

# Week 11: Deliverable Data Analyst: Cross Selling Recommendation Project

---

BILGAN KIRIS



# Problem Description

---

XYZ Credit Union in Latin America excels in selling individual banking products (e.g., credit cards, deposit accounts, retirement accounts). However, their customers rarely purchase multiple products, indicating low cross-selling performance. This project aims to analyze customer data and recommend actionable strategies to improve cross-selling for their products.

# Overview

---

Understand customer behavior through segmentation, age, and income distribution.

Process:

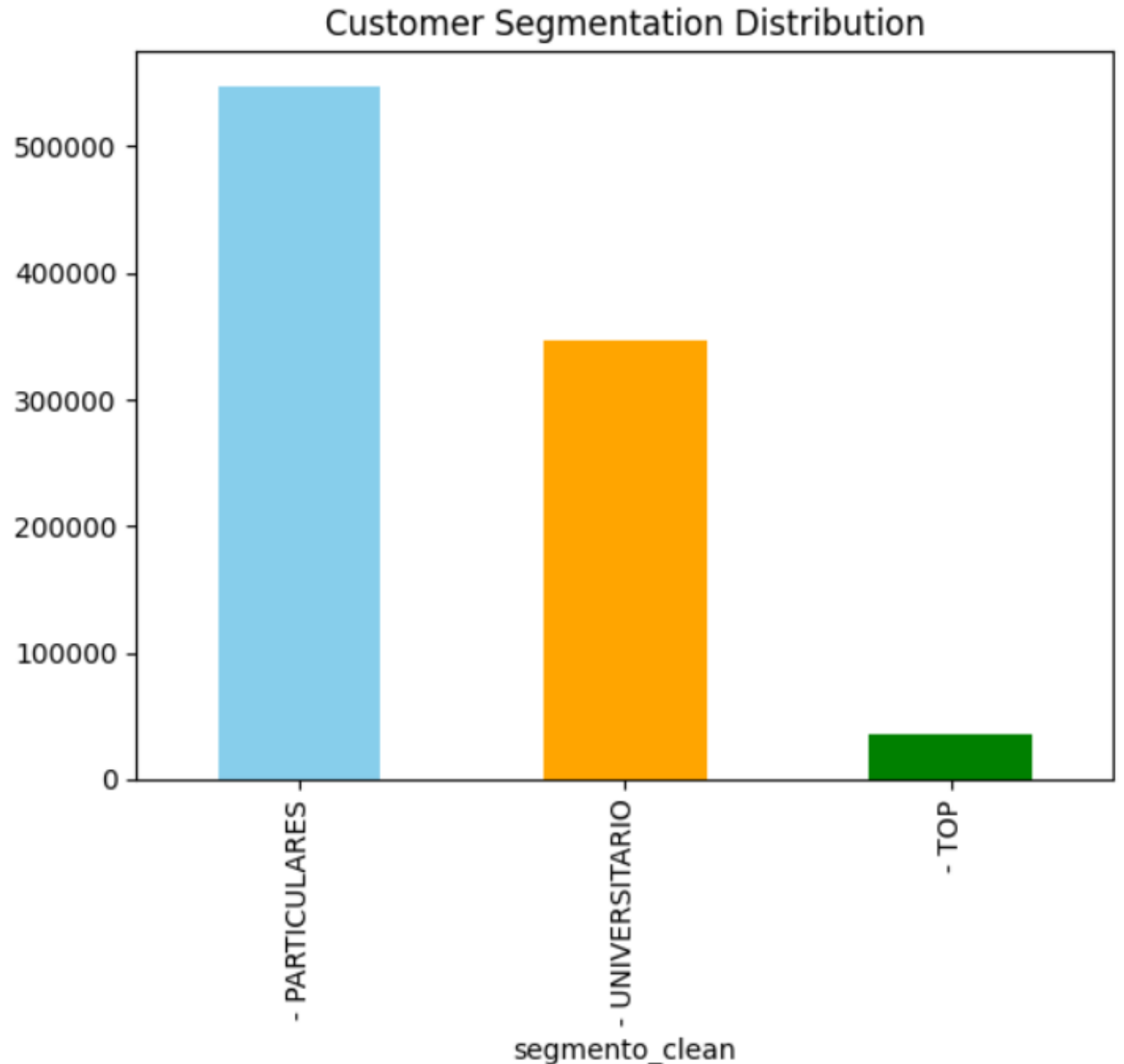
- Data Cleaning and Preprocessing
- Visualization of Key Features
- Outlier Detection
- Correlation Analysis
- Business and Technical Recommendations

