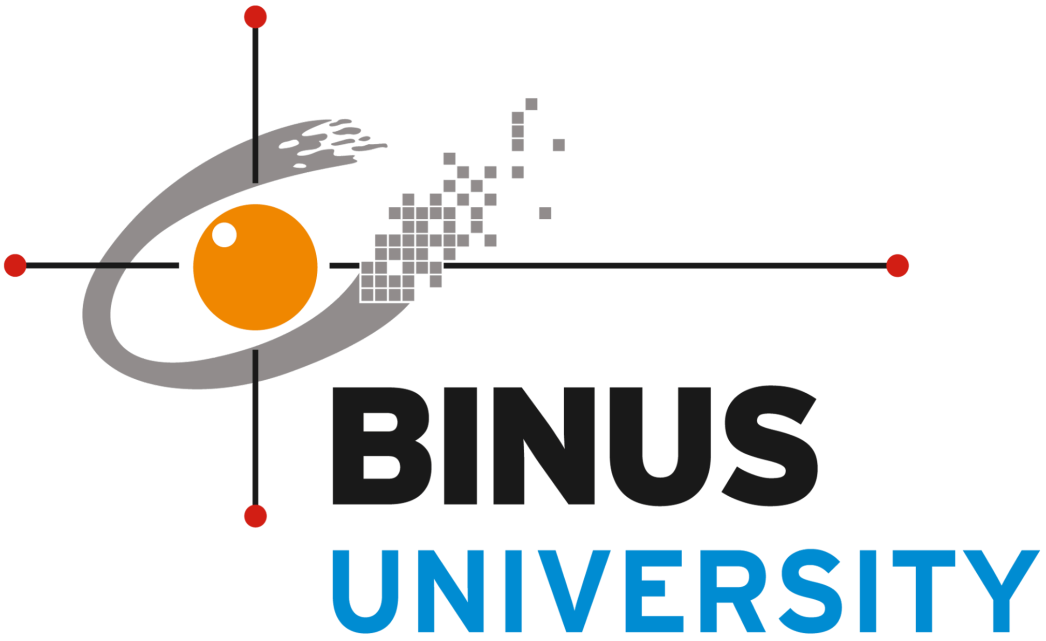
Pizza Sales Report



DV Final Project Report

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I. Problem Statement

This dataset is about pizza sales that contains detailed information about pizza orders, including specifics about the pizza variants, quantities, pricing, dates, times, and categorization details. This dataset consists of 12 columns. And we imagine ourselves as a data analyst team that tries to make a pizza sales report and send it to our "boss".

Question to be answer as problem statement:

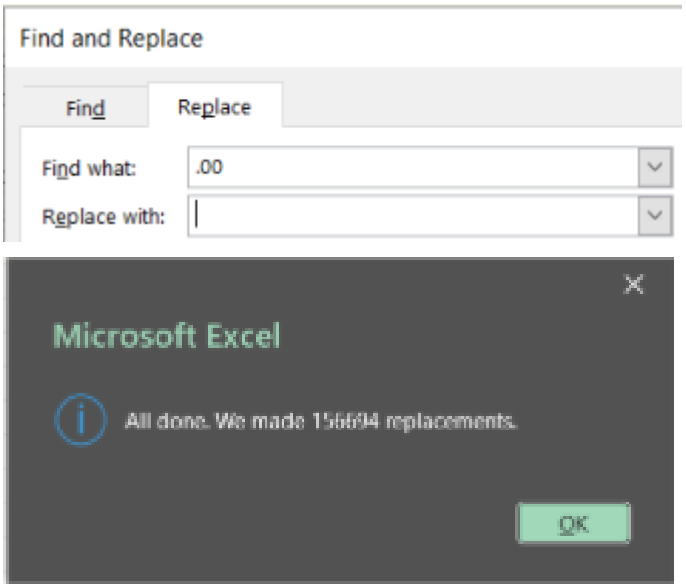
1. Which pizzas generate the most revenue and which ones underperform?
2. What size pizzas do customers buy the most?
3. Total pizza sales by category
4. When do the most orders occur? Are there any seasonal or weekly trends?

II. Data Cleaning Steps (duplicates & missing values handling)

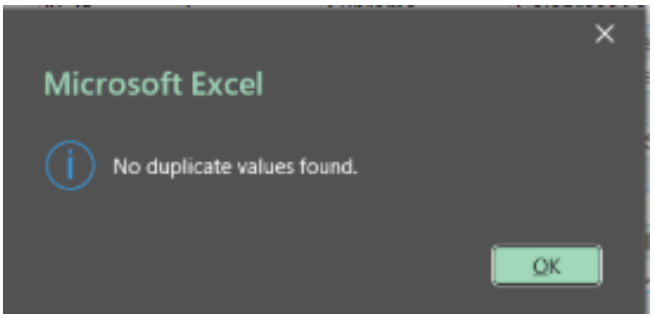
We performed a data cleaning step from the pizza sales data set in Excel, where we found that there was messy data formatting, namely in the pizza_id, order_id, and unit_price columns with a number format like this:

