

RESTAURANTS ORDER ANALYTICS

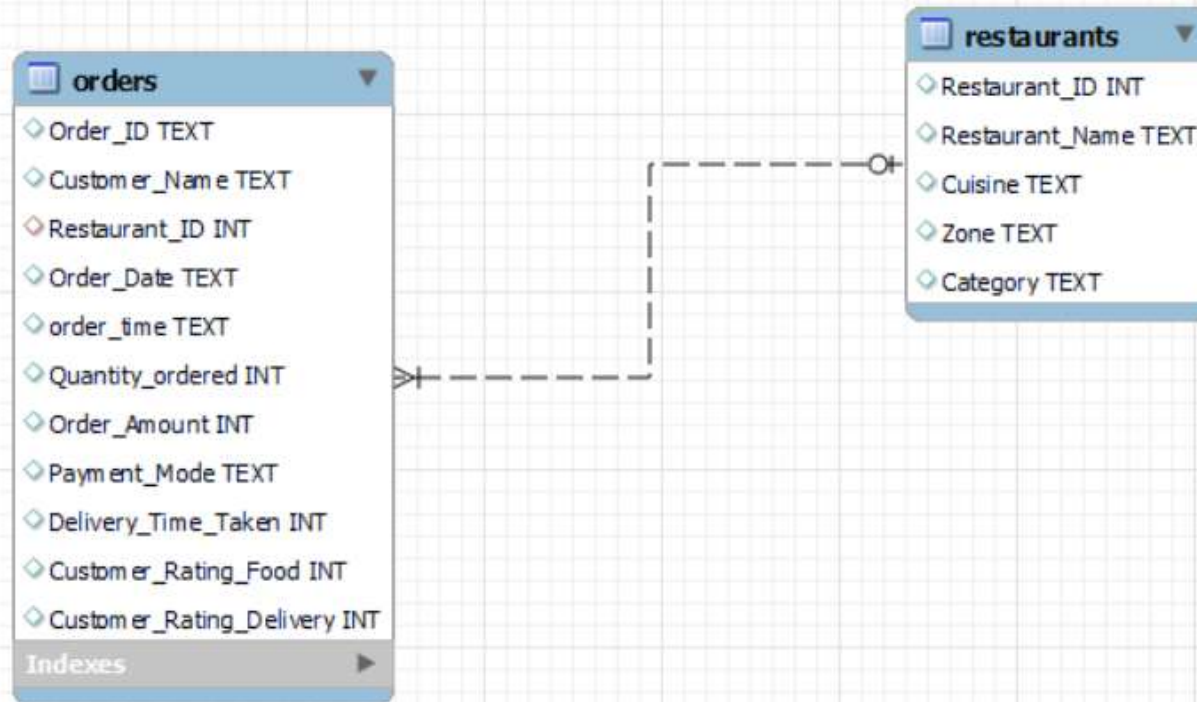




PROBLEM STATEMENT

- A few restaurants reviewed their sales and discovered a decline. To gain deeper insights, they approached an **Analytics Firm** and explained their problem.
- The company assigned the task to a skilled data analyst to identify the reasons behind the decline in sales.

DATA MODEL





REPEATED CUSTOMER'S AMOUNT IN TOTAL AMOUNT

```
/* repeated customer sale percentage in total AMOUNT */
```

```
WITH rc AS (  
    SELECT  
        orders.customer_name,  
        orders.restaurant_id,  
        restaurants.restaurant_name,  
        COUNT(orders.customer_name) AS repeat_time,  
        SUM(orders.order_amount) AS total_amount  
    FROM orders  
    INNER JOIN restaurants  
        ON orders.restaurant_id = restaurants.restaurant_id  
    GROUP BY orders.customer_name, orders.restaurant_id,  
        restaurants.restaurant_name  
    HAVING COUNT(orders.customer_name) > 1  
,  
  
    nc AS (  
        SELECT  
            orders.restaurant_id,  
            restaurants.restaurant_name,  
            SUM(orders.order_amount) AS total_amount  
        FROM orders  
        INNER JOIN restaurants  
            ON orders.restaurant_id = restaurants.restaurant_id  
        GROUP BY orders.restaurant_id, restaurants.restaurant_name  
    )  
  
    SELECT  
        DISTINCT rc.restaurant_name,  
        (rc.total_amount * 100.0) / NULLIF(nc.total_amount, 0) AS  
        repeat_custamt_in_totalamount  
    FROM rc  
    INNER JOIN nc  
        ON rc.restaurant_id = nc.restaurant_id  
    ORDER BY repeat_custamt_in_totalamount DESC;
```




