RFM Segmentation: JD Sports

Brian Witarsa

RFM: Recency, Frequency, Monetary

Identify customer segments

Enables personalized and targeted marketing strategies

Greater conversion rate and returns

Overview

Data Aggregation (KPIs)

Grouped by Customer ID

Key Metrics (KPIs)

1. **Recency**: Days since last transaction

2. **Frequency**: Total transactions (unique order numbers)

3. **ATV (Average Transaction Value)**: Total Sales / Frequency

4. Total Sales

5. Total Visits

6. Sales per Visit

K-means

Divides data into 'k' distinct clusters

Assigns each point to nearest centroid, recalculates centroid as mean of all points in the centroid
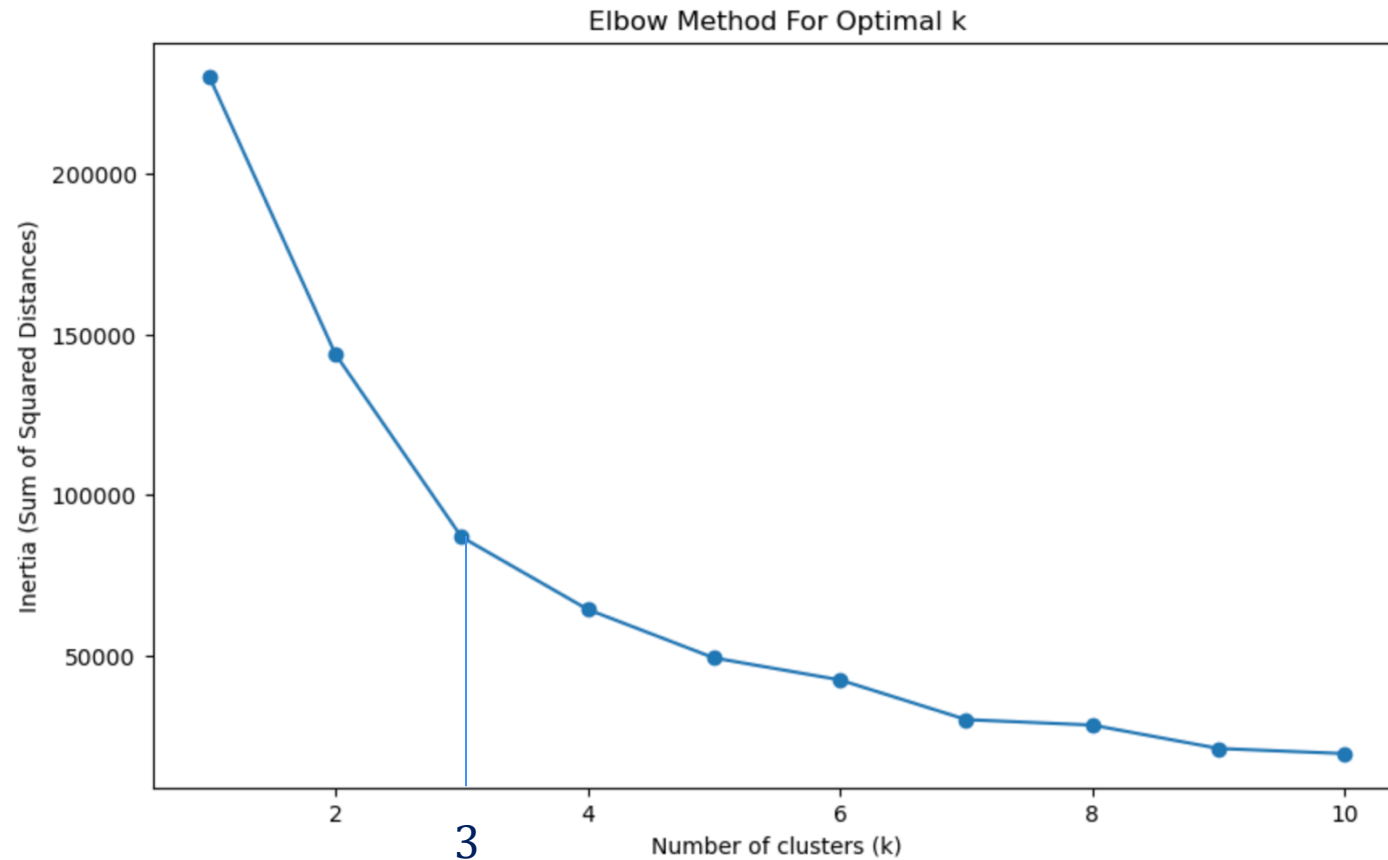
Goal: minimize inertia - sum of squared distances between point and nearest centroid