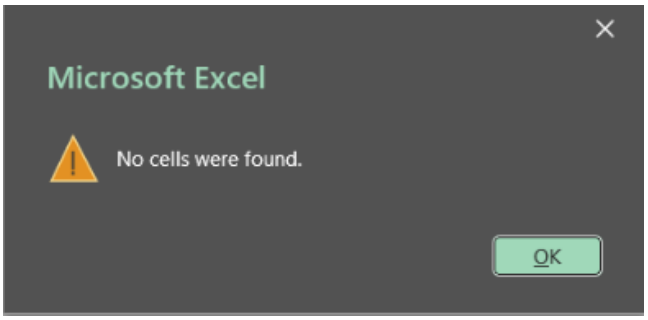
pizza_id	order_id
1.00	1.00
2.00	2.00
3.00	2.00

Then we use the find and replace feature, and change it to a neater format by removing the .00



For duplicates and missing values, this dataset is clean and does not contain either of these.





III. Key Descriptive Statistics

Kategori Pizza	Mean	Median	Minimum	Maximum
Chicken	18.11	16.75	12.75	83
Classic	15.09	14.45	9.75	61.5
Supreme	17.67	16.5	12.25	62.25
Veggie	16.91	16.75	12	55.5

- **Chicken** is both the most expensive price group and also has the largest mean. As such, pizzas within this category will have higher sale values. They perhaps also come

with higher-end ingredients and/or larger portion sizes. That staggering price tag of 83 would most like result from an enormous sale or an enormous-size pizza.

- **Classic** is lowest for mean and median hence this category becomes both economical and suitable for price-conscious customers.
- **Supreme** and **Veggie** have exactly the same values for the middle (16.5–16.75), and these values indicate price stability and popularity within the price category of mid-range.
- This tells us that the distribution of price is not skewed very much, except perhaps for Chicken with a very large maximum, perhaps resulting from an outlier such as a bulk buy or supersized serving.

Bulan	Mean	Median	Minimum	Maximum
January	16.79	15.36	9.75	62.25
February	16.74	15.78	9.75	48.75
March	16.81	15.9	9.75	48
April	16.9	15.83	9.75	51
May	16.84	15.46	9.75	62.25
June	16.95	15.90	9.75	51

Bulan	Mean	Median	Minimum	Maximum
July	16.87	15.95	9.75	48
August	16.67	16.1	9.75	41.5
September	16.8	15.4	9.75	83
October	16.86	15.42	9.75	62.25
November	16.82	15.63	9.75	55.5
December	16.76	15.75	9.75	51

- **Monthly averages** of pizzas sales remain steady with variation only from 16.67–16.95, indicating no variation whatsoever from month to month on prices.
- **The median point** for pizzas' monthly sale values ranges from 15.36 to 16.10. Half of all sales on a month-to-month basis fall within this area, and can be classed as extremely stable and consistent for a period spanning a whole year.
- It always has at least a **minimum** of 9.75 per month, assuming the lowest-priced pizza most likely being a small Classic.

- The September peak **maximum** of 83 was also a record September peak Chicken price. This could be due to an order for a big Chicken pizza and/or a bulk order.
- There are no particular seasonal trends for prices. Nevertheless, the trend for sales volume may be different.

IV. Explanation of Our Visualizations

1. **Which pizzas generate the most revenue and which ones underperform?**
   Top performing pizzas are usually chicken pizzas. **Thai Chicken Pizza and Barbecue Chicken Pizza both earned $43K, which are the best sellers.** Others that sell a lot are the California Chicken Pizza, Classic Deluxe, and Spicy Italian Pizza. Yet others did not do as well. **The lowest-selling pizza was the Brie Carre Pizza at $12K, then Green Garden, Spinach Supreme, Mediterranean, and Spinach Pesto Pizzas selling between $14K and $16K.** These lower-selling pizzas are mostly vegetarian.
   Recommendation: Promote best-selling pizzas with offers, meal packs, or bundle. For lower-selling pizzas, try enhancing the recipes, marketing them differently, or maybe cutting them and making room for new ones that would sell better.

2. **What size pizzas do customers buy the most?**
   Most individuals sell Large pizzas, which represent close to 46% of sales. There are also good sales for Medium and Regular size pizzas, with 30.5% and 21.8%. **Not many people buy Extra Large or Super Extra Large pizzas** together they represent less than 2% of sales. This shows that normal-sized pizzas are most preferred by customers.
   Recommendation: Direct promotions and prices at the most sought-after sizes especially Large. Reduce stock or promote the Extra Large sizes and reserve them for special events or campaigns only.

