

PIZZA SALES

ORDER
NOW

Start Your Slide





HELLO!

My Name is Jaysai Tandel

This project demonstrates SQL skills and techniques typically used by data analysts to explore, clean, and analyze retail sales data. The project involves setting up a pizza sales database, performing exploratory data analysis (EDA), and answering business questions through SQL queries.



DATA CLEANING



Fine Duplicate Values

```
SELECT * FROM pizza_sales
WHERE
    pizza_id IS NULL OR order_id IS NULL
    OR pizza_name_id IS NULL OR quantity IS NULL
    OR order_date IS NULL OR order_time IS NULL
    OR unit_price IS NULL OR total_price IS NULL
    OR pizza_size IS NULL OR pizza_ingredients IS NULL
    OR pizza_name IS NULL;
```

DATA EXPLORAON



How many sales we have ?

```
SELECT COUNT(*) AS total_sales FROM pizza_sales
```

| | total_sales |
|---|-------------|
| 1 | 48620 |

DATA EXPLORAON



How many unique orders we have ?

```
SELECT COUNT(DISTINCT order_id) AS unique_orders  
FROM pizza_sales
```

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

DATA EXPLORAON

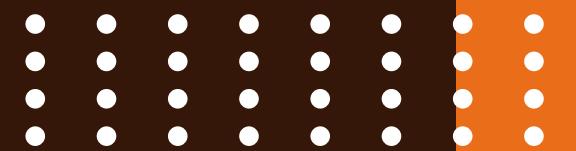


How many unique product categories in the dataset ?

```
SELECT DISTINCT pizza_category from pizza_sales
```

| | pizza_category |
|---|----------------|
| 1 | Classic |
| 2 | Chicken |
| 3 | Veggie |
| 4 | Supreme |

DATA ANALYSIS

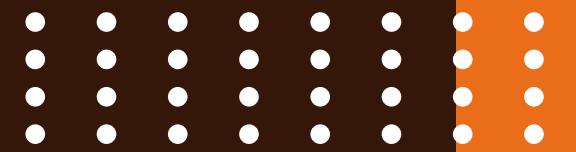


retrieve all columns for sales made on '2015-10-03'

```
SELECT *
FROM pizza_sales
WHERE order_date = '2015-10-03'
```

| | pizza_id | order_id | pizza_name_id | quantity | order_date | order_time | unit_price | total_price | pizza_size | pizza_category | pizza_ingredients | pizza_name |
|----|----------|----------|---------------|----------|------------|------------------|------------|-------------|------------|----------------|---|------------------------------|
| 1 | 37091 | 16378 | calabrese_l | 1 | 2015-10-03 | 11:53:41.0000000 | 20.25 | 20.25 | L | Supreme | ?duja Salami, Pancetta, Tomatoes, Red Onions, Friggi... | The Calabrese Pizza |
| 2 | 37092 | 16379 | pepperoni_m | 1 | 2015-10-03 | 12:00:47.0000000 | 12.5 | 12.5 | M | Classic | Mozzarella Cheese, Pepperoni | The Pepperoni Pizza |
| 3 | 37093 | 16380 | classic_dlx_s | 1 | 2015-10-03 | 12:02:51.0000000 | 12 | 12 | S | Classic | Pepperoni, Mushrooms, Red Onions, Red Peppers, B... | The Classic Deluxe Pizza |
| 4 | 37094 | 16380 | ital_veggie_m | 1 | 2015-10-03 | 12:02:51.0000000 | 16.75 | 16.75 | M | Veggie | Eggplant, Artichokes, Tomatoes, Zucchini, Red Pepper... | The Italian Vegetables Pizza |
| 5 | 37095 | 16381 | napolitana_l | 1 | 2015-10-03 | 12:04:45.0000000 | 20.5 | 20.5 | L | Classic | Tomatoes, Anchovies, Green Olives, Red Onions, Garlic | The Napolitana Pizza |
| 6 | 37096 | 16381 | pepperoni_l | 1 | 2015-10-03 | 12:04:45.0000000 | 15.25 | 15.25 | L | Classic | Mozzarella Cheese, Pepperoni | The Pepperoni Pizza |
| 7 | 37097 | 16382 | big_meat_s | 2 | 2015-10-03 | 12:09:45.0000000 | 12 | 24 | S | Classic | Bacon, Pepperoni, Italian Sausage, Chorizo Sausage | The Big Meat Pizza |
| 8 | 37098 | 16382 | five_cheese_l | 1 | 2015-10-03 | 12:09:45.0000000 | 18.5 | 18.5 | L | Veggie | Mozzarella Cheese, Provolone Cheese, Smoked Goud... | The Five Cheese Pizza |
| 9 | 37099 | 16383 | pepperoni_s | 1 | 2015-10-03 | 12:22:07.0000000 | 9.75 | 9.75 | S | Classic | Mozzarella Cheese, Pepperoni | The Pepperoni Pizza |
| 10 | 37100 | 16384 | classic_dlx_m | 1 | 2015-10-03 | 12:29:09.0000000 | 16 | 16 | M | Classic | Pepperoni, Mushrooms, Red Onions, Red Peppers, B... | The Classic Deluxe Pizza |