Elbow Method

Conducted test from k = 1 to 11

- To determine the optimal number of clusters (k)

- Scale Data

- Find the "Elbow" point - point of diminishing returns
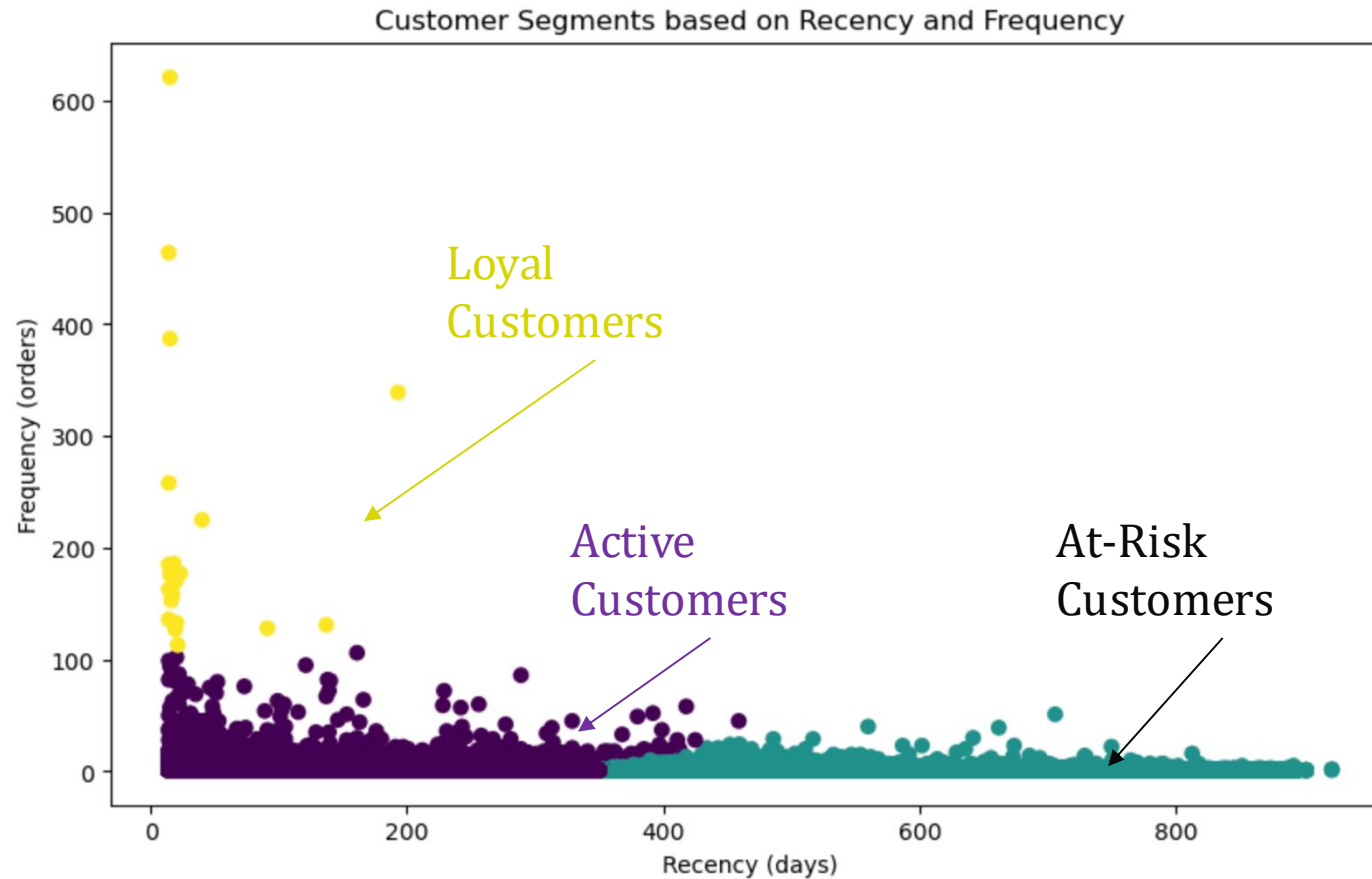
Elbow Method: Recency and Frequency

