PIZZA SALES REPORT

BY SONAM CHAUHAN

HELLO!!

My name is Sonam Chauhan. I've done my B. tech from Data science from IIT Mandi. In this project i have utilized SQL quarries to solve pizza sales related questions.

ABOUT DATASET

I have dataset naming pizza sales, which contains 4 tables as below.

pizza_id	pizza_type_id	size	price
bbq_ckn_s	bbq_ckn	S	12.75
bbq_ckn_m	bbq_ckn	M	16.75
bbq_ckn_l	bbq_ckn	L	20.75
cali_ckn_s	cali_ckn	S	12.75
cali_ckn_m	cali_ckn	M	16.75

order_details_id	order_id	pizza_id	quantity
1	1	hawaiian_m	1
2	2	classic_dlx_m	1
3	2	five_cheese_l	1
4	2	ital_supr_l	1
5	2	mexicana_m	1

order_id	order_date	order_time
1	2015-01-01	11:38:36
2	2015-01-01	11:57:40
3	2015-01-01	12:12:28
4	2015-01-01	12:16:31
5	2015-01-01	12:21:30

pizza_type_id	name	category	ingredients
bbq_ckn	The Barbecue Chicken Pizza	Chicken	Barbecued Chic
cali_ckn	The California Chicken Pizza	Chicken	Chicken, Articho
ckn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red O
ckn_pesto	The Chicken Pesto Pizza	Chicken	Chicken, Tomat
southw_ckn	The Southwest Chicken Pizza	Chicken	Chicken, Tomat

RETRIVE THE TOTAL NUMBER OF ORDERWS PLACED

```sql
SELECT
    COUNT(order_id) AS total_orders
FROM
    orders;
```

Result Grid

total_orders
21350

CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

```sql
SELECT
round(SUM(order_details.quantity * pizzas.price),3) AS total_pizza_sales
FROM order_details JOIN pizzas
ON pizzas.pizza_id = order_details.pizza_id;
```

Result Grid

	total_pizza_sales
▶	535488.75

IDENTIFY THE HIGHEST-PRICED PIZZA.

```sql
select pizza_types.name, pizzas.price
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
order by pizzas.price desc limit 1;
```

Result Grid | Filter Ro

	name	price
▶	The Greek Pizza	35.95

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```
select pizzas.size, count(order_details.order_details_id) as order_count
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id
group by pizzas.size order by order_count desc;
```

Result Grid | Filte

size	order_count
L	12125
M	10104
S	9202
XL	371
XXL	18

LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES.

```
select pizza_types.name, sum(order_details.quantity) as quantity
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.name order by quantity desc limit 5;
```

Result Grid | Filter Rows:

name	quantity
The Barbecue Chicken Pizza	1619
The Classic Deluxe Pizza	1578
The Pepperoni Pizza	1577
The California Chicken Pizza	1560
The Hawaiian Pizza	1551

JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.

```
select pizza_types.category, sum(order_details.quantity) as quantity
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category;
```

Result Grid | Filter

	category	quantity
▶	Classic	9707
	Veggie	7687
	Supreme	7857
	Chicken	7190

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

```
select hour(order_time), count(order_id)
from orders
group by hour(order_time);
```

Result Grid | Filter Rows:

hour(order_time)	count(order_id)
11	1231
12	2520
13	2455
14	1472
15	1468

JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS.

```
select category, count(name)
from pizza_types
group by category;
```

Result Grid | Filter Rows:

category	count(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

```
select round(avg(quantity),1) as average_number_of_pizzas_ordered_per_day from
(select orders.order_date, sum(order_details.quantity) as quantity
from orders join order_details
on orders.order_id = order_details.order_id
group by orders.order_date) as total_orders;
```

	average_number_of_pizzas_ordered_per_day
▶	138.6

DETERMINE THE MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY.

