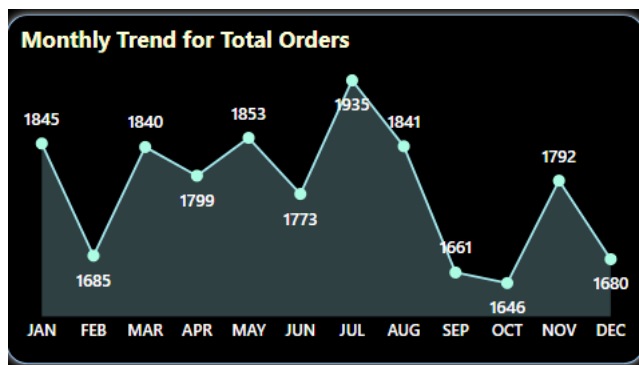
Across 7 days, Total Orders ranged from 2624 to 3538. Friday contributed 16.57% to total orders. Monday contributed 12.29% to total orders



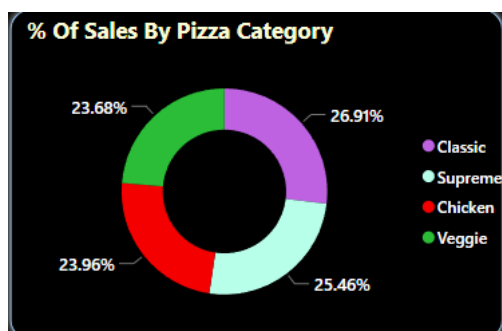
**8. Monthly Trend for Total Orders:** Peak order months were July(1935 orders), May(1853 orders), and January(1845 orders).

The months with the lowest orders were October(1646 orders), September(1661 orders), and December(1680 orders).

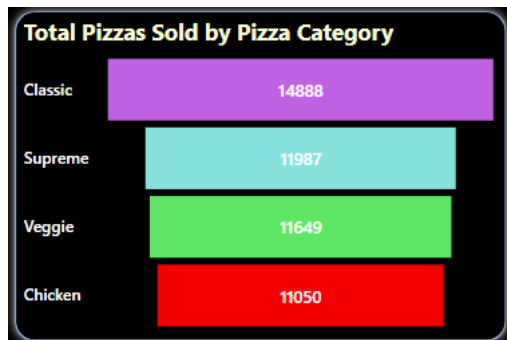
Across all 12 Months, Total Orders ranged from 1680 to 1935. Orders were second highest in January, then dropped by 8.67% in Feb, then rose again and were above average during spring and June. Then orders peaked in July, and third highest in August. This means the pizza store's business was best during summer, followed by spring. Then orders were below average during autumn and winter except for November and January.



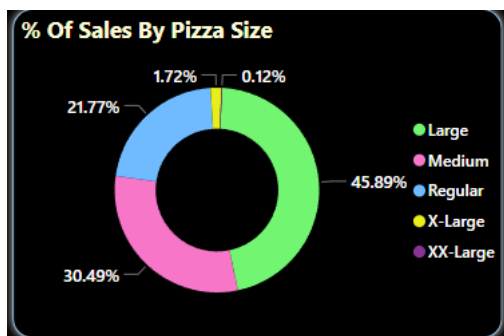
**9. Percentage of Sales by Pizza Category:** Classic accounted for 26.91% of Total Revenue, followed by Supreme(25.46%), Chicken(23.96%) and Veggie(23.68%).



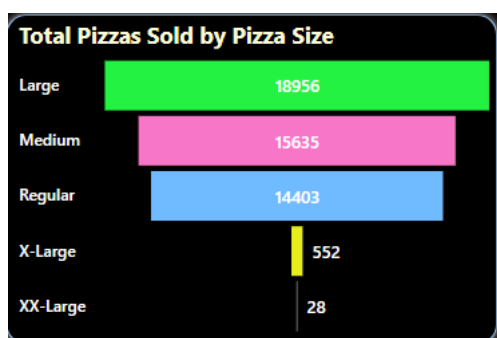
**10. Total Pizzas Sold by Pizza Category:** **Classic** topped the chart with **14888** pizzas sold, followed by **Supreme(11987)**, **Veggie(11649)** and **Chicken(11050)**. Even though pizzas sold by the **Chicken Category** are less than the pizzas sold by the **Veggie category** by 5.42%, the revenue generated by the **Chicken category** is more by 0.28%.



