Customer Segmentation Analysis Project Documentation

**Project Overview:** The objective of this project is to perform customer segmentation analysis using Excel. The dataset provided contains information about customers, including demographic and behavioral factors such as gender, age, profession, work experience, spending score, and more. The analysis aims to gain insights into customer characteristics and behaviours to inform business decisions.

**Project Steps:**

**1.Data Import and Cleaning:**

The dataset containing customer information :

* + ID
  + Gender
  + Ever\_Married
  + Age
  + Graduated
  + Profession
  + Work\_Experience
  + Spending\_Score
  + Family\_Size
  + Var\_1

Data cleaning was performed to handle missing values and ensure consistency in the data.

**2.Exploratory Data Analysis (EDA):**

1. Descriptive statistics were calculated for numerical variables such as Age, Work\_Experience, Family\_Size to understand the distribution and central tendencies.
2. Visualizations were created to explore the distribution of categorical variables such as Gender, Ever\_Married, Profession, Spending\_Score, Var\_1 using charts like column charts, pie charts, histograms, etc.

**3.Business Question Analysis:**

Ten business questions were formulated to guide the analysis:

* Comparing the distribution of Gender
* Analyzing Ever\_Married status
* Investigating Age distribution
* Exploring Professions
* Comparing Work\_Experience
* Analyzing Spending\_Score
* Investigating Family\_Size distribution
* Examining Var\_1 distribution
* Comparing Graduated status
* Demographic and behavioral factors

**4.Visualization and Dashboard Creation:**

Four Key Performance Indicators (KPIs) were identified and calculated:

1. Total Customers
2. Average Age
3. Total Graduates
4. Marriage Status Distribution

**Visualizations were created using Excel charts:**

* Column chart for the distribution of Professions among customers
* Pie chart for the percentage of Work\_Experience among employees
* 3D clustered column chart for Spending\_Score by Gender
* Histogram for the distribution of Var\_1 categories among customers
* Clustered column chart for the distribution of Graduation status by Work\_Experience.

**5.Insights and Recommendations:**

Based on the analysis and visualizations, the following insights were derived:

* There is a roughly equal distribution of genders across both datasets.
* The majority of customers are married, indicating potential marketing opportunities for family-oriented products/services.
* The distribution of Age among customers varies widely, with a significant portion falling in the middle-aged range.
* The most common professions among customers include Artist, Doctor, and Engineer.
* There is a diverse distribution of Work\_Experience among customers, with a significant number having 0 or 1 years of experience.
* The majority of customers have a low Spending\_Score, suggesting potential areas for targeted marketing campaigns.
* The distribution of Var\_1 categories among customers shows varying levels of engagement or interaction.
* Graduation status varies across different levels of work experience, indicating potential correlations between education and career progression.
* Recommendations for business strategies and marketing campaigns can be formulated based on these insights, such as targeting specific age groups or professions with tailored promotions.

**Conclusion:**

The customer segmentation analysis project provides valuable insights into the characteristics and behaviors of customers, allowing businesses to make data-driven decisions and tailor their strategies to meet customer needs effectively. By leveraging Excel's data analysis and visualization capabilities, meaningful insights were derived, leading to actionable recommendations for business growth and customer engagement.