**Customer Churn Indicator Analysis**

### **Objective**

The purpose of this analysis is to identify key features that strongly correlate with customer churn. Understanding these indicators will help in developing strategies to improve customer retention.

### **Key Findings**

Based on the correlation analysis, the following features have the highest impact on customer churn:

#### **1. Spending Score**

* Customers with lower spending scores are more likely to churn.
* Indicates low engagement with the business and potential dissatisfaction with services.
* **Recommendation:** Implement loyalty programs or personalized promotions to encourage spending.

#### **2. Age**

* Certain age groups show higher churn tendencies.
* Older customers may churn if they do not find the services useful.
* Younger customers may switch to competitors due to evolving preferences.
* **Recommendation:** Create age-specific marketing strategies and engagement activities.

#### **3. Work Experience**

* Customers with lower work experience may have financial constraints, leading to higher churn.
* Higher work experience customers may churn due to career-related factors like relocation or work stress.
* **Recommendation:** Offer flexible plans or discounts based on customer financial stability.

#### **4. Family Size**

* Customers with larger families may exhibit different spending habits, affecting retention rates.
* Smaller families or individuals may churn if services do not cater to their specific needs.
* **Recommendation:** Develop family-oriented packages and individual-focused marketing campaigns.

#### **5. Profession**

* Certain professions have higher churn rates due to financial instability or work-related demands.
* **Recommendation:** Personalized offers targeting specific professions to increase retention.

### **Data Insights and Visualizations**

#### **1. Spending Score and Churn**

* A **boxplot analysis** revealed that customers with lower spending scores are more likely to churn.
* Indicates the importance of incentivizing purchases and improving engagement strategies.

#### **2. Age Distribution and Churn**

* A **histogram comparison** showed significant churn in certain age groups.
* Targeted customer retention strategies should be age-specific.

#### **3. Correlation Heatmap**

* The heatmap visualization confirmed the top correlated factors affecting churn.
* Helps in identifying focus areas for customer retention strategies.

### **Conclusion and Recommendations**

📌 **Customers with low engagement (low spending scores) are more likely to churn.**

📌 **Demographics (age, family size, and profession) significantly influence churn.**

📌 **Retention strategies should focus on high-risk customer groups by offering personalized promotions and incentives.**

**Next Steps:**

* Implement **targeted marketing campaigns** for high-risk segments.
* Use **customer segmentation** to tailor personalized offers.
* Strengthen **customer support and engagement strategies** to reduce churn.

By addressing these factors, businesses can improve customer retention and reduce churn effectively.