



Prepared by group 12

Marketing Segmentation Analysis

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Introduction



Market segmentation divides a broad market into smaller, defined groups based on shared characteristics.

Segmentation enables businesses to:

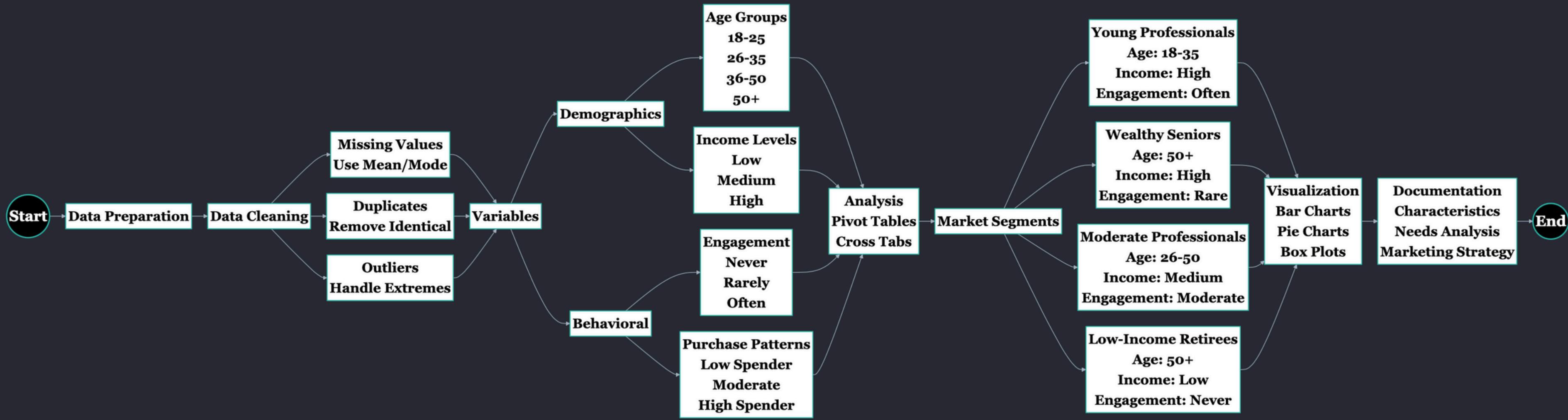
- Develop personalized marketing strategies.
- Optimize resource allocation and boost ROI.
- Understand and meet diverse customer needs effectively.

Overview:

- Dataset: 100 customers with demographic and behavioural data.
 - Variables Analyzed: Age, Income, Gender, Region, Purchasing Behavior, Promotion Engagement.
 - Methodology: K-means clustering to identify 4 distinct customer segments.
 - Purpose: Create actionable, segment-specific marketing strategies.
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Methodology



Tools and Techniques

Tools Used:

- Excel for cleaning and pivot tables.
- Python for clustering, visualization, and marketing strategy generation.



Segments Identified

Young Professionals

Average Age: 29.8 years

Average Income: \$58,000

Key Characteristics:

- Tech-savvy consumers
- Prefer digital channels
- Active promotion engagement
- Mid to high spending capacity



Low-Income Retirees

Average Age: 45.4 years

Average Income \$42,000

Key Characteristics:

- Budget-conscious shopping
- Limited digital engagement
- Price-sensitive consumers
- Traditional retail preference

Wealthy Seniors

Average Age: 56.5 years

Average Income: \$72,000

Key Characteristics:

- Traditional shopping preferences
- Higher disposable income
- Value quality over price
- Mixed digital engagement

Moderately Engaged Professionals

Average Age: 36.4 years

Average Income: \$48,000

Key Characteristics:

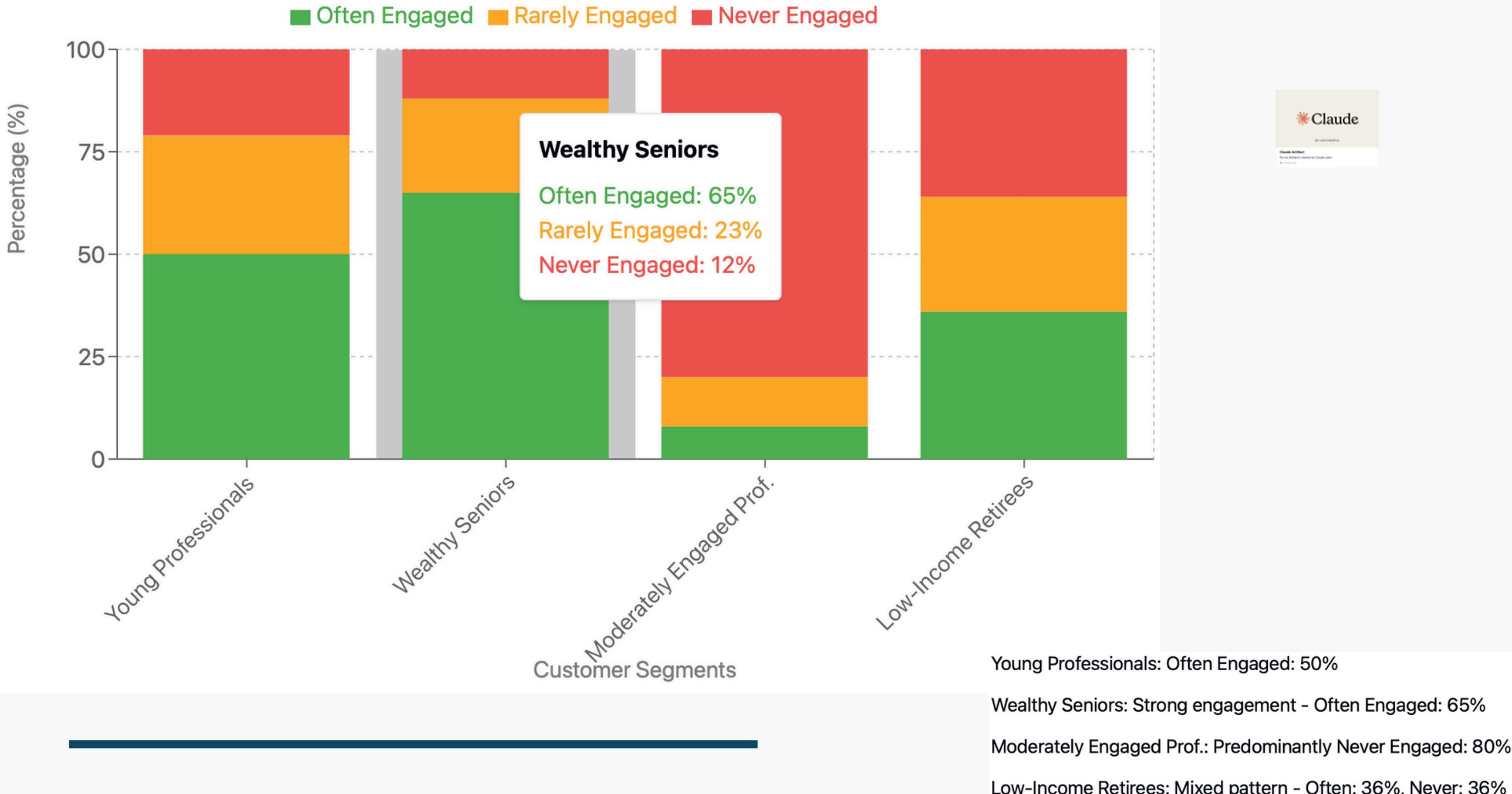
- Balanced spending habits
- Selective digital adoption
- Value-conscious decisions

