Project Title: Market Segmentation Analysis

Overview:

Market segmentation is an essential part of business strategy. It involves analyzing customer data to identify different market segments and developing strategies for targeting each segment effectively. In this project, we will use customer demographic data to perform market segmentation analysis using machine learning techniques. We will develop a model that identifies different customer segments and provides insights that can be used to develop targeted marketing campaigns.

Dataset:

We will be using a customer dataset from Kaggle (https://www.kaggle.com/kyanyoga/sample-sales-data). The dataset contains information about customers such as age, gender, income, and location.

Project Steps:

1. Collect and clean the data
2. Perform exploratory data analysis
3. Feature engineering
4. Clustering
5. Visualizing clusters

Tools and Technologies:

- Python
- Pandas
- Scikit-learn
- Matplotlib
- Seaborn

Deliverables:

- Jupyter notebook with code and comments explaining each step
- Data visualization to show the different customer segments
- Report summarizing the insights gained from the analysis and recommendations for targeted marketing campaigns

Expected Outcome:

- Identification of different customer segments based on demographic data
- Insights into each customer segment, including their preferences, behaviors, and buying patterns
- Recommendations for targeted marketing campaigns to improve customer engagement and sales

Additional Ideas for Enhancement:

- Perform a market basket analysis to identify product associations and cross-selling opportunities
- Use social media data to perform sentiment analysis and develop targeted social media campaigns
- Use A/B testing to measure the effectiveness of different marketing campaigns on each customer segment