DATA ANALYSIS

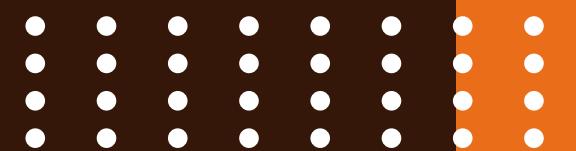


retrieve all transactions where the Pizza category is
'Classic' in the month of Nov-2015

```
SELECT * FROM pizza_sales
WHERE pizza_category = 'Classic'
    AND FORMAT(order_date, 'yyyy-MM') = '2015-11'
```

| | pizza_id | order_id | pizza_name_id | quantity | order_date | order_time | unit_price | total_price | pizza_size | pizza_category | pizza_ingredients | pizza_name |
|----|----------|----------|---------------|----------|------------|------------------|------------|-------------|------------|----------------|---|-----------------------------|
| 1 | 40578 | 17880 | big_meat_s | 1 | 2015-11-01 | 12:12:20.0000000 | 12 | 12 | S | Classic | Bacon, Pepperoni, Italian Sausage, Chorizo Sausage | The Big Meat Pizza |
| 2 | 40582 | 17880 | hawaiian_m | 1 | 2015-11-01 | 12:12:20.0000000 | 13.25 | 13.25 | M | Classic | Sliced Ham, Pineapple, Mozzarella Cheese | The Hawaiian Pizza |
| 3 | 40583 | 17880 | hawaiian_s | 1 | 2015-11-01 | 12:12:20.0000000 | 10.5 | 10.5 | S | Classic | Sliced Ham, Pineapple, Mozzarella Cheese | The Hawaiian Pizza |
| 4 | 40584 | 17880 | napolitana_m | 1 | 2015-11-01 | 12:12:20.0000000 | 16 | 16 | M | Classic | Tomatoes, Anchovies, Green Olives, Red Onions, Garlic | The Napolitana Pizza |
| 5 | 40585 | 17880 | pepperoni_m | 1 | 2015-11-01 | 12:12:20.0000000 | 12.5 | 12.5 | M | Classic | Mozzarella Cheese, Pepperoni | The Pepperoni Pizza |
| 6 | 40587 | 17881 | ital_cpcllo_s | 1 | 2015-11-01 | 12:23:50.0000000 | 12 | 12 | S | Classic | Capocollo, Red Peppers, Tomatoes, Goat Cheese, Gar... | The Italian Capocollo Pizza |
| 7 | 40588 | 17882 | classic_dlx_m | 1 | 2015-11-01 | 12:31:08.0000000 | 16 | 16 | M | Classic | Pepperoni, Mushrooms, Red Onions, Red Peppers, B... | The Classic Deluxe Pizza |
| 8 | 40589 | 17883 | big_meat_s | 1 | 2015-11-01 | 12:38:50.0000000 | 12 | 12 | S | Classic | Bacon, Pepperoni, Italian Sausage, Chorizo Sausage | The Big Meat Pizza |
| 9 | 40593 | 17886 | classic_dlx_l | 1 | 2015-11-01 | 13:02:02.0000000 | 20.5 | 20.5 | L | Classic | Pepperoni, Mushrooms, Red Onions, Red Peppers, B... | The Classic Deluxe Pizza |
| 10 | 40601 | 17887 | napolitana_m | 1 | 2015-11-01 | 13:09:02.0000000 | 16 | 16 | M | Classic | Tomatoes, Anchovies, Green Olives, Red Onions, Garlic | The Napolitana Pizza |