Visualizations of Segments

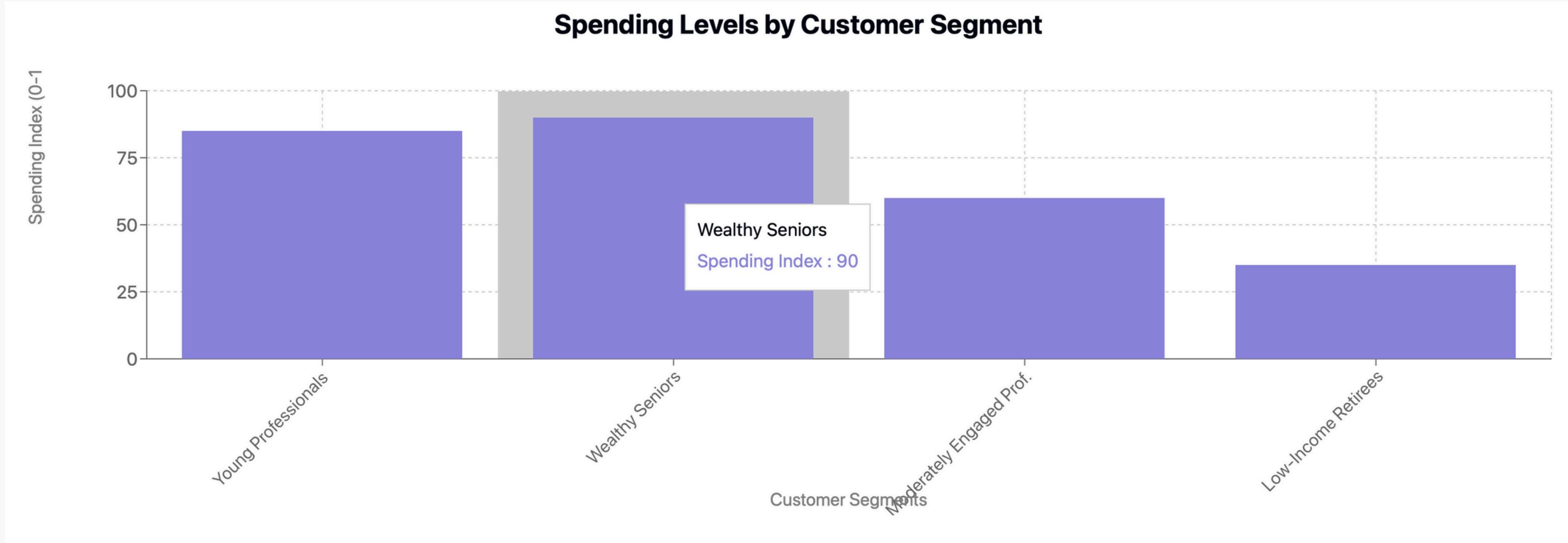


Behavioral Insights

Engagement Distribution by Segment



Spending Patterns



Spending Pattern Summary:

- Young Professionals: High spenders on digital channels (85)
- Wealthy Seniors: Highest spenders, premium products focused (90)
- Moderately Engaged Prof.: Balanced spending behavior (60)
- Low-Income Retirees: Value-conscious spending (35)

4Ps Segment-Specific Strategies

Marketing Strategy by Segment

Segment	Product	Price	Place	Promotion
Young Professionals	Mid-range products	Competitive pricing	Digital platforms	Digital marketing with personalized offers
Wealthy Seniors	Premium, high-end products	Premium pricing with loyalty rewards	Traditional retail	Traditional marketing with broad appeal
Moderately Engaged Professionals	Mid-range and practical items	Balanced pricing	Omnichannel (physical + digital)	Value-based promotions with discounts
Low-Income Retirees	Affordable, basic products	Low pricing strategies	Physical retail in local areas	Community-focused campaigns

Young Professionals

Product	Mid-range products
Price	Competitive pricing
Place	Digital platforms
Promotion	Digital marketing with personalized offers