RESTAURANT WITH LESS EFFICIENCY SCORE

```
/* 5 RESTAURANTS HAVING LESS EFFICIENCY SCORE */
```

```
select * from (
```

```
select
```

```
restaurants.restaurant_name,
```

```
(avg(orders.delivery_time_taken))/(avg(orders.customer_rating_food) +
```

```
avg(orders.customer_rating_delivery)) as efficiency_score
```

```
from
```

```
restaurants
```

```
inner join
```

```
orders on
```

```
restaurants.restaurant_id = orders.restaurant_id
```

```
group by 1
```

```
order by
```

```
(avg(orders.delivery_time_taken))/(avg(orders.customer_rating_food) +
```

```
avg(orders.customer_rating_delivery)) asc)b
```

```
limit 5;
```




CUSTOMER HAVING ORDERED MORE THAN 3 TIMES

```
/* restaurant having good cuisines and good food rating, delivery rating  
*/
```

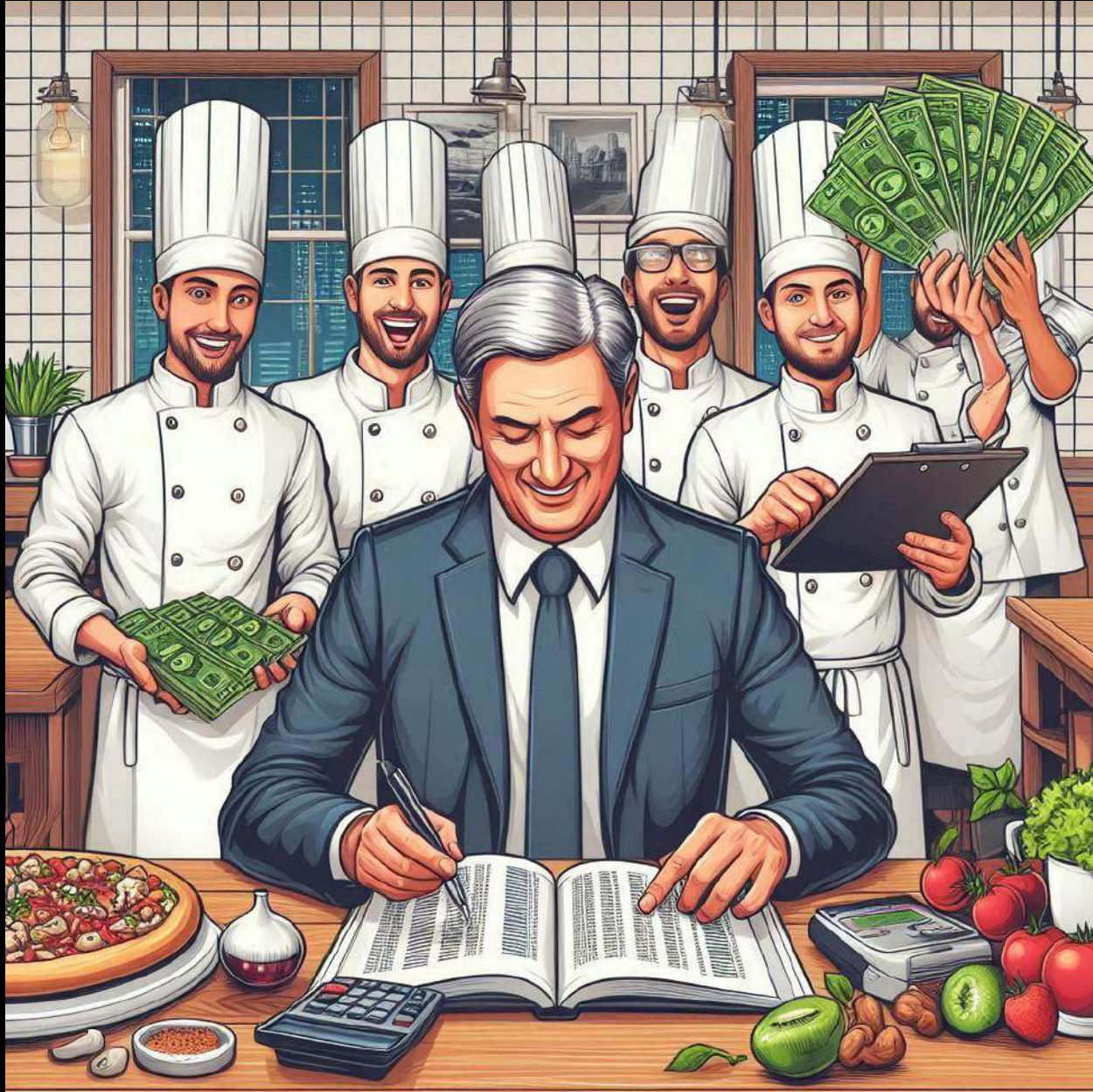
```
WITH cte1 AS (  
    SELECT DISTINCT  
        restaurants.restaurant_name,  
        restaurants.cuisine  
    FROM orders  
    LEFT JOIN restaurants ON orders.restaurant_id =  
        restaurants.restaurant_id  
    WHERE orders.customer_rating_food >= 4  
        AND orders.customer_rating_delivery >= 4  
)  
  
SELECT * FROM cte1;
```