DATA ANALYSIS

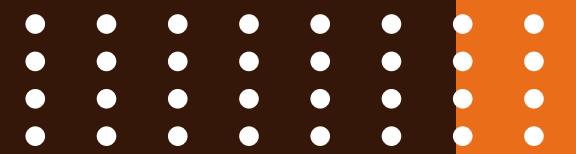


calculate the total sales (total_sale) for each Pizza category.

```
SELECT pizza_category,  
       SUM(CAST(total_price AS DECIMAL(10,2))) AS net_sale,  
       COUNT(*) AS total_orders  
FROM pizza_sales  
GROUP BY pizza_category;
```

| | pizza_category | net_sale | total_orders |
|---|----------------|-----------|--------------|
| 1 | Classic | 220053.10 | 14579 |
| 2 | Chicken | 195919.50 | 10815 |
| 3 | Veggie | 193690.45 | 11449 |
| 4 | Supreme | 208197.00 | 11777 |

DATA ANALYSIS

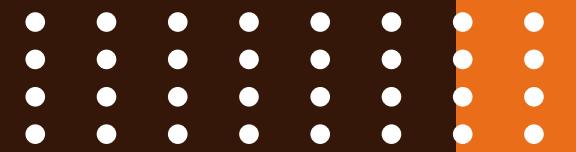


Find the average unit price of customers who purchased items from the 'Veggie' category.

```
SELECT  
    ROUND(AVG(unit_price),2) AS avg_unit_price  
FROM pizza_sales  
WHERE pizza_category = 'Veggie'
```

| | avg_unit_price |
|---|----------------|
| 1 | 16.61 |

DATA ANALYSIS

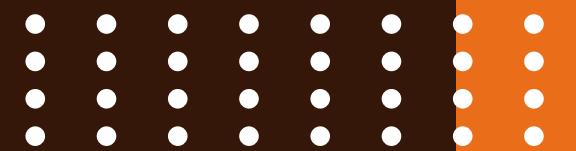


Find all transactions where the total_price is greater than 15.

```
SELECT * FROM pizza_sales  
WHERE total_price > 15
```

| | pizza_id | order_id | pizza_name_id | quantity | order_date | order_time | unit_price | total_price | pizza_size | pizza_category | pizza_ingredients | pizza_name |
|----|----------|----------|----------------|----------|------------|------------------|------------|-------------|------------|----------------|--|----------------------------------|
| 1 | 2 | 2 | classic_dlx_m | 1 | 2015-01-01 | 11:57:40.0000000 | 16 | 16 | M | Classic | Pepperoni, Mushrooms, Red Onions, Red Peppers, B... | The Classic Deluxe Pizza |
| 2 | 3 | 2 | five_cheese_l | 1 | 2015-01-01 | 11:57:40.0000000 | 18.5 | 18.5 | L | Veggie | Mozzarella Cheese, Provolone Cheese, Smoked Goud... | The Five Cheese Pizza |
| 3 | 4 | 2 | ital_supr_l | 1 | 2015-01-01 | 11:57:40.0000000 | 20.75 | 20.75 | L | Supreme | Calabrese Salami, Capocollo, Tomatoes, Red Onions, ... | The Italian Supreme Pizza |
| 4 | 5 | 2 | mexicana_m | 1 | 2015-01-01 | 11:57:40.0000000 | 16 | 16 | M | Veggie | Tomatoes, Red Peppers, Jalapeno Peppers, Red Onio... | The Mexicana Pizza |
| 5 | 6 | 2 | thai_ckn_l | 1 | 2015-01-01 | 11:57:40.0000000 | 20.75 | 20.75 | L | Chicken | Chicken, Pineapple, Tomatoes, Red Peppers, Thai Sw... | The Thai Chicken Pizza |
| 6 | 7 | 3 | ital_supr_m | 1 | 2015-01-01 | 12:12:28.0000000 | 16.5 | 16.5 | M | Supreme | Calabrese Salami, Capocollo, Tomatoes, Red Onions, ... | The Italian Supreme Pizza |
| 7 | 8 | 3 | prsc_argla_l | 1 | 2015-01-01 | 12:12:28.0000000 | 20.75 | 20.75 | L | Supreme | Prosciutto di San Daniele, Arugula, Mozzarella Cheese | The Prosciutto and Arugula Pizza |
| 8 | 9 | 4 | ital_supr_m | 1 | 2015-01-01 | 12:16:31.0000000 | 16.5 | 16.5 | M | Supreme | Calabrese Salami, Capocollo, Tomatoes, Red Onions, ... | The Italian Supreme Pizza |
| 9 | 10 | 5 | ital_supr_m | 1 | 2015-01-01 | 12:21:30.0000000 | 16.5 | 16.5 | M | Supreme | Calabrese Salami, Capocollo, Tomatoes, Red Onions, ... | The Italian Supreme Pizza |
| 10 | 17 | 9 | ital_cpcollo_l | 1 | 2015-01-01 | 12:52:01.0000000 | 20.5 | 20.5 | L | Classic | Capocollo, Red Peppers, Tomatoes, Goat Cheese, Gar... | The Italian Capocollo Pizza |