Moderately Engaged Professionals

Product	Mid-range and practical items
Price	Balanced pricing
Place	Omnichannel (physical + digital)
Promotion	Value-based promotions with discounts

Wealthy Seniors

Product	Premium, high-end products
Price	Premium pricing with loyalty rewards
Place	Traditional retail
Promotion	Community-focused campaigns

Low-Income Retirees

Product	Affordable, basic products
Price	Low pricing strategies
Place	Physical retail in local areas
Promotion	Community-focused campaigns

Data Analysis

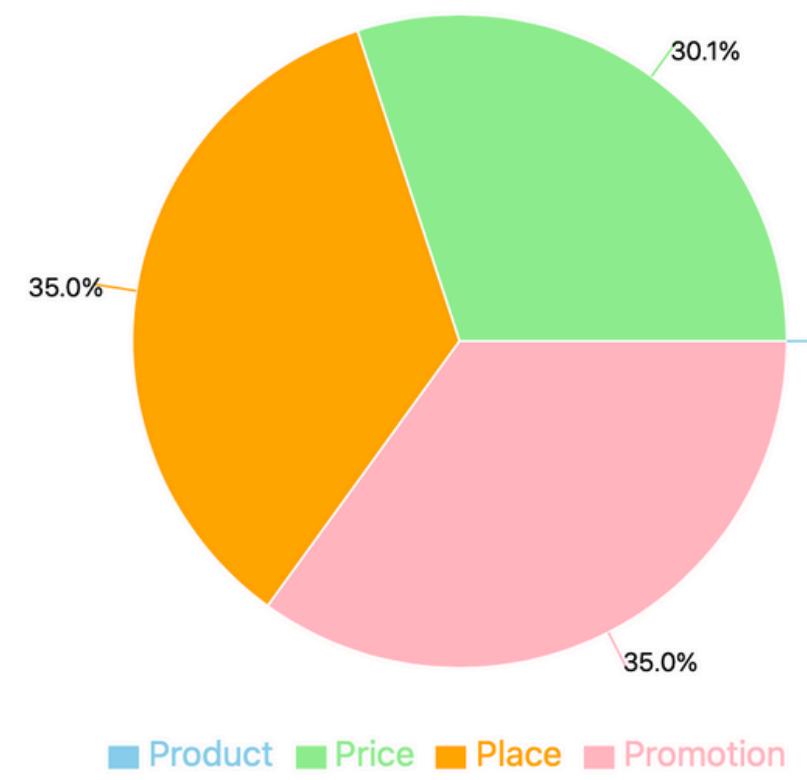
Cluster Weight Distribution

Cluster	Product Weight	Price Weight	Place Weight	Promotion Weight
Cluster 0	0.00%	25.05%	29.15%	29.15%
Cluster 1	39.33%	27.25%	38.45%	38.45%
Cluster 2	24.76%	24.72%	0.73%	0.73%
Cluster 3	35.91%	22.98%	31.67%	31.67%