SALES IN A DAY

```
/*SALES IN a DAY */
```

```
SELECT
  COALESCE(restaurants.cuisine, 'Total') AS Cuisine,
  SUM(CASE WHEN HOUR(orders.order_time) = 11 THEN 1 ELSE 0 END) AS
Morning,
  SUM(CASE WHEN HOUR(orders.order_time) = 12 THEN 1 ELSE 0 END) AS
Mid_day,
  SUM(CASE WHEN HOUR(orders.order_time) BETWEEN 13 AND 15 THEN 1 ELSE 0
END) AS Afternoon,
  SUM(CASE WHEN HOUR(orders.order_time) BETWEEN 16 AND 18 THEN 1 ELSE 0
END) AS Evening,
  SUM(CASE WHEN HOUR(orders.order_time) BETWEEN 19 AND 21 THEN 1 ELSE 0
END) AS Night,
  SUM(CASE WHEN HOUR(orders.order_time) BETWEEN 22 AND 23 THEN 1 ELSE 0
END) AS Late_Night
FROM restaurants
RIGHT JOIN orders ON restaurants.restaurant_id = orders.restaurant_id
GROUP BY restaurants.cuisine WITH ROLLUP;
```

MOST PROFITABLE RESTAURANTS

/* WHICH ZONE IS THE MOST PROFITABLE AND HIGHER ORDER RECEIVING AND GIVE THE RESTAURANTS IN THAT ZONE */

```
SELECT r.restaurant_name
FROM restaurants r
WHERE r.zone IN (
    SELECT sub.zone
    FROM (
        SELECT restaurants.zone
        FROM restaurants
        RIGHT JOIN orders ON restaurants.restaurant_id =
orders.restaurant_id
        GROUP BY restaurants.zone
        ORDER BY SUM(orders.order_amount) DESC
        limit 1
    ) sub
);
```

