# Pizza Analysis Report

- Total Number of Unique Order

```
SELECT COUNT(DISTINCT order_id) AS unique_orders
FROM orders;
```

| | unique_orders bigint |
|---|---|
| 1 | 21350 |

- Percent of Order Volume changed month-over-month and year-over-year?

```
WITH monthly_orders AS(
    SELECT *,
        EXTRACT (MONTH FROM date) as month
    FROM orders
)
SELECT month,
    COUNT(order_id) as order_count,
    LAG(COUNT(order_id)) OVER(order by month) as prev_month,
     CONCAT(ROUND(100.0 * (COUNT(order_id) -
              LAG(COUNT(order_id)) OVER(order by month))
     / NULLIF(LAG(COUNT(order_id)) OVER(order by month),0),2),'%') AS mom_growth_pct
FROM monthly_orders
GROUP BY month
ORDER BY month;
```

| | month numeric | order_count bigint | prev_month bigint | mom_growth_pct text |
|---|---|---|---|---|
| 1 | 1 | 1845 | [null] | % |
| 2 | 2 | 1685 | 1845 | -8.67% |
| 3 | 3 | 1840 | 1685 | 9.20% |
| 4 | 4 | 1799 | 1840 | -2.23% |
| 5 | 5 | 1853 | 1799 | 3.00% |
| 6 | 6 | 1773 | 1853 | -4.32% |
| 7 | 7 | 1935 | 1773 | 9.14% |
| 8 | 8 | 1841 | 1935 | -4.86% |
| 9 | 9 | 1661 | 1841 | -9.78% |
| 10 | 10 | 1646 | 1661 | -0.90% |
| 11 | 11 | 1792 | 1646 | 8.87% |
| 12 | 12 | 1680 | 1792 | -6.25% |

- Identify peak and off-peak ordering days

```
SELECT
    TO_CHAR(DATE, 'Day') AS day_name,
    COUNT(order_id) AS number_of_Order
FROM orders
GROUP BY 1
ORDER BY 2;
```

| | day_name text | number_of_order bigint |
|---|---|---|
| 1 | Sunday | 2624 |
| 2 | Monday | 2794 |
| 3 | Tuesday | 2973 |
| 4 | Wednesday | 3024 |
| 5 | Saturday | 3158 |
| 6 | Thursday | 3239 |
| 7 | Friday | 3538 |

- Is Order volumes vary by day of the week (e.g., weekends vs weekdays)?

```
WITH daywise_order AS(
    SELECT
        EXTRACT(ISODOW FROM date) as day_of_week,
        COUNT(order_id) as total_order
    FROM orders
    GROUP BY 1
    ORDER BY 1
)
SELECT
    day_of_week,
    total_order,
    LAG(total_order) OVER(ORDER BY day_of_week) as prev_day,
    ROUND(100 * (total_order - LAG(total_order) OVER(ORDER BY day_of_week))
    / NULLIF(LAG(total_order) OVER(ORDER BY day_of_week),0),2)
FROM daywise_order
```

| | day_of_week numeric | total_order bigint | prev_day bigint | round numeric |
|---|---|---|---|---|
| 1 | 1 | 2794 | [null] | [null] |
| 2 | 2 | 2973 | 2794 | 6.00 |
| 3 | 3 | 3024 | 2973 | 1.00 |
| 4 | 4 | 3239 | 3024 | 7.00 |
| 5 | 5 | 3538 | 3239 | 9.00 |
| 6 | 6 | 3158 | 3538 | -10.00 |
| 7 | 7 | 2624 | 3158 | -16.00 |

- Expected order growth trend based on historical data?

```sql
SELECT
    date,
    COUNT(DISTINCT order_id) as daily_order,
    SUM(COUNT(DISTINCT order_id)) OVER(ORDER BY date) as cumlative_orders
FROM orders
GROUP BY 1
ORDER BY 1;
```

| | date<br>date | daily_order<br>bigint | cumlative_orders<br>numeric |
|---|---|---|---|
| 1 | 2015-01-01 | 69 | 69 |
| 2 | 2015-01-02 | 67 | 136 |
| 3 | 2015-01-03 | 66 | 202 |
| 4 | 2015-01-04 | 52 | 254 |
| 5 | 2015-01-05 | 54 | 308 |
| 6 | 2015-01-06 | 64 | 372 |
| 7 | 2015-01-07 | 58 | 430 |
| 8 | 2015-01-08 | 72 | 502 |
| 9 | 2015-01-09 | 62 | 564 |