```sql
select category, name, revenue,
rank() over(partition by category order by revenue desc) as rn
from
(select pizza_types.category, pizza_types.name,
sum((order_details.quantity) * pizzas.price) as revenue
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category, pizza_types.name) as a;
```

Result Grid | Filter Rows: | Export: | Wrap Cell

category	name	revenue	rn
Chicken	The Thai Chicken Pizza	43434.25	1
Chicken	The Barbecue Chicken Pizza	42768	2
Chicken	The California Chicken Pizza	41409.5	3
Chicken	The Southwest Chicken Pizza	34705.75	4

CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

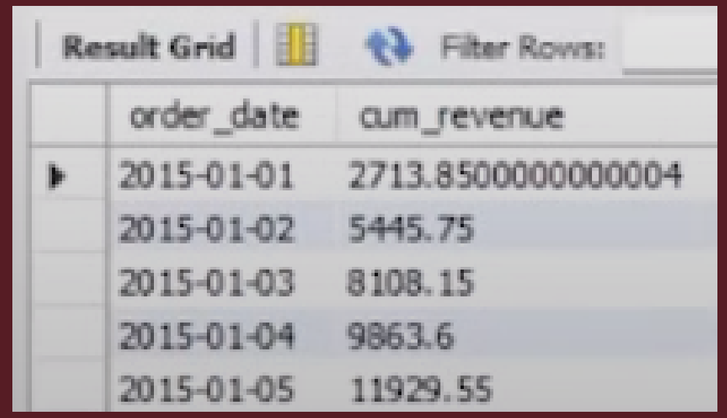
```sql
select pizza_types.category,
round(sum(order_details.quantity*pizzas.price) / (SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_sales
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id) *100,2) as revenue
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category order by revenue desc;
```

Result Grid

category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

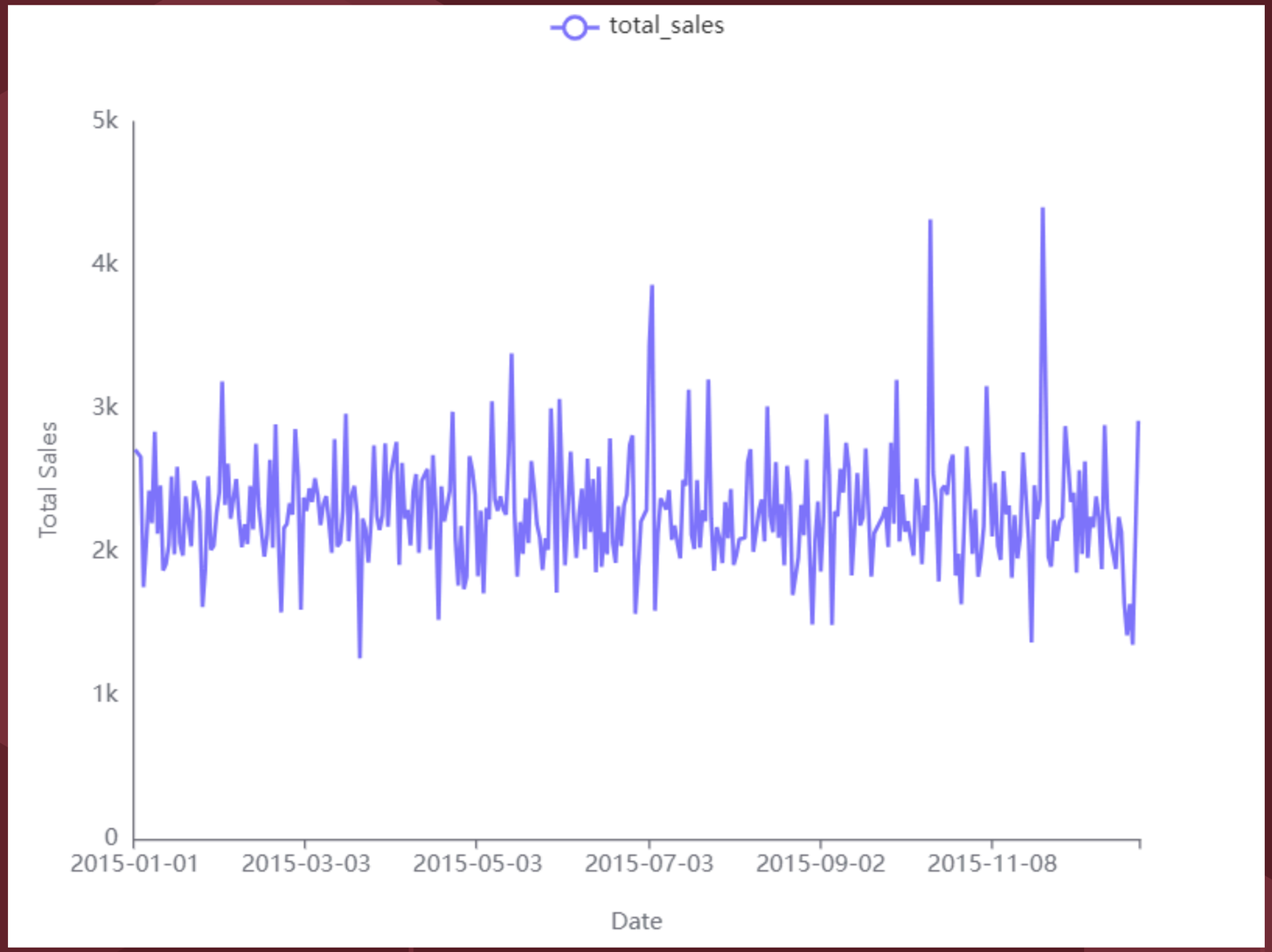
ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```
select order_date,
sum(revenue) over(order by order_date) as cum_revenue
from
(select orders.order_date,
sum(order_details.quantity * pizzas.price) as revenue
from order_details join pizzas
on order_details.pizza_id = pizzas.pizza_id
join orders
on orders.order_id = order_details.order_id
group by orders.order_date) as sales;
```



order_date	cum_revenue
2015-01-01	2713.850000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55

TOTAL SALES PER DAY USING A LINE CHART



CONCLUSION

The analysis indicates a strong market preference for **Classic and Supreme pizzas**, particularly in larger sizes. The sales trends suggest that promotions or special events might significantly impact daily sales, and there might be an opportunity to **boost sales in the Veggie category and larger pizza sizes**. Strategic promotions, especially on slower days and for less popular categories or sizes, could help in evening out the sales distribution and increasing overall revenue.

THANK YOU

25 May, 2024