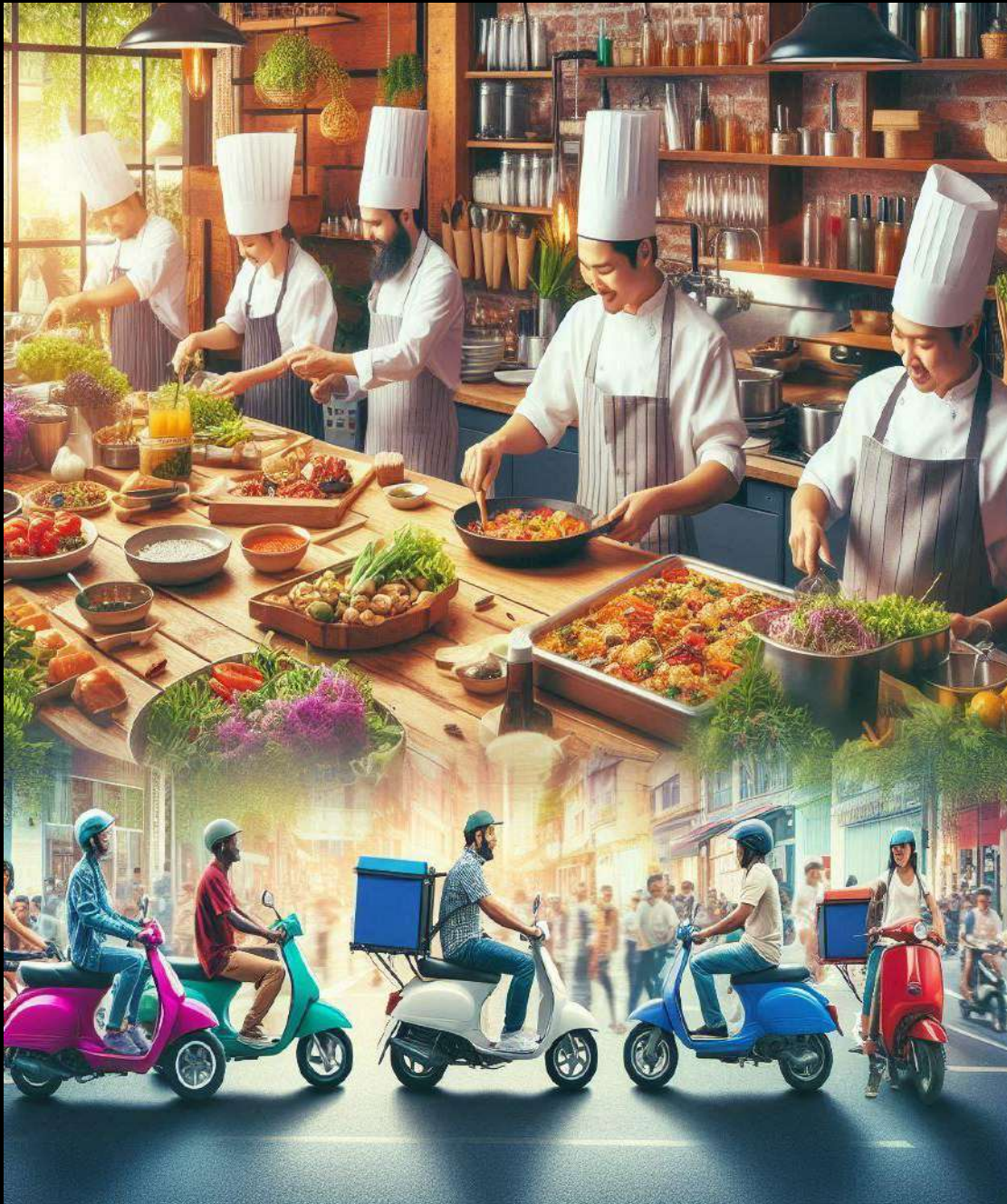

RESTAURANT WITH VARIANCE OF FOOD RATING



```
/* restaurants with variance of rating > 2 */
```

```
WITH HighVarianceRestaurants AS (  
    SELECT
```

