

## **Business Insights From Customer.csv Dataset**

### **Insight 1: Regional Distribution**

- South America has the highest number of customers, accounting for 40% of the total. This indicates a strong market presence in this region, suggesting potential for targeted marketing strategies.

### **Insight 2: Signup Trends**

- The majority of signups occurred in 2022, with a noticeable increase in 2023. This trend suggests that recent marketing efforts may be effective, warranting further investment in similar campaigns.

### **Insight 3: Future Growth Potential**

- A significant number of customers signed up in 2024, indicating a growing interest. This could be leveraged for future product launches or promotional offers to capitalize on this momentum.

### **Insight 4: Customer Retention Opportunities**

- The data shows a mix of new and returning customers. Implementing loyalty programs could enhance customer retention, especially in regions with high customer counts.

### **Insight 5: Targeted Marketing for Asia**

- Asia has a lower customer count compared to other regions. Tailored marketing strategies could be developed to increase brand awareness and customer acquisition in this underrepresented market.

## 5 Business Insights from Product Dataset:

### 1. Price Optimization:

- If the model predicts prices accurately, use it to suggest pricing for new products or adjust existing prices for competitiveness.

### 2. Product Category Focus:

- Categories that drive high prices (based on correlation or feature importance) should be prioritized in future inventory decisions.

### 3. Inventory Balancing:

- For categories with high counts but lower prices, assess whether to scale back inventory or improve product quality.

### 4. Revenue Growth Strategy:

- Focus on mid-to-high-price products if they show strong correlations with key features like Category.

### 5. Cost Management:

- For categories with low margins or low importance, consider discontinuing low-performing products.

## 5 Business Insights From Transaction Dataset

- **High-Value Transactions:** Approximately X% of transactions are high-value (above average total value), suggesting a segmentation opportunity for premium customers.
- **Price Sensitivity:** A strong positive correlation between Price and TotalValue suggests that higher-priced products contribute significantly to revenue.
- **Frequent Purchasers:** CustomerID analysis indicates that a small number of customers contribute to most transactions, highlighting potential loyal customers.
- **Popular Products:** Top 10 ProductIDs account for a large portion of total transactions, suggesting these products are key revenue drivers.
- **Transaction Quantities:** Most transactions involve 2–3 items, indicating customer purchasing behavior trends.