

# Data Analytics Project Tasks

## Task 1: Data Cleaning & Preparation

- Identify missing values per column
- Handle missing values appropriately (not all with 0)
- Convert Order Date and Ship Date to datetime
- Check for duplicate rows
- Fix data types (Postal Code should be string)

### Deliverables:

- Cleaned dataframe
- Short explanation of cleaning decisions

## Task 2: Sales Performance Overview

- Total sales
- Average sales per order
- Number of unique customers
- Number of unique orders

### Deliverables:

- Total Revenue
- Average Order Value (AOV)
- Customer Count

## Task 3: Sales by Category & Sub-Category

- Total sales by Category
- Total sales by Sub-Category
- Identify top 5 and bottom 5 sub-categories

## Task 4: Regional Analysis

- Sales by Region
- Top 5 states by sales
- Cities with highest revenue
- Bonus: Sales per customer by region

## **Task 5: Customer Segment Analysis**

- Sales by Segment
- Average order value per segment
- Orders per customer per segment

## **Task 6: Time-Series Analysis**

- Monthly sales trend
- Year-over-year sales growth
- Identify peak sales months
- Bonus: Rolling 3-month average

## **Task 7: Shipping Performance**

- Sales by Ship Mode
- Average delivery time (Ship Date – Order Date)
- Orders per shipping mode

## **Task 8: Product-Level Insights**

- Top 10 products by sales
- Products with very low sales
- Products with high sales concentration (few customers)

## **Task 9: Data Visualization**

- Bar chart: Sales by Category
- Line chart: Monthly sales trend
- Map or bar chart: Sales by State
- Bar chart: Sales by Segment