Total rows: 358 of 358 Query complete 00:00:00.143 Ln 212, Col 82

- Total Revenue from Pizza Sales (KPIs)

```sql
SELECT SUM(o.quantity * p.price) AS total_revenue
FROM order_details as o
    JOIN pizzas as p ON o.pizza_id = p.pizza_id;
```

| | total_revenue<br>numeric |
|---|---|
| 1 | 817860.05 |

- Top 5 Highest-Priced Pizza

```sql
SELECT
    name,
    category,
    size,
    price
FROM pizzas as pz
    JOIN pizza_types as pz_ty ON pz.pizza_type_id = pz_ty.pizza_type_id
ORDER BY price DESC
LIMIT 5;
```

| | name character varying (50) | category character varying (10) | size character varying (8) | price numeric (5,2) |
|---|---|---|---|---|
| 1 | The Greek Pizza | Classic | XXL | 35.95 |
| 2 | The Greek Pizza | Classic | XL | 25.50 |
| 3 | The Brie Carre Pizza | Supreme | S | 23.65 |
| 4 | The Italian Vegetables Pizza | Veggie | L | 21.00 |
| 5 | The Barbecue Chicken Pizza | Chicken | L | 20.75 |

- Total Number of Pizza Size Ordered

```
SELECT
    p.size,
    COUNT(od.order_details_id) as total_order
FROM order_details as od
    JOIN pizzas as p ON od.pizza_id = p.pizza_id
GROUP BY 1
ORDER BY 1;
```

| | size character varying (8) | total_order bigint |
|---|---|---|
| 1 | L | 18526 |
| 2 | M | 15385 |
| 3 | S | 14137 |
| 4 | XL | 544 |
| 5 | XXL | 28 |

- Top 5 Most Ordered Pizza Types

```
SELECT
    p.pizza_type_id,
    pt.name,
    COUNT(order_details_id) as total_sold
FROM order_details AS od
    JOIN pizzas AS p ON od.pizza_id = p.pizza_id
    JOIN pizza_types AS pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY 1, 2
ORDER BY 3 DESC
LIMIT 5;
```

| | pizza_type_id character varying (20) | name character varying (50) | total_sold bigint |
|---|---|---|---|
| 1 | classic_dlx | The Classic Deluxe Pizza | 2416 |
| 2 | bbq_ckn | The Barbecue Chicken Pizza | 2372 |
| 3 | hawaiian | The Hawaiian Pizza | 2370 |
| 4 | pepperoni | The Pepperoni Pizza | 2369 |
| 5 | thai_ckn | The Thai Chicken Pizza | 2315 |

- Bottom 5 Least Ordered Pizza Types

```
SELECT p.pizza_type_id, pt.name, COUNT(order_details_id)
FROM order_details AS od
    JOIN pizzas AS p ON od.pizza_id = p.pizza_id
    JOIN pizza_types AS pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY 1, 2
ORDER BY 3 ASC
LIMIT 5;
```

| | pizza_type_id<br>character varying (20) | name<br>character varying (50) | total_sold<br>bigint |
|---|---|---|---|
| 1 | classic_dlx | The Classic Deluxe Pizza | 2416 |
| 2 | bbq_ckn | The Barbecue Chicken Pizza | 2372 |
| 3 | hawaiian | The Hawaiian Pizza | 2370 |
| 4 | pepperoni | The Pepperoni Pizza | 2369 |
| 5 | thai_ckn | The Thai Chicken Pizza | 2315 |

