ShopNest Store Capstone

ShopNest stands as the leading department store in the e-commerce marketplaces in Portugal. Serving as a seamless link, it connects small businesses from various regions in Portugal to channels, streamlining the process with a single point of contact. Through the ShopNest Store, these merchants can showcase and sell their products, with the added convenience of direct shipment to customers facilitated by ShopNest logistics partners. The provided data represents authentic commercial information that has undergone the process of anonymization.

This capstone has 9 datasets and the descriptions are below :

Customers_dataset :

Columns	Description
Customer_id	Key to the orders dataset. Each order has a unique customer_id.
Customer_zip_code	First five digits of customer zip code.
Customer_city	Customer city name.
Customer_state	Customer state.

Geolocation_dataset :

Columns	Description
Geolocation_zip_code	First 5 digits of zip code
Geolocation_lat	Latitude
Geolocation_lng	Longitude
Geolocation_city	City name
Geolocation_state	State

Order_items_dataset :

Columns	Description
Order_id	Order unique identifier
Order_item_id	Sequential number identifying number of items included in the same order.
Product_id	Product unique identifier
Seller_id	Seller unique identifier
Shipping_limit_date	Shows the seller shipping limit date for handling the order over to the logistic partner.
Price	Item price
Freight_value	Item freight value item

Order_payments_dataset :

Columns	Description
Order_id	Unique identifier of an order.
Payment_sequential	A customer may pay an order with more than one payment method.
Payment_type	Method of payment chosen by the customer.
Payment_installments	Number of installments chosen by the customer.
Payment_value	Transaction value

Order_reviews_dataset :

Columns	Description
Review_id	Unique review identifier.
Order_id	Unique order identifier.
Review_score	Note ranging from 1 to 5 given by the customer on a satisfaction survey.
Review_comment_title	Comment title from the review left by the customer.
Review_comment_message	Comment message from the review left by the customer.
Review_creation_date	Shows the date in which the satisfaction survey was sent to the customer.
Review_answer_timestamp	Shows satisfaction survey answer timestamp.

Orders_dataset :

Columns	Description
Order_id	Unique identifier of the order.
Customer_id	Key to the customer dataset. Each order has a unique customer_id.
Order_status	Reference to the order status (delivered, shipped, etc).
Order_purchase_timestamp	Shows the purchase timestamp.
Order_approved_at	Shows the payment approval timestamp.
Order_delivered_carrier_date	Shows the order posting timestamp. When it was handled to the logistic partner.
Order_delivered_customer_date:	Shows the actual order delivery date to the customer.
Order_estimated_delivery_date:	Shows the estimated delivery date that was informed to customer at the purchase moment.

Products_dataset :

Columns	Description
Product_id	Unique product identifier.
Product_category_name	Root category of product.
Product_name_length	Number of characters extracted from the product name.
Product_description_length:	Number of characters extracted from the product description.
Product_photos_qty	Number of product published photos.
Product_weight_g	Product weight measured in grams.
Product_length_cm	Product length measured in centimeters.
Product_height_cm	Product height measured in centimeters.
Product_width_cm	Product width measured in centimeters.

Sellers_dataset :

Columns	Description
Seller_id	Seller unique identifier.
Seller_zip_code_prefix:	First 5 digits of seller zip code.
Seller_city:	Seller city name.
Seller_state:	Seller state.

Product Categories :

Columns	Description
Product_category_name	Category name in Portuguese
Product_category_name_english	Category name in English

Tasks to do :
Design a comprehensive Power BI dashboard to address key business analytics for a retail dataset. The following analytical questions should be answered through your dashboard:

1. **Top Categories by Total Price:**

   Identify and visually represent the top 10 product categories by total sales.

2. **Delayed Orders Analysis:**

   Determine the number of delayed orders in each category. An order is considered delayed if the actual delivery date is later than the estimated delivery date.

3. **Monthly Comparison of Delayed and On-Time Orders:**

   Create a dynamic visual that compares the number of delayed orders to the number of orders received earlier for each month. Utilize the drillthrough cross-report feature to provide a detailed analysis of late and on-time deliveries.

4. **Payment Method Analysis:**

   Analyze the most frequently used payment methods by customers using a visually appealing representation, such as a pie chart or other suitable visuals.

5. **Product Rating Analysis:**

   Determine the top 10 highest-rated products and the bottom 10 lowest-rated products using a bar or column chart.

6. **State-wise Sales Analysis:**

   Identify and visually represent states with high and low sales, providing a clear understanding of regional sales performance.

7. **Seasonal Sales Patterns:**

   Investigate and visualize any seasonal patterns(Quarterly) or trends in sales data over the course of the year.

8. **Revenue Analysis:**

   Determine the total revenue generated by ShopNest Store and analyze how it changes over time(Yearly). Represent this information through suitable visuals to highlight trends and patterns.