**11. Percentage of Sales by Pizza Size:** **Large** accounted for **45.89%** of Total Revenue, followed by **Medium(30.49%)**, **Regular(21.77%)**, **X-Large(1.72%)**, and **XX-Large(0.12%)**.



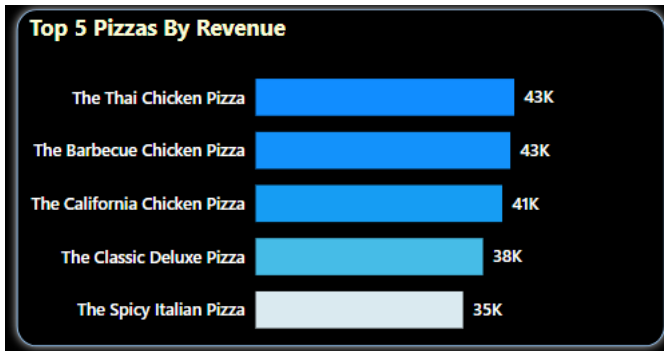
**12. Total Pizzas Sold by Pizza Size:** **Large** topped the chart with **18956** pizzas sold, followed by **Medium(15635)**, **Regular(14403)**, **X-Large(552)**, and **XX-Large(28)**. **Large** contributes to **88.78%** to total orders whereas **XX-Large** contributes to only **0.13%** to total orders.



### 13. Top 5 Best Sellers:

#### Revenue

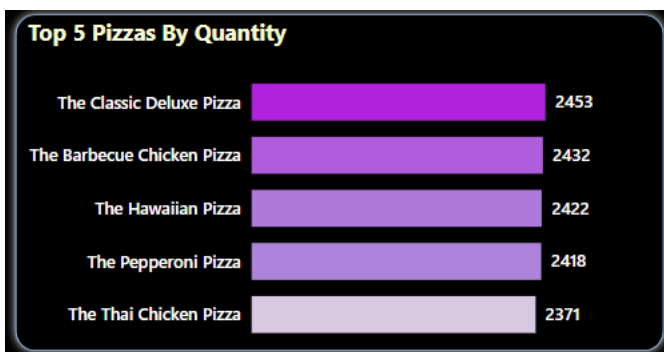
**The Thai Chicken Pizza(\$43434.25)** is the best seller followed by **The Barbeque Chicken Pizza(\$42768)**, **The California Chicken Pizza(\$41409.5)**, **The Classic Deluxe Pizza(\$38180.50)**, and **The Spicy Italian Pizza(\$34831.25)**.



### Total Quantity (Total Pizzas Sold)

**The Classic Deluxe Pizza(2453)** is the best seller followed by **The Barbeque Chicken Pizza(2432)**, **The Hawaiian Pizza(2422)**, **The Pepperoni Pizza(2418)**, and **The Thai Chicken Pizza(2371)**.

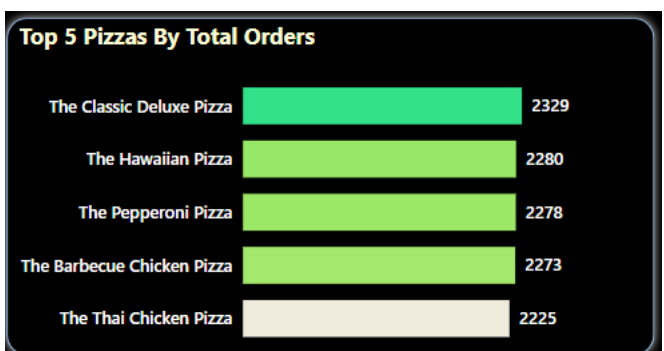
**The Thai Chicken Pizza** is sold 0.04% less than **The Classic Deluxe Pizza**, however, the revenue generated by **The Thai Chicken Pizza** is 12% more than **The Classic Deluxe Pizza**.



### Total Orders

**The Classic Deluxe Pizza(2329)** is the best seller followed by **The Hawaiian Pizza(2280)**, **The Pepperoni Pizza(2278)**, **The Barbeque Chicken Pizza(2273)**, and **The Thai Chicken Pizza(2225)**.