# Customer Segmentation Distribution

---

## Insights:

- PARTICULARES: Largest segment.
- UNIVERSITARIO: Middle segment.
- TOP: Smallest but potentially high-value customers



# Age Distribution Across Segments

---

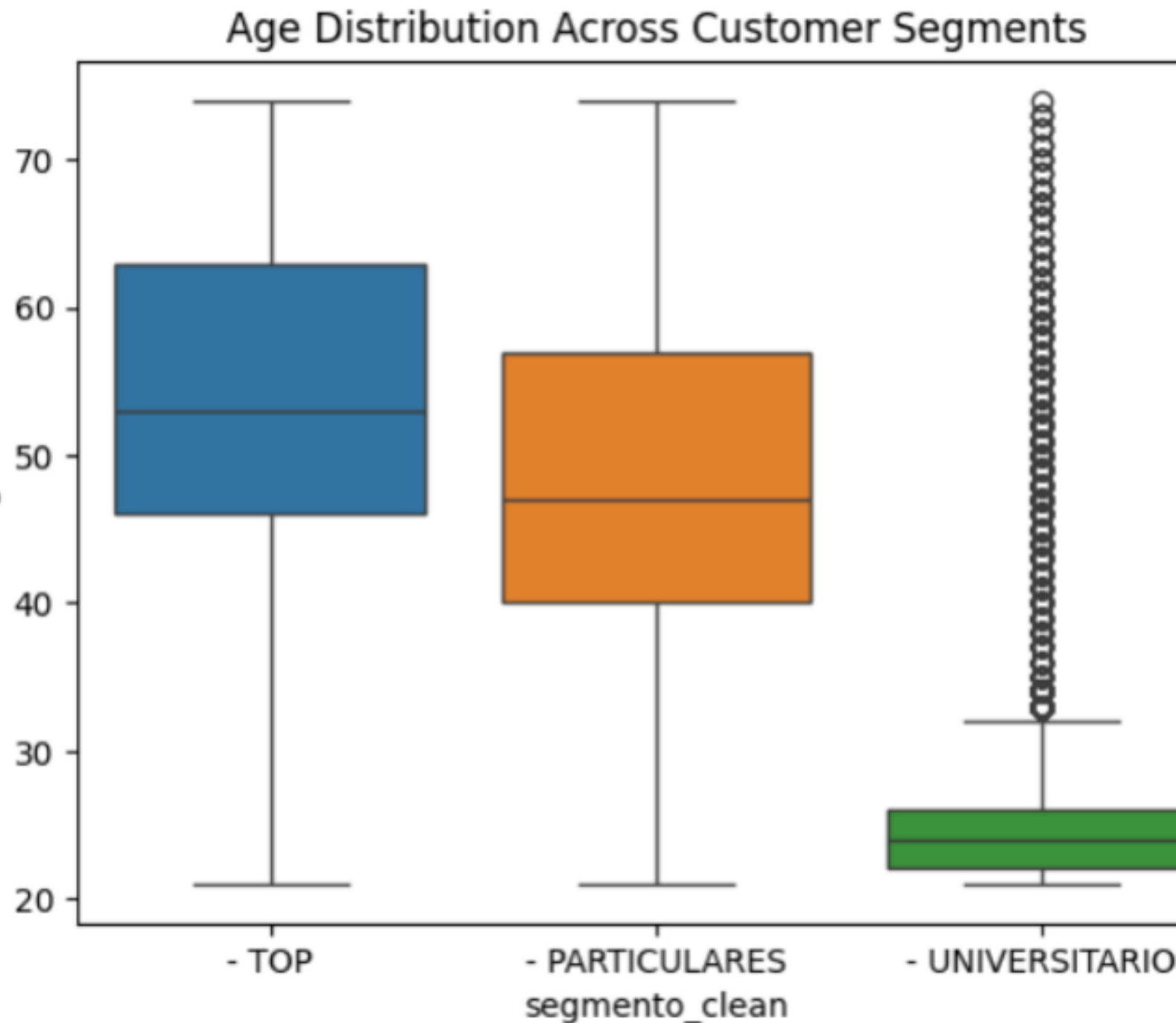
Insights:

