Olist E-Commerce Analytics

Overview

This project analyzes **Olist's Brazilian e-commerce dataset** (~100,000 rows) to explore customer behavior, order patterns, payment methods, and product performance.

The insights help answer key business questions such as:

- Which cities generate the most orders?

- What is the average payment value by payment type?

- Which orders are the most expensive?

- How do delivery times vary by region?

Company

Olist is a Brazilian e-commerce company that connects small businesses to major online marketplaces.

It provides a platform for sellers to manage products, payments, and deliveries while ensuring efficient customer service.

Dataset & Database Schema

The dataset contains **six main tables**:

| Table | Description |

|-------|-------------|

| `olist_customers_dataset` | Customers (customer_id, city, state) |

| `olist_orders_dataset` | Orders (order_id, customer_id, timestamps) |

| `olist_order_items_dataset` | Items per order (order_id, product_id, price, freight) |

| `olist_order_payments_dataset` | Payment information (order_id, payment_type, payment_value) |

| `olist_products_dataset` | Product details (product_id, category, dimensions) |

| `olist_order_reviews_dataset` | Reviews (order_id, review_score, timestamps) |

Relationships:

- `customer_id` links customers with orders

- `order_id` links orders with items, payments, and reviews

- `product_id` links items with products

Tools & Technologies

- **Database:** PostgreSQL
- **Programming:** Python 3.8+
- **Libraries:** pandas, psycopg2, matplotlib, plotly, openpyxl
- **Version Control:** GitHub

Project Structure