**DATA ANALYSIS CAPSTONE PROJECT**

**Project Title:**

**"Insights into E-Commerce Sales: Analyzing Trends, Customer Behavior, and Revenue Patterns"**

**Download link: https://www.kaggle.com/datasets/benroshan/ecommerce-data**

**Project Objectives:**

1. Analyze sales data to identify trends and patterns.
2. Perform customer segmentation based on purchasing behavior.
3. Develop visualizations to communicate findings effectively.
4. Provide actionable insights for business growth and decision-making.

**Deliverables:**

1. **Report:** A detailed report with explanations of the analysis, steps taken, and key insights.
2. **Visualizations:** Include at least 5 clear and meaningful visualizations.
3. **Code Notebook:** Well-documented Python code (or any tool used).
4. **Presentation:** A concise PowerPoint or PDF summarizing findings.

**Learning Outcomes:**

1. Understand the end-to-end data analysis process.
2. Learn how to clean and preprocess raw data.
3. Gain experience in creating meaningful visualizations.
4. Develop actionable insights from data for decision-making.
5. Understand customer behavior and sales trends in a real-world scenario.

**Tools and Skills:**

* **Tools:** Python (Pandas, Matplotlib, Seaborn), SQL, Excel, Power BI, or Tableau.
* **Skills:** Data cleaning, visualization, EDA, segmentation, and communication of insights.’

**BONUS:**

**USE THE FAKER DATASET YOU CREATED WITH PYTHON TO VISUALIZE ON POWER BI**

**Project\_Codar Documentation**

**Project Title: Insights into E-Commerce Sales: Analyzing Trends, Customer Behavior, and Revenue Patterns**

[**Project Overview**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#project-overview)[**Data Sources**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#data-sources)[**Tools Used**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#tools-used)[**Data Cleaning and Preparation**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#data-cleaning-and-preparation)[**Exploratory Data Analysis**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#exploratory-data-analysis)[**Data Analysis**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#data-analysis)[**Data Visualization**](https://github.com/ca2mee/Project_Codar/edit/main/README.md#data-visualization)

**Project Overview**

**This Data Analysis Project aims to generate insights performance of the E-commerce sales project over the past years.**

**By analyzing the various parameters in the data received we seek to gather enough insight to make reasonable decisions which then enables**

**us to tell compelling stories around our data from the insight gotten and to know the best performance from our data.**

**Data Sources**

**The primary source of data used here is List of Orders.csv, Order Details.csv, Sales Target.csv and Employee\_England.csv, this**

**is an open-source data that can be freely downloaded from an open source online such as Kaggle or FRED or other data repository site**

**Tools Used**

* **Microsoft Excel**[**Download Here**](https://www.microsoft.com/)
  + **For Data Cleaning**
  + **For Analysis**
  + **For Visualization**
* **My SQL - Structured Query Language for Querying of Data**
* **Power Bi for Visualization and Data Modelling**
* **Python ( Numpy, Pandas, Matplotlib, Seaborn)**
* **GitHub For Building Portfolio [SignUp Here](https://github.com/)**

**Data Cleaning and Preparation**

**in the initial phase of the Data cleaning and preparations, we perform the following action;**

**1. Data loading and inspection**

**2. Handling missing variables**

**3. Data Cleaning and formatting**

**Exploratory Data Analysis**

**EDA involved the exploring of the Data to answer some questions about the such as;**

**- What is the Overall sales trend?**

**- Which product are top sellers**

**- What are the products on peak sales?**

**Data Analysis**

**This is where we include some basics lines of code or queries or even some of the DAX**

**expressions used during my analysis;**

**select Name, Email, Job\_title, phone\_number, City**

**from employees\_england**

**order by City desc, Name asc;**