**Data-Science-Assignment-of-eCommerce-Transactions-Datasets**

Overview: This repository contains data and analysis for the Data Science assignment focusing on eCommerce transactions. The dataset includes transaction details, which will be used for exploratory data analysis (EDA), clustering, and building predictive models to gain insights from eCommerce data.

Project Contents: The repository includes the following files:

1. Aditya\_Neema\_Clustering.ipynb - Jupyter notebook for clustering analysis using various machine learning algorithms.
2. Aditya\_Neema\_Clustering.pdf - A PDF version of the clustering analysis report.
3. Aditya\_Neema\_EDA.ipynb - Jupyter notebook for performing Exploratory Data Analysis (EDA) on the eCommerce transactions dataset.
4. Aditya\_Neema\_EDA.pdf - A PDF version of the EDA report.
5. Aditya\_Neema\_Lookalike.csv - A CSV file containing data on potential lookalike customers for targeted marketing.
6. Aditya\_Neema\_Lookalike.ipynb - Jupyter notebook for analyzing the lookalike customer data.

Prerequisites: Make sure to have the following dependencies installed before running the project:

1. Python 3.x
2. Jupyter Notebook
3. Pandas
4. Matplotlib
5. Seaborn
6. Scikit-learn
7. Data source: eCommerce Transactions dataset

Tools Used: Python, Jupyter Notebook, Pandas, Matplotlib, Scikit-learn

Analysis Performed:

1. Exploratory Data Analysis (EDA) The EDA notebook performs a thorough analysis of the eCommerce transaction data, including data cleaning, summary statistics, and visualizations. Key findings from the EDA are documented in the corresponding EDA PDF.
2. Clustering The Clustering notebook implements unsupervised learning techniques to segment customers into different groups based on their transaction behavior. Different clustering algorithms, such as K-Means and DBSCAN, are applied to identify patterns in customer behavior. Results and insights are detailed in the Clustering PDF.
3. Lookalike Modeling The Lookalike notebook is focused on identifying potential lookalike customers for targeted marketing campaigns. The model uses customer attributes to find similar profiles for creating highly targeted campaigns.

Results and Conclusion:

The findings from the analysis, including clustering results, insights from EDA, and potential marketing strategies based on lookalike analysis, are summarized in the respective notebooks and PDF reports.