A Slice of SQL: Pizza Sales Data Analysis

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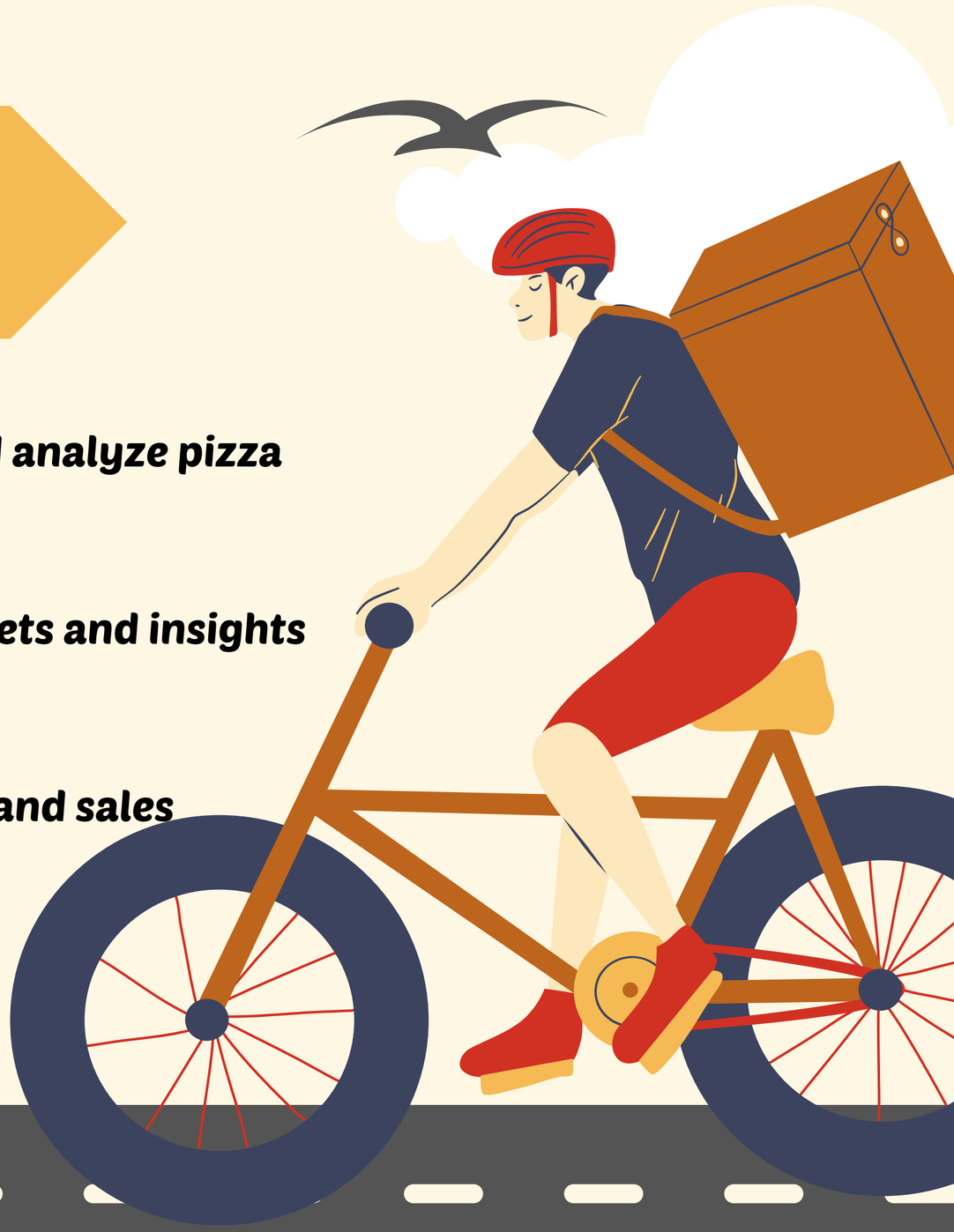
Introduction

- **Objective**: Demonstrate the use of SQL queries to extract and analyze pizza sales data.
- **Scope**: Execute various SQL queries to retrieve specific datasets and insights from the pizza sales database.
- **Outcome**: Identify key sales trends, top-performing pizzas, and sales performance across different time periods.



Retrieve the total number of orders placed.

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

	total_orders
▶	21350

Calculate the total revenue generated from pizza sales.

```
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS Total_sales
FROM
    order_details
        JOIN
    pizzas ON order_details.pizza_id = pizzas.pizza_id;
```

	Total_sales
▶	817860.05

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 price DESC
LIMIT 1;
```

name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS Frequently_ordered
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY size
order by Frequently_ordered desc
LIMIT 1;
```

	size	Frequently_ordered
▶	L	18526

List the top 5 most ordered pizza types along with their quantities.

```sql
SELECT
    pizza_types.name, SUM(order_details.quantity) AS sum
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 name
ORDER BY sum DESC
LIMIT 5;
```

	name	sum
▶	The Classic Deluxe Pizza	2453
	The Barbecue Chicken Pizza	2432
	The Hawaiian Pizza	2422
	The Pepperoni Pizza	2418
	The Thai Chicken Pizza	2371

Join the necessary tables to find the total quantity of each pizza category ordered.

```sql
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY quantity DESC;
```

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

Determine the distribution of orders by hour of the day.

```sql
SELECT
    HOUR(orders.order_time) as Order_Hour,
    SUM(order_details.quantity) AS orders
FROM
    orders
        JOIN
    order_details ON orders.order_id = order_details.order_id
GROUP BY Order_Hour;

-- (OR)

SELECT
    HOUR(order_time), COUNT(order_id) AS order_count
FROM
    orders
GROUP BY HOUR(order_time);
```

Order_Hour	orders
11	2728
12	6776
13	6413
14	3613
15	3216
16	4239
17	5211
18	5417
19	4406
20	3534
21	2545
22	1386
23	68
10	18
9	4

Group the orders by date and calculate the average number of pizzas ordered per day.

```sql
SELECT
    ROUND(AVG(sum_qty), 0) AS Average_Orders_per_day
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS sum_qty
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY orders.order_date) AS order_Quantity;
```

	Average_Orders_per_day
▶	138

Determine the top 3 most ordered pizza types based on revenue.