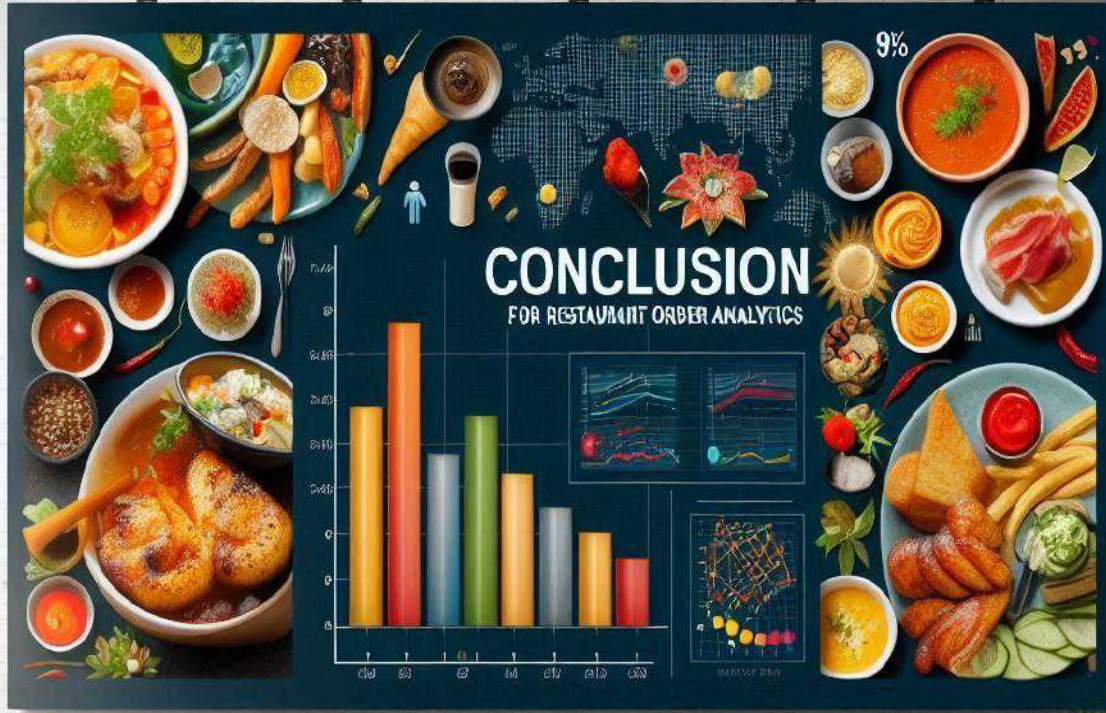
```
        restaurant_id,  
        VARIANCE(customer_rating_food) AS rating_variance  
FROM orders  
GROUP BY restaurant_id  
HAVING VARIANCE(customer_rating_food) > 2  
)  
SELECT  
    distinct r.restaurant_name,  
    r.zone,  
    hv.rating_variance  
FROM HighVarianceRestaurants hv  
JOIN restaurants r ON hv.restaurant_id = r.restaurant_id  
JOIN orders o ON r.restaurant_id = o.restaurant_id  
ORDER BY hv.rating_variance;
```

RESTAURANTS WITH HIGH DELIVERY TIME

```
/* RESTAURANTS HAVING HIGH DELIVERY TIME */
```

```
SELECT
    r.restaurant_id,
    r.restaurant_name,
    AVG(o.delivery_time_taken) AS avg_delivery_time
FROM orders o
JOIN restaurants r ON o.restaurant_id = r.restaurant_id
GROUP BY
    r.restaurant_id,
    r.restaurant_name
HAVING AVG(o.delivery_time_taken) >30
ORDER BY avg_delivery_time DESC;
```

Conclusions

- Restaurants should improve their order delivery time so that customers get satisfied over delivery
- Restaurants should focus on AfterNoon and Night sales to attract more customers
- Should Maintain their food Taste consistently so that the Loyal customer will definitely increases
- **Chew Restaurant ,Ruchi Restaurant and AMN Restaurant** should focus of food rating



Suggestion For a New Restaurant

There is Higher Chance to increase the sales if we Open a South Indian restaurant in zone D