CUSTOMER SEGEMENTATION USING DATA SCIENCE

**AI\_PHASE 1: PROBLEM DEFINITON AND DESIGN THINKING**

**Problem Definition:**

Our goal is to leverage data science technique to segment our customer base efficiently. By doing so, we aim to gain insight into customer behavior, preference and demographic. This will enable us to tailor our marketing strategies, improve customer engagement , and optimize product offering.

**Design Thinking:**

First of all we need to understand the problem via gather all available data related to customer interactions, purchase history, demographic, and any other relevant information. Define key performance indicators(KPI’s) to measure the success of customer segmentation, such as increased conversion rates or higher customer satisfaction

Create customer personal based on available data. Conduct surveys or interviews to gather qualitative insights and understand customer pain points

Utilize data preprocessing techniques to clean and prepare the data for analysis. Explore the data through descriptive statistics and data visualization to identify potential customer segments. Consider using clustering algorithms like K-Means or hierarchical clustering with similar characteristics.

Brianstorm marketing strategies and personalized campaigns for each customer segment. Explore adavanced data analytics and machine learning models to predict customer behavior and preference.

Develop a proof-a-concept model for customer segmentation. Split the dataset into training and testing sets to evaluate the model’s performance.

Continuously improve the segmentation model based on feedback and performance metrics. Consider incorporate external data source for more accurate segmentation

Deploy the final customer segmentation model into the production environment. Implement targeting marketing strategies for each segment. Monitor the impact of segmentation on business KPI’s and refine strategies accordingly

Create documentation, detailing the entire process, include data sources, preprocessing steps modeling technique and results