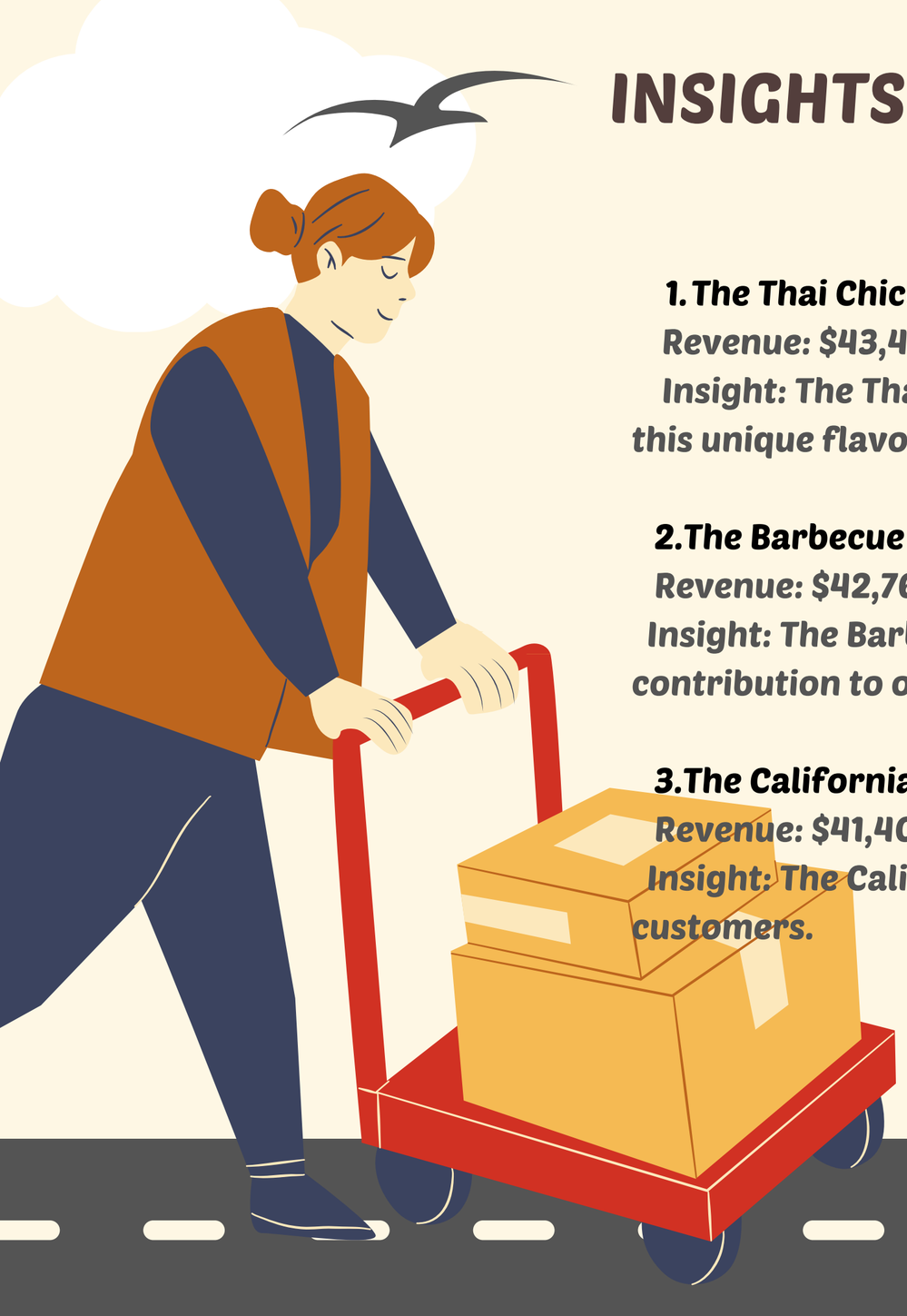
```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS Revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY Revenue DESC
LIMIT 3;
```

name	Revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```sql
select name, revenue from
(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) as b
where rn <= 3;
```

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5
The Classic Deluxe Pizza	38180.5
The Hawaiian Pizza	32273.25
The Pepperoni Pizza	30161.75



INSIGHTS

Top 3 Pizzas by Revenue

1.The Thai Chicken Pizza

Revenue: $43,434.25

Insight: The Thai Chicken Pizza is the highest-grossing pizza, indicating strong customer preference fo this unique flavor profile.

2.The Barbecue Chicken Pizza

Revenue: $42,768.00

Insight: The Barbecue Chicken Pizza follows closely, showcasing its popularity and significant contribution to overall sales.

3.The California Chicken Pizza

Revenue: $41,409.50

Insight: The California Chicken Pizza ranks third, highlighting its appeal and consistent demand among customers.