- Total Quantity sold by Pizza Category

```
SELECT pt.category, SUM(od.quantity) AS total_qnty_sold
FROM order_details as od
    JOIN pizzas as p ON od.pizza_id = p.pizza_id
    JOIN pizza_types as pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY 1
ORDER BY 2 desc;
```

| | category<br>character varying (10) | total_qnty_sold<br>bigint |
|---|---|---|
| 1 | Classic | 14888 |
| 2 | Supreme | 11987 |
| 3 | Veggie | 11649 |
| 4 | Chicken | 11050 |

- Pizza Order by Hours of the Day

```
SELECT
    EXTRACT(HOUR FROM time) as hour,
    COUNT(*) as total_pizza_order
FROM orders as o
    JOIN order_details as od on o.order_id = od.order_id
GROUP BY 1
ORDER BY 1 ASC;
```

| | hour numeric | total_pizza_order bigint |
|---|---|---|
| 1 | 9 | 4 |
| 2 | 10 | 17 |
| 3 | 11 | 2672 |
| 4 | 12 | 6543 |
| 5 | 13 | 6203 |
| 6 | 14 | 3521 |
| 7 | 15 | 3170 |
| 8 | 16 | 4185 |
| 9 | 17 | 5143 |

Total rows: 15 of 15 Query complete 00:00:00.108 Ln 329, Col 16

- Category Wise Pizza Sold

```
SELECT pt.category, COUNT(od.order_details_id) AS pizza_sold_in_each_category
FROM orders AS o
    JOIN order_details AS od ON o.order_id = od.order_id
    JOIN pizzas AS p ON p.pizza_id = od.pizza_id
    JOIN pizza_types AS pt ON p.pizza_type_id = pt.pizza_type_id
GROUP BY 1
ORDER BY 2 DESC;
```

| | category character varying (10) | pizza_sold_in_each_category bigint |
|---|---|---|
| 1 | Classic | 14579 |
| 2 | Supreme | 11777 |
| 3 | Veggie | 11449 |
| 4 | Chicken | 10815 |

- Average Pizzas Ordered per Day

```
SELECT ROUND(AVG(daily_order),2) as avg_order_per_day
FROM
    (SELECT date, SUM(QUANTITY) AS daily_order
    FROM orders AS o
        JOIN order_details AS od ON o.order_id = od.order_id
    GROUP BY 1
)
```

| | avg_order_per_day numeric |
|---|---|
| 1 | 138.47 |

- Top 5 Pizzas by Revenue

```
SELECT
    pt.name AS pizza,
    SUM(od.quantity * p.price) AS revenue
FROM order_details AS od
    JOIN pizzas AS p On od.pizza_id = p.pizza_id
    JOIN pizza_types AS pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5;
```

| | pizza<br>character varying (50) | revenue<br>numeric |
|---|---|---|
| 1 | The Thai Chicken Pizza | 43434.25 |
| 2 | The Barbecue Chicken Pizza | 42768.00 |
| 3 | The California Chicken Pizza | 41409.50 |
| 4 | The Classic Deluxe Pizza | 38180.50 |
| 5 | The Spicy Italian Pizza | 34831.25 |

- Bottom 5 Pizzas by Revenue

```
WITH CTE AS(
    SELECT
        pt.name AS pizza,
        SUM(od.quantity * p.price) AS revenue,
        RANK() OVER(ORDER BY SUM(od.quantity * p.price)) AS rank
    FROM order_details AS od
        JOIN pizzas AS p On od.pizza_id = p.pizza_id
        JOIN pizza_types AS pt ON pt.pizza_type_id = p.pizza_type_id
    GROUP BY 1
)
SELECT pizza, revenue
FROM CTE
WHERE rank <= 5;
```

| | pizza<br>character varying (50) | revenue<br>numeric |
|---|---|---|
| 1 | The Brie Carre Pizza | 11588.50 |
| 2 | The Green Garden Pizza | 13955.75 |
| 3 | The Spinach Supreme Pizza | 15277.75 |
| 4 | The Mediterranean Pizza | 15360.50 |
| 5 | The Spinach Pesto Pizza | 15596.00 |