Identified optimal k, k = 3

K-means: Recency and Frequency

Using k = 3

- Identify customers with similar purchasing behavior

- Y-axis: Frequency: Total number of transactions

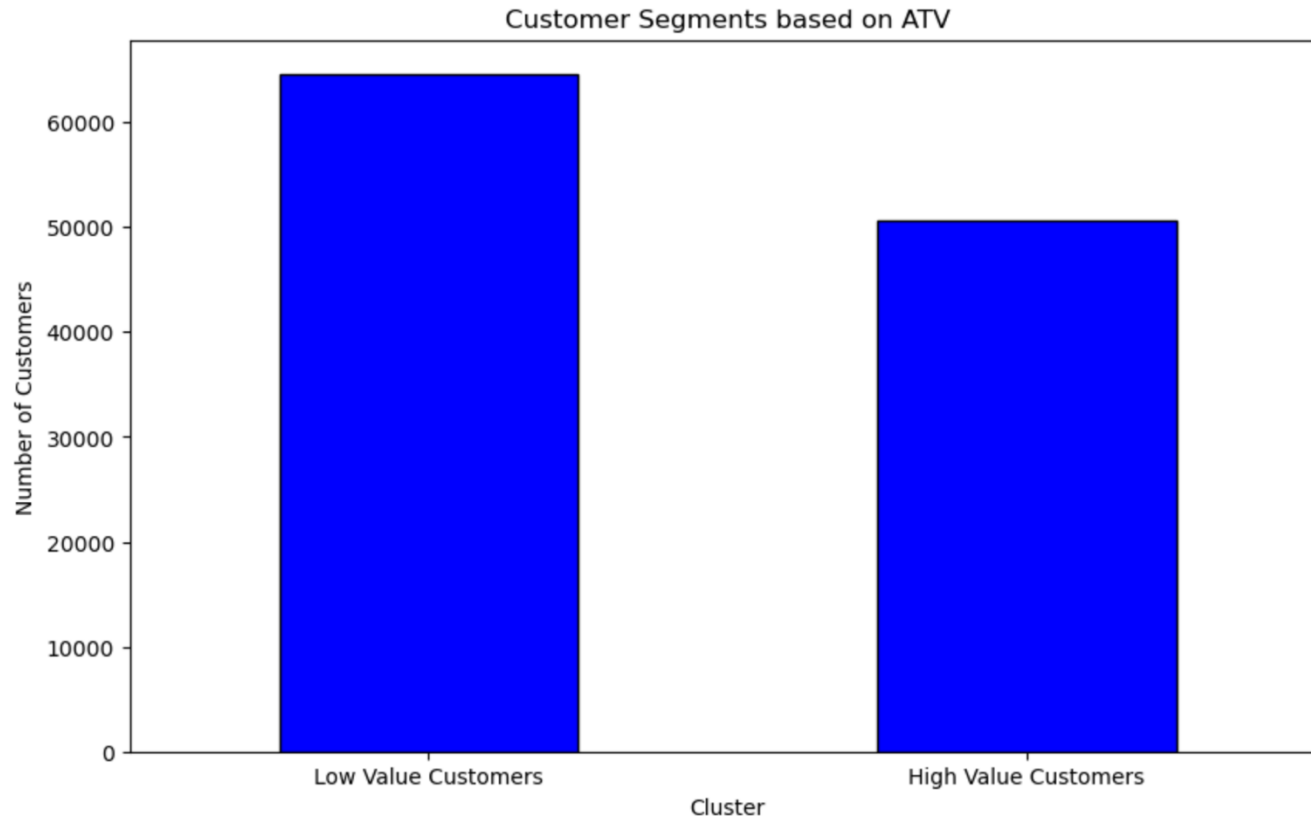- X-axis: Recency: Days since last transaction