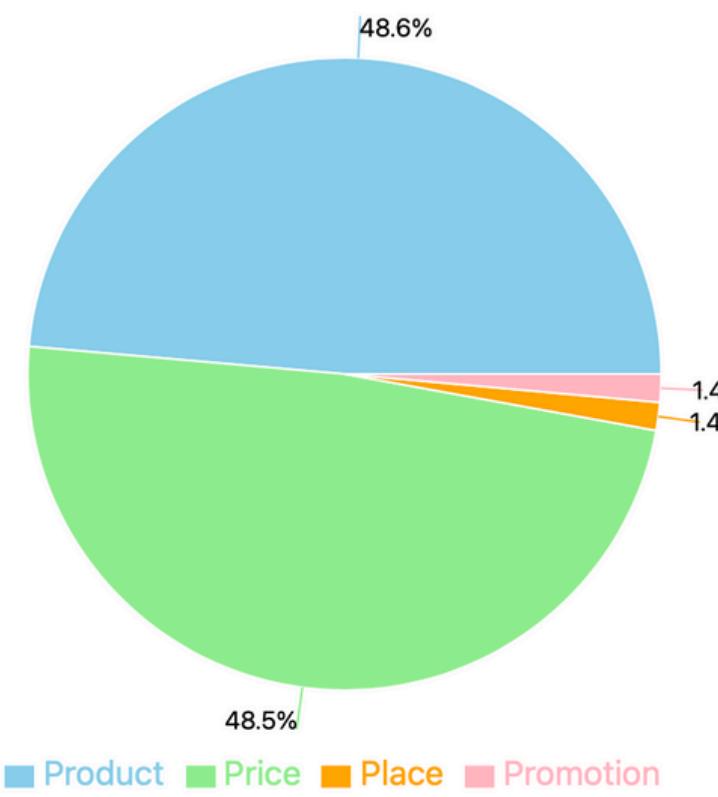
Cluster	Definition
Cluster 0	Young Professionals
Cluster 1	Wealthy Seniors
Cluster 2	Moderately Engaged Professionals
Cluster 3	Low-Income Retirees

Cluster Weight Analysis

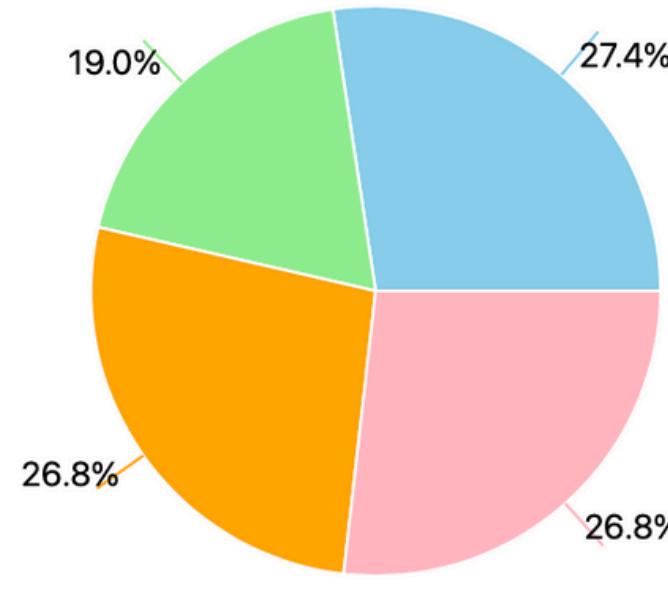
Cluster 0 - Young Professionals



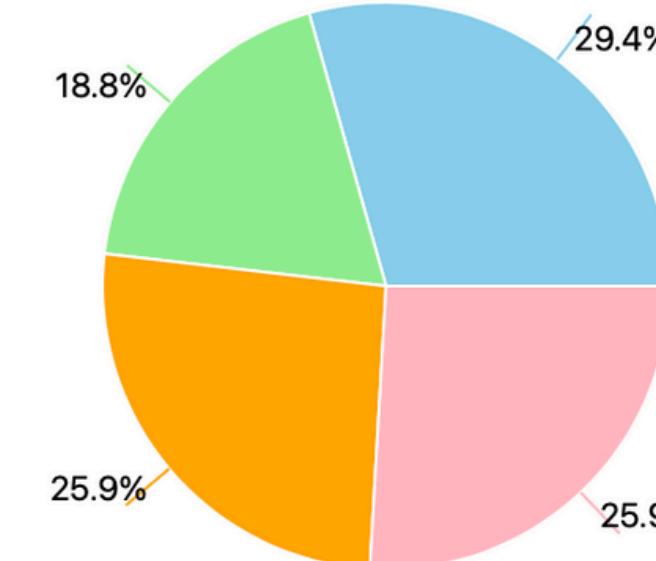
Cluster 2 - Moderately Engaged Professionals