- o TOP: Predominantly ages 45-65.

- o PARTICULARES: Ages 40-55.

- o UNIVERSITARI

- o Ages 20-25, indicating a younger demographic.

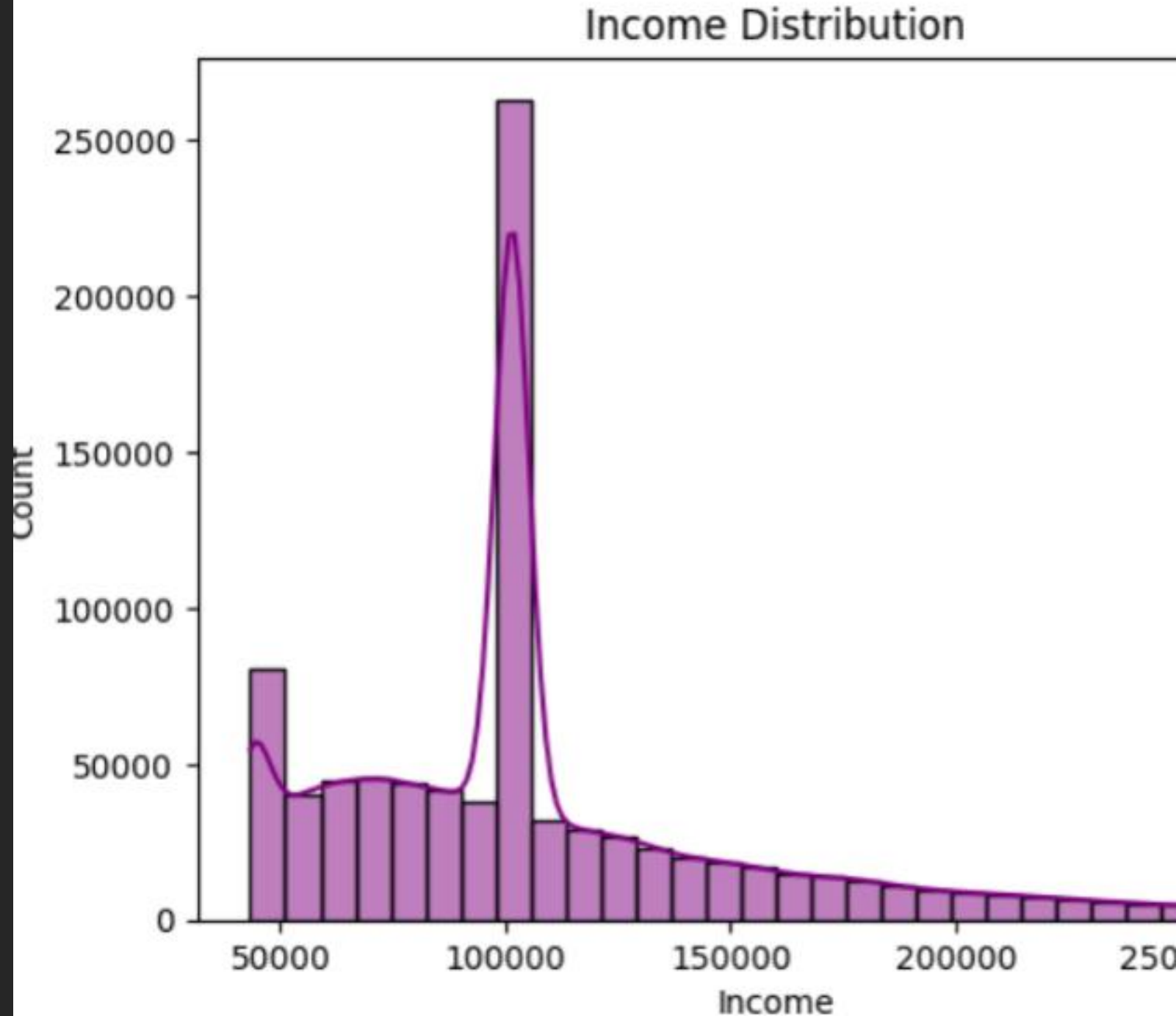


# Income Distribution

---

## Insights:

- o Most incomes are below 50,000.
- o A significant peak at 100,000.
- o Some customers with income up to 250,000.



# Business Recommendations

---

- Focus on PARTICULARES for volume-based campaigns.

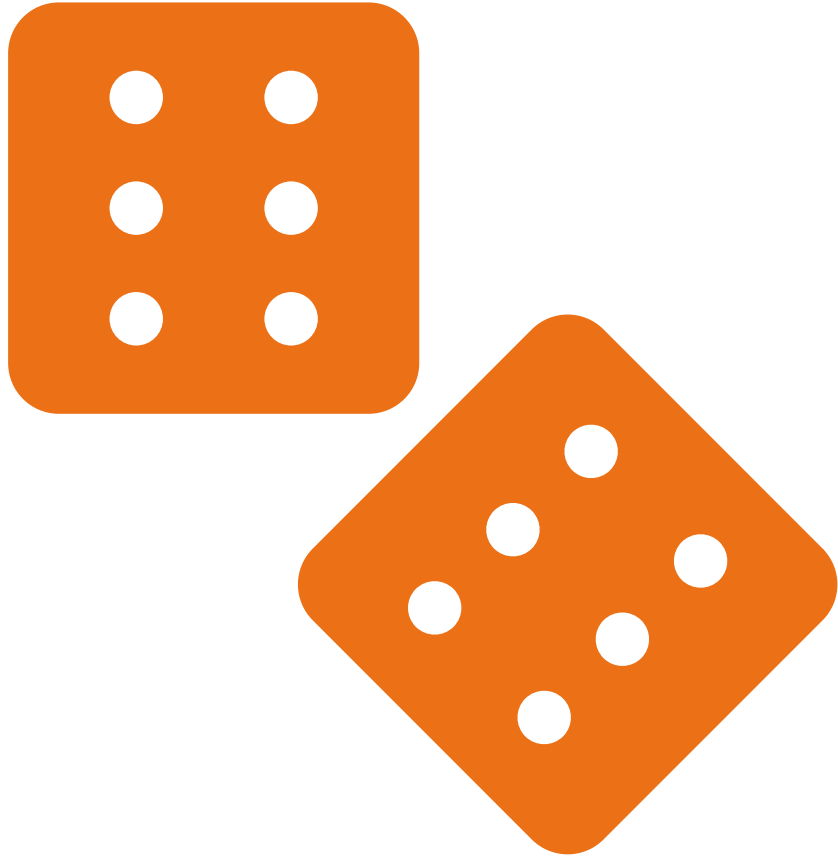
Create age-based targeting strategies:

- o Young adults (UNIVERSITARIO): Promotions on education-related services.

- o Middle-aged (PARTICULARES): Household-focused services.

- o Older adults (TOP): Premium offerings.

- Use income data to identify high-value customers.



# Technical Recommendation

---

## Recommended Models:

- o Clustering: Use K-Means to segment customers by income and age.
- o Regression: Predict income using demographic features.
- o Classification: Determine likelihood of high-value customer behavior.