DATA ANALYSIS

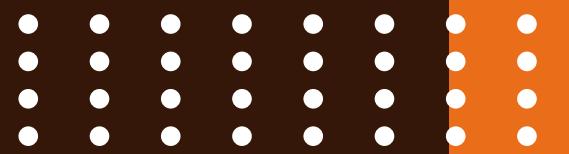


Find the total number of transactions (order_id) made by each category.

```
SELECT pizza_category,  
       COUNT(*) AS total_transaction  
FROM pizza_sales  
GROUP BY pizza_category;
```

| | pizza_category | total_transaction |
|---|----------------|-------------------|
| 1 | Classic | 14579 |
| 2 | Chicken | 10815 |
| 3 | Veggie | 11449 |
| 4 | Supreme | 11777 |

DATA ANALYSIS

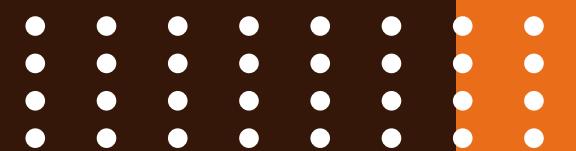


Calculate the average sale for each month. Find out best selling month in each year

```
WITH monthly_sales AS (
    SELECT
        YEAR(order_date) AS year,
        MONTH(order_date) AS month,
        AVG(total_price) AS avg_sale
    FROM pizza_sales
    GROUP BY YEAR(order_date), MONTH(order_date)
)
SELECT year, month, avg_sale
FROM (
    SELECT
        year,
        month,
        avg_sale,
        RANK() OVER (PARTITION BY year ORDER BY avg_sale DESC) AS rank
    FROM monthly_sales
) t1
WHERE rank = 1;
```

| | year | month | avg_sale |
|---|------|-------|------------------|
| 1 | 2015 | 6 | 16.9516025007734 |

DATA ANALYSIS

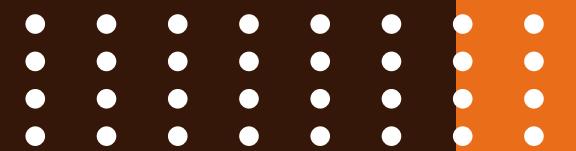


Find the top 5 pizza name based on the highest total sales

```
SELECT TOP 5
    pizza_name,
    SUM(total_price) as total_sales
FROM pizza_sales
GROUP BY pizza_name
ORDER BY SUM(total_price) DESC
```

| | pizza_name | total_sales |
|---|------------------------------|-------------|
| 1 | The Thai Chicken Pizza | 43434.25 |
| 2 | The Barbecue Chicken Pizza | 42768 |
| 3 | The California Chicken Pizza | 41409.5 |
| 4 | The Classic Deluxe Pizza | 38180.5 |
| 5 | The Spicy Italian Pizza | 34831.25 |

DATA ANALYSIS

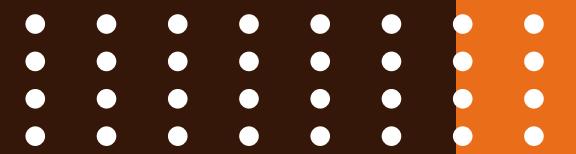


Find the number of unique customers who purchased items from each category.

```
SELECT  
    pizza_category,  
    COUNT(DISTINCT order_id) AS cnt_unique_cs  
FROM pizza_sales  
GROUP BY pizza_category;
```

| | pizza_category | cnt_unique_cs |
|---|----------------|---------------|
| 1 | Classic | 10859 |
| 2 | Chicken | 8536 |
| 3 | Veggie | 8941 |
| 4 | Supreme | 9085 |

DATA ANALYSIS



Create each shift and number of orders (Example Morning <12, Afternoon Between 12 & 17, Evening >17)

```
WITH hourly_sale AS (
    SELECT *,
        CASE
            WHEN DATEPART(HOUR, order_time) < 12 THEN 'Morning'
            WHEN DATEPART(HOUR, order_time) BETWEEN 12 AND 17 THEN 'Afternoon'
            ELSE 'Evening'
        END AS shift
    FROM pizza_sales
)
SELECT
    shift,
    SUM(total_price) AS total_sales
FROM hourly_sale
GROUP BY shift;
```

| | shift | total_sales |
|---|-----------|------------------|
| 1 | Evening | 286107.450283051 |
| 2 | Morning | 45322.4500484467 |
| 3 | Afternoon | 486430.150506973 |

**THANK YOU
FOR ATTENTION**