- Revenue Contribution by Each Pizza in Percentage(%)

```
SELECT
    pt.name AS pizza,
    SUM(od.quantity * p.price) AS revenue,
    CONCAT(ROUND(100 * SUM(od.quantity * p.price) / SUM(SUM(od.quantity * p.price))OVER(),2),'%') pcnt_contribution
FROM order_details AS od
    JOIN pizzas AS p On od.pizza_id = p.pizza_id
    JOIN pizza_types AS pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY 1
ORDER BY 3 DESC;
```

| | pizza<br>character varying (50) | revenue<br>numeric | pcnt_contribution<br>text |
|---|---|---|---|
| 1 | The Thai Chicken Pizza | 43434.25 | 5.31% |
| 2 | The Barbecue Chicken Pizza | 42768.00 | 5.23% |
| 3 | The California Chicken Pizza | 41409.50 | 5.06% |
| 4 | The Classic Deluxe Pizza | 38180.50 | 4.67% |
| 5 | The Spicy Italian Pizza | 34831.25 | 4.26% |
| 6 | The Southwest Chicken Pizza | 34705.75 | 4.24% |
| 7 | The Italian Supreme Pizza | 33476.75 | 4.09% |
| 8 | The Hawaiian Pizza | 32273.25 | 3.95% |
| 9 | The Four Cheese Pizza | 32265.70 | 3.95% |

Total rows: 32 of 32 Query complete 00:00:00.113 Ln 418, Col 55

- Cumulative Revenue Over Month-on-Month

```
SELECT
    month,
    monthy_revenue,
    SUM(monthy_revenue) OVER(ORDER BY month) AS cumulative_revenue
FROM
    (SELECT
        EXTRACT(MONTH FROM o.date) AS month,
        SUM(od.quantity * p.price) AS monthy_revenue
    FROM orders AS o
        JOIN order_details AS od ON o.order_id = od.order_id
        JOIN pizzas AS p ON p.pizza_id = od.pizza_id
    GROUP BY 1
    ORDER BY 1
);
```

| | month numeric | monthy_revenue numeric | cumulative_revenue numeric |
|---|---|---|---|
| 1 | 1 | 69793.30 | 69793.30 |
| 2 | 2 | 65159.60 | 134952.90 |
| 3 | 3 | 70397.10 | 205350.00 |
| 4 | 4 | 68736.80 | 274086.80 |
| 5 | 5 | 71402.75 | 345489.55 |
| 6 | 6 | 68230.20 | 413719.75 |
| 7 | 7 | 72557.90 | 486277.65 |
| 8 | 8 | 68278.25 | 554555.90 |
| 9 | 9 | 64180.05 | 618735.95 |
| 10 | 10 | 64027.60 | 682763.55 |
| 11 | 11 | 70395.35 | 753158.90 |
| 12 | 12 | 64701.15 | 817860.05 |

Total rows: 12 of 12 Query complete 00:00:00.114 Ln 452, Col 1

- Average Order Size

```
SELECT ROUND(AVG(total_order),2) AS avg_order_per_person
FROM (
    SELECT
        order_id,
        SUM(quantity) as total_order
    FROM order_details
    GROUP BY 1
)
```

| | avg_order_per_person numeric |
|---|---|
| 1 | 2.32 |

- Monthly Trends

```
SELECT
    EXTRACT(MONTH FROM date) AS month,
    COUNT(*) AS num_of_order
FROM orders
GROUP BY 1
ORDER BY 1;
```

| | month numeric | num_of_order bigint |
|---|---|---|
| 1 | 1 | 1845 |
| 2 | 2 | 1685 |
| 3 | 3 | 1840 |
| 4 | 4 | 1799 |
| 5 | 5 | 1853 |
| 6 | 6 | 1773 |
| 7 | 7 | 1935 |

- Revenue by Pizza Size

```
SELECT p.size, SUM(od.quantity * p.price) as revenue
FROM order_details AS od
    JOIN pizzas AS p ON od.pizza_id = p.pizza_id
GROUP BY 1
order by 2 DESC;
```

| | size character varying (8) | revenue numeric |
|---|---|---|
| 1 | L | 375318.70 |
| 2 | M | 249382.25 |
| 3 | S | 178076.50 |
| 4 | XL | 14076.00 |
| 5 | XXL | 1006.60 |