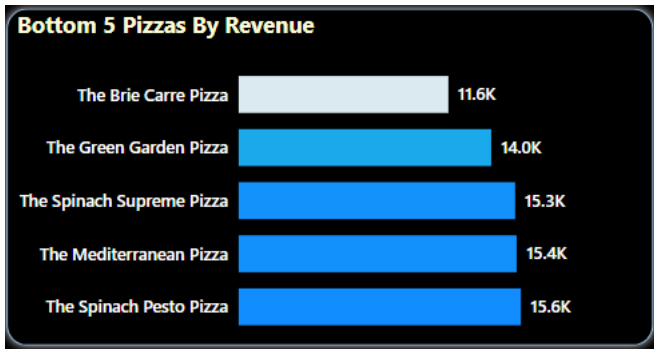
**The Thai Chicken Pizza** is sold 0.04% less than **The Classic Deluxe Pizza**, however, the revenue generated by **The Thai Chicken Pizza** is 12% more than **The Classic Deluxe Pizza**.



## 14. Top 5 Worst Sellers:

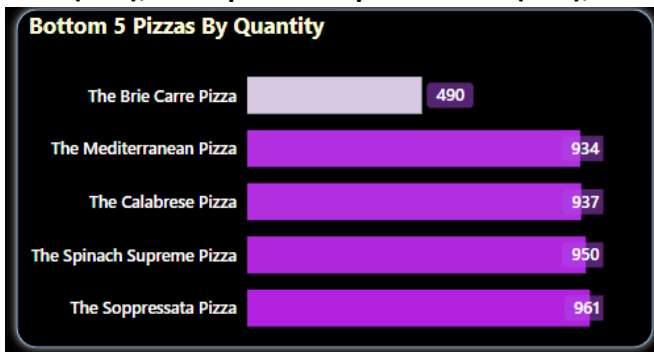
### Revenue

**The Brie Carre Pizza(\$11588.50)** is the worst seller followed by **The Green Garden Pizza(\$13955.75)**, **The Spinach Supreme Pizza(\$15277.75)**, **The Mediterranean Pizza(\$15360.50)**, and **The Spinach Pesto Pizza(\$15596)**.



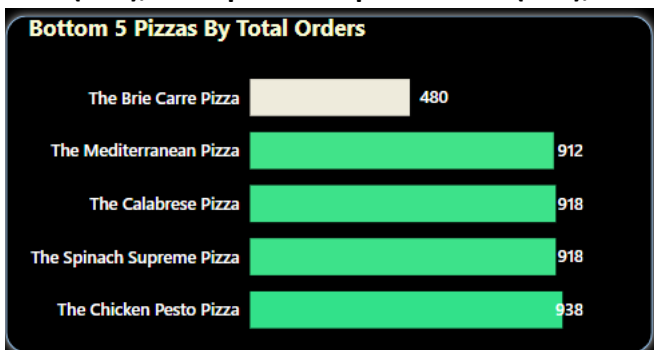
### Total Quantity (Total Pizzas Sold)

**The Brie Carre Pizza(490)** is the worst seller followed by **The Mediterranean Pizza(934)**, **The Calabrese Pizza(937)**, **The Spinach Supreme Pizza(950)**, and **The Soppressata Pizza(961)**.



### Total Orders

**The Brie Carre Pizza(480)** is the worst seller followed by **The Mediterranean Pizza(912)**, **The Calabrese Pizza(918)**, **The Spinach Supreme Pizza(918)**, and **The Soppressata Pizza(938)**.



Following are the two KPIs that are not mentioned in the problem statement, and I believe these to be important indicators for pizza sales analysis.

**15. Avg. Total Revenue Pizza Wise:** Across all pizzas, revenue ranged from **\$43434.25** for **The Thai Chicken Pizza** to **\$11588.50** for **The Brie Carre Pizza**. So, Avg. Total Revenues pizza-wise is **\$27511.37**.

**16. Revenue To Quantity (RTQ):** This is a ratio calculated by dividing the **total revenue** generated by a specific pizza by its **quantity sold**. This ratio determines which pizzas are generating more revenue even if their quantity sold is less. This will help us to curate offers.

From the tree map given below, it's clear that **The Brie Carre Pizza**(worst seller by revenue and total quantity) has the highest **RTQ of 23.65**. This means that an increase in the sale of this pizza will increase the revenue the most as compared to the other pizzas.

The **Big Meat Pizza** has the least **RTQ of 12**, still, it's not in the top 5 worst sellers by revenue or by total quantity. This means that an increase in the sale of this pizza will not help in generating more revenue.