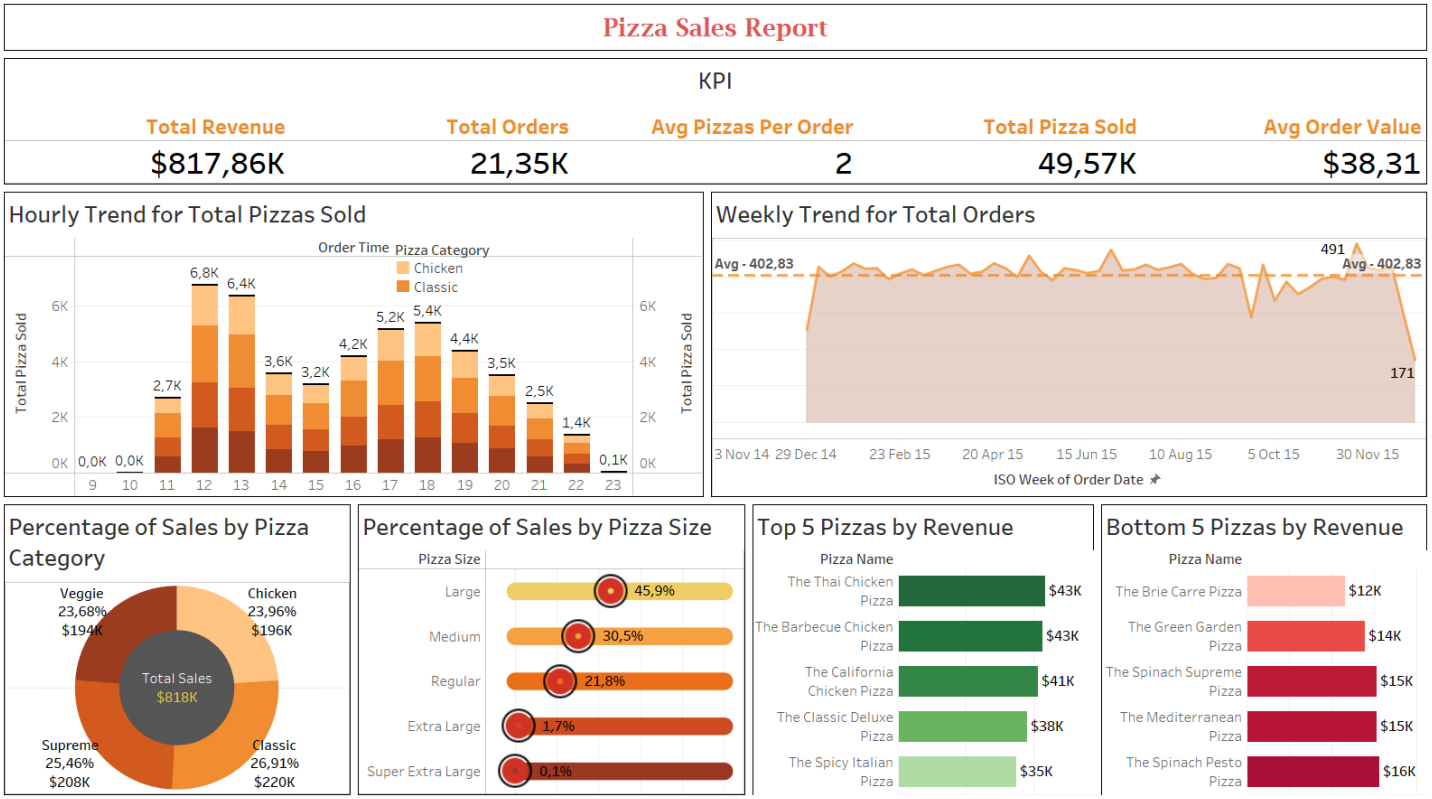
3. **Total pizza sales by category**
   Classic pizzas make the highest sales with a share of 27%. Supreme, Chicken, and Veggie pizzas follow closely behind, each having a share of about 23–25% of overall sales. All varieties, therefore, sell quite decently, but **Classic and Supreme pizzas just barely better.**
   Recommendation: Keep all four varieties available to accommodate different tastes but target Classic and Supreme pizzas in promotions. We can even introduce new seasonal varieties within these leading groups to keep customers interested.

4. **When do the most orders occur? Are there any seasonal or weekly trends?**
   Most pizzas are sold at lunchtime, especially at 12 PM and 1 PM, and **also at 6 PM for the evening dinner**. Few orders occur in the early morning or late evening. If one examines patterns for the week, orders remain constant throughout most of the year with a mean of around 403 orders per week. There is a massive decline towards the

end with just 171 orders in one week and a high of 491 orders in another. Sales are otherwise consistent with minor fluctuations.

Recommendation: Coordinate time-of-day promotions, like "lunch specials" or "dinner combos," to mesh with rush hours. During slow weeks, try limited-time discounts, repeat business rewards, or events to keep customers coming year-round.

V. Dashboard



Link Dashboard (Tableau)

https://public.tableau.com/app/profile/owen.pangalila5042/viz/PizzaSalesReportDashboard_17487921799740/Dashboard1?publish=yes

Link Presentation (PPT):

https://www.canva.com/design/DAGn6KbB9WI/i7cpKG6esZcMiDz_fP71Bg/edit?utm_content=DAGn6KbB9WI&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton