AI-DRIVEN LOYALTY PROGRAM OPTIMIZATION

Enhancing Customer Engagement for Supermarkets in Kenya

Presented by: Sylvia, Clive, Ezekiel, Brenda, Isaiah

BUSINESS UNDERSTANDING

- Supermarkets in Kenya are facing increased competition

- Traditional loyalty programs are outdated and impersonal

- Customers expect personalized experiences and rewards

PROBLEM STATEMENT

Problems with Current Loyalty Programs:

- Generic offers lead to poor customer engagement

- Money is wasted on non-targeted promotions

- Supermarkets struggle to retain loyal customers

OUR SOLUTION

- AI-POWERED LOYALTY OPTIMIZATION

- GROUP CUSTOMERS BY THEIR SHOPPING HABITS

- IDENTIFY VALUABLE CUSTOMERS

- PREDICT WHICH CUSTOMERS ARE LIKELY TO STOP SHOPPING

OUR GOALS

01
- Build smart customer segments

02
- Predict customers at risk of leaving

03
- Help businesses reward their most valuable shoppers

04
- Ensure our models are at least 80–90% accurate

THE DATA WE USED

1

Customer Information (e.g., gender, loyalty ID)

2

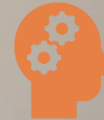Shopping Transactions (e.g., products bought, amount spent)

WHAT WE DID

- Cleaned and analyzed the data

- Discovered shopping patterns

- Created customer profiles

- Predicted future customer behavior

KEY INSIGHTS

- Different types of shoppers prefer different products and promotions

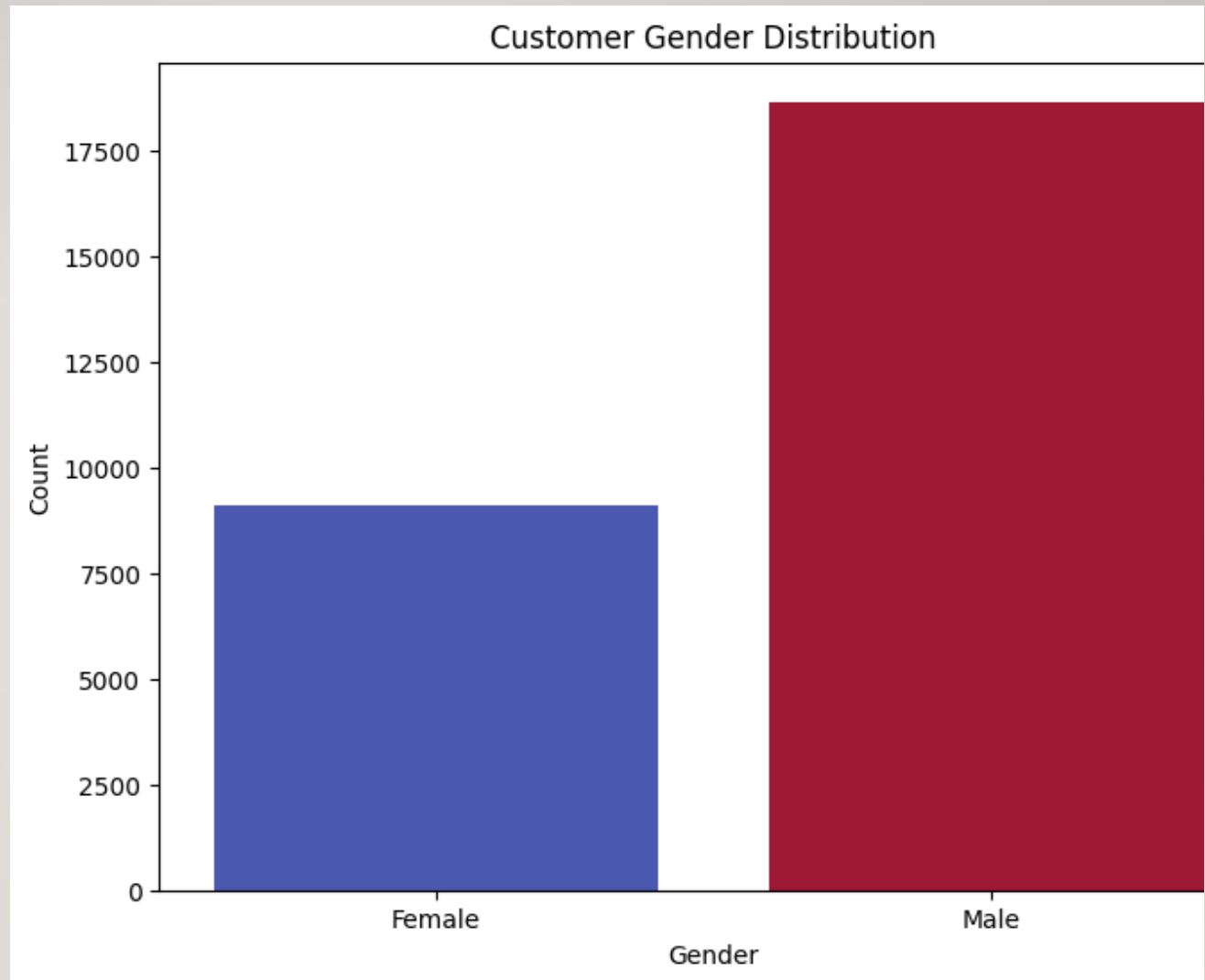- Some customers are highly loyal, others are at risk of leaving

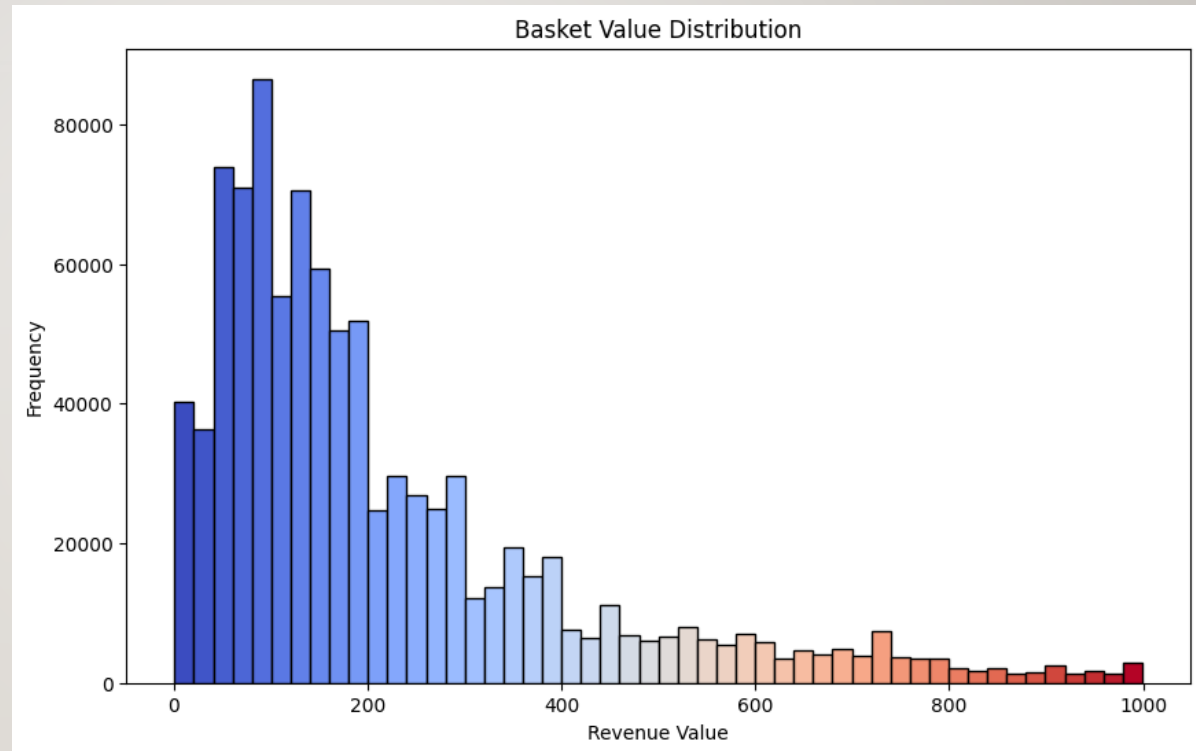- Personalized rewards can significantly improve customer retention

CUSTOMER DISTRIBUTION BY GENDER

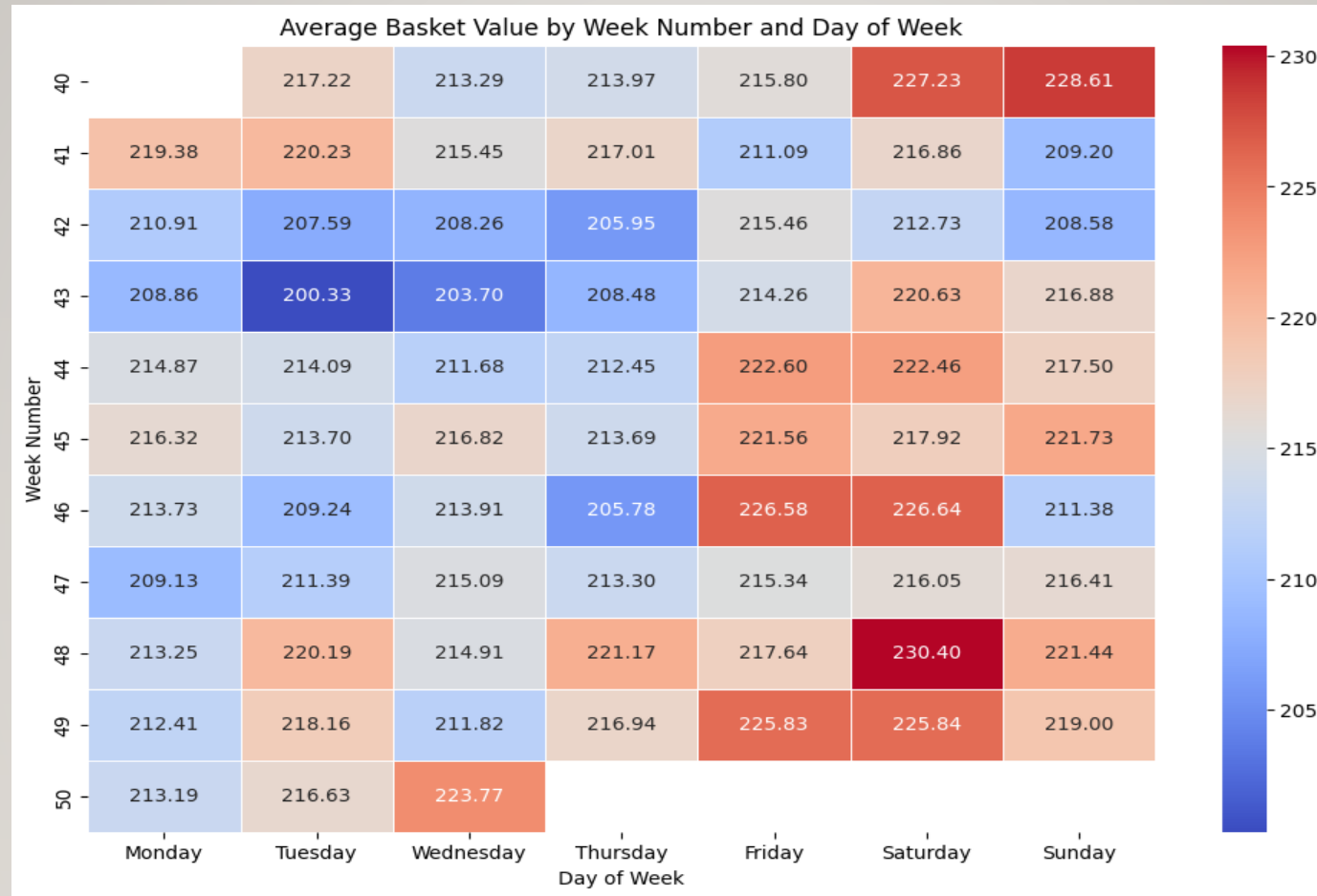Based on the analysis, most shoppers are Male.

Customer Gender Distribution

BASKET VALUE DISTRIBUTION

- Shoppers with basket value below Ksh 200 shop most frequently

- The higher the basket value the lower the frequency

Basket Value Distribution

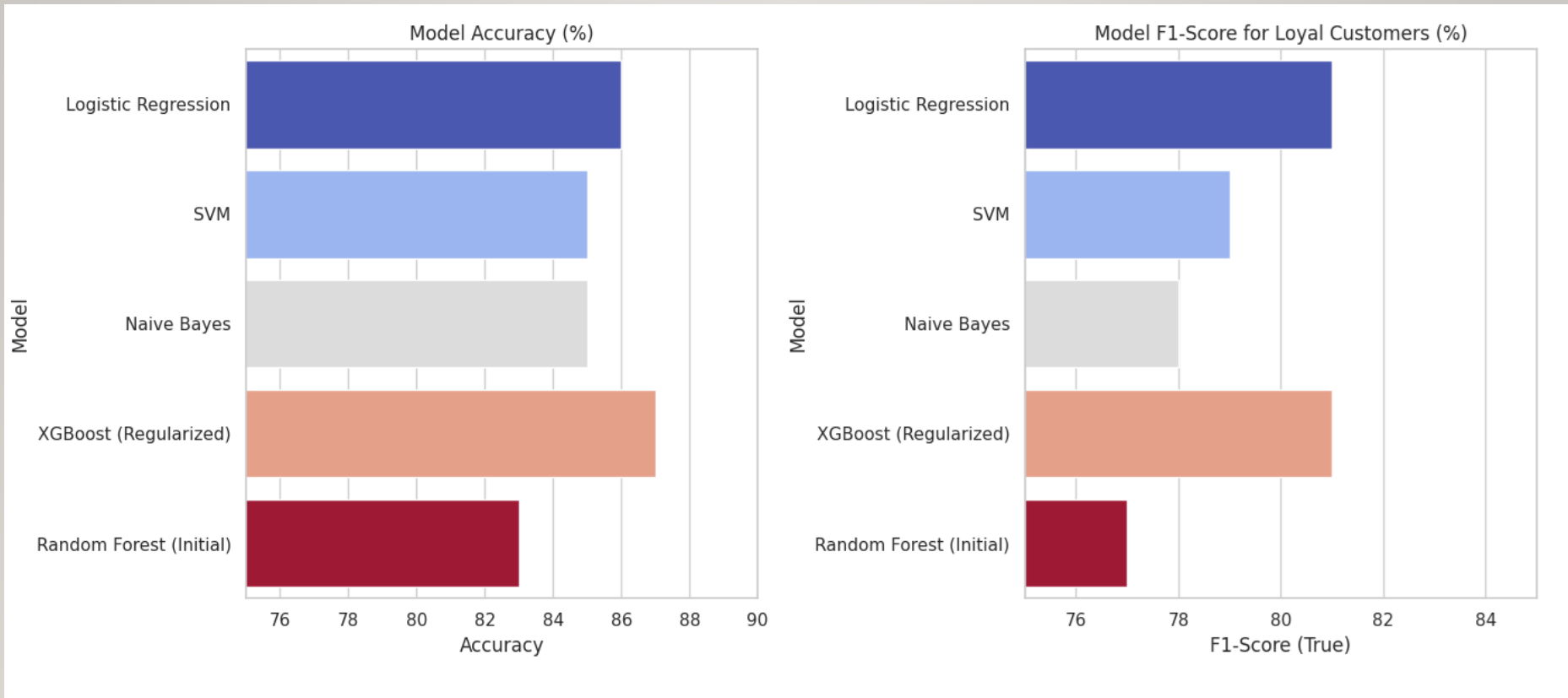# Basket Value by Day of Week

Average Basket Value by Week Number and Day of Week

Major shopping mostly happen on weekends(Friday, Saturday & Sunday). Saturday being the best day.

Model Performance

XGBoost was the best performing model.

RECOMMENDATIONS

Targeted Engagement Strategies

Personalized and Localized Rewards

Sustainability and Upscaling

Optimize Promotions by Day

Develop a Store-Level Strategy

Ensure Continuous Model Monitoring

Innovative Product Promotion:

Targeted Engagement Strategies

Target Promotional and Marketing Campaigns by Customer Cluster

Cluster 0 (Loyal High-Value): Premium incentives and VIP treatment.

Cluster 1 (At-Risk): Strong discounts and personalized offers to bring them back.

Cluster 2 (New): Welcome bonuses and introductory deals.

Cluster 3 (Occasional): Encourage upsell through bundling and seasonal promotions.

Optimize Promotions by Day

Focus efforts on **Fridays to Sundays** to capture peak shopper traffic and boost campaign effectiveness.

PERSONALIZED AND LOCALIZED REWARDS

Personalize

Personalize Customer Rewards

- Leverage AI to assign loyalty scores and craft tailored rewards (e.g., point-based systems aligned with preferences).

Develop

Develop Store-Level Marketing Strategies

- Analyze customer registration data to implement location-specific campaigns, especially in high-density regions.

Promote

Promote Top-Performing Products

- Highlight best-selling items in promotions and use product bundling to increase perceived value and drive loyalty.

SUSTAINABILITY AND UPSCALING

- **Continuous Model Monitoring**

Retrain and calibrate AI models regularly to keep up with **changing consumer behavior** and maintain predictive accuracy.

- **Upscale Customers to Premium Segments**

Use smart promotions to **encourage higher basket sizes** and transition customers to premium product categories.

BUSINESS IMPACT

- Better targeting = fewer wasted promotions

- Loyalty customer retention= High value customers

- Increased customer loyalty = higher sales

- Insights help make smarter business decisions

CONCLUSIONS

We've built a foundation for a modern, AI-driven loyalty program that can:

- Adapt to customer needs

- Improve engagement and sales

- Set the stage for long-term growth