Customer Segments based on Recency and Frequency

K-means: Recency and Frequency

Identified 3 main customer groups:

1. Loyal Customers   21
2. Active Customers   75,286
3. At-Risk Customers   39,891

Customer Segments based on ATV

K-means: ATV

Elbow point, optimal **k = 2**
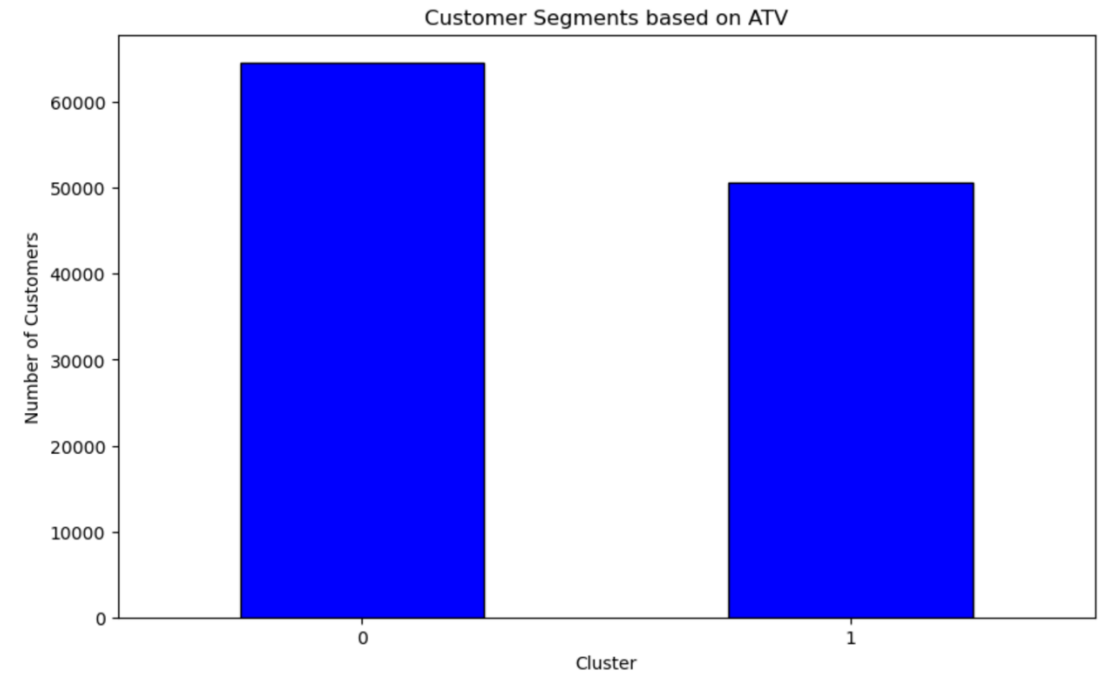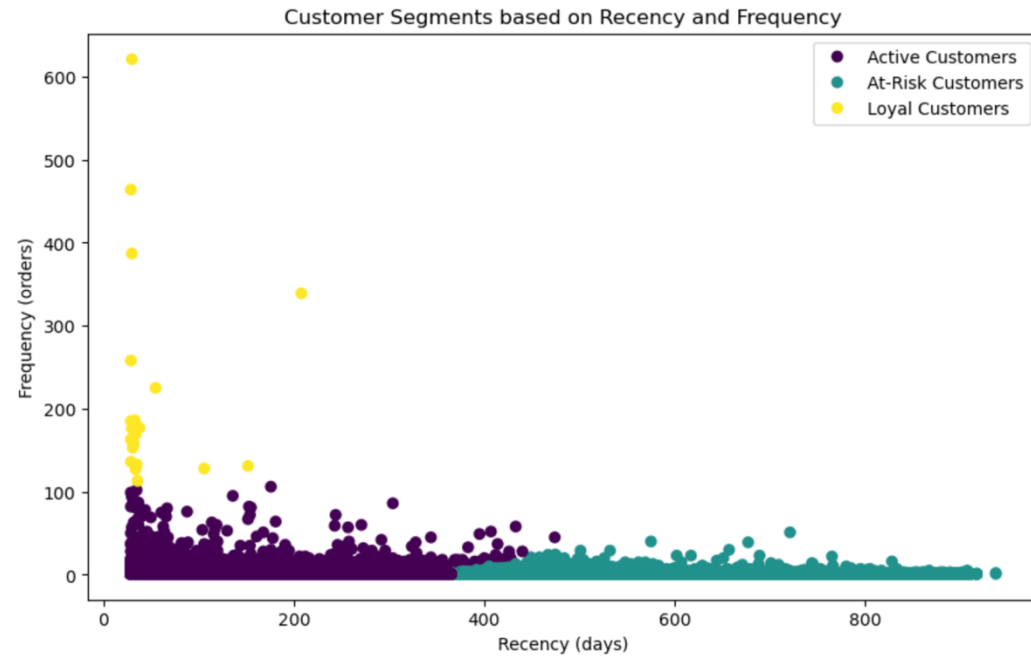
- Segment customers according to customer purchasing capacity

Low Spenders:
Rp 0,000,000.00 – Rp 1,328,570.00

High Spenders:
Rp 1,328,570.00 – Rp 3,599,000.00

Interpreting Results

Customer Segments based on Recency and Frequency

Customer Segments based on ATV

Interpreting Results: RFM Segments

3 Recency & Frequency x 2 Monetary

Waning Shoppers:
At-Risk Customers & Low Spenders

Fickle Big Spenders:
At-Risk Customers & High Spenders

Casual Browsers:
Active Customers & Low Spenders

Frequent Shoppers:
Active Customers & High Spenders

Steady Buyers:
Loyal Customers & Low Spenders

Premium Patrons:
Loyal Customers & High Spenders

Heatmap of Customer Segments by Monetary Value and RF Segments

Interpreting Results: Segments

1. Loyal Customers

2. Active Customers

3. At-Risk Customers

Suggested Marketing: At-Risk Customers

- "We Miss You" campaigns
- Time-sensitive promotions
- Reactivation Discounts
- Personalized Reminders
- Seasonal promotions

Suggested Marketing: Active Customers

- Exclusive Discount on following order
- Company Newsletter (i.e New Products)
- Loyalty Program Rewards
- Similar Product Suggestions
- Seasonal Promotions

Suggested Marketing: Loyal Customers

Low-Value

- Loyalty Rewards
- Similar Product Suggestions
- Referral Programs
- **Bundle Discounts**

High-Value

- Premium Loyalty Rewards
- Similar Product Suggestions
- Referral Programs
- **Personalized Bundles**
- **New & Limited edition**
- **Gift Raffle**

Next Steps

- Implemented into Database by IT team

- If Campaigns team wants to use identified segments, notify BA team

- Perform deeper segmentation on customer brand preference (prepare database for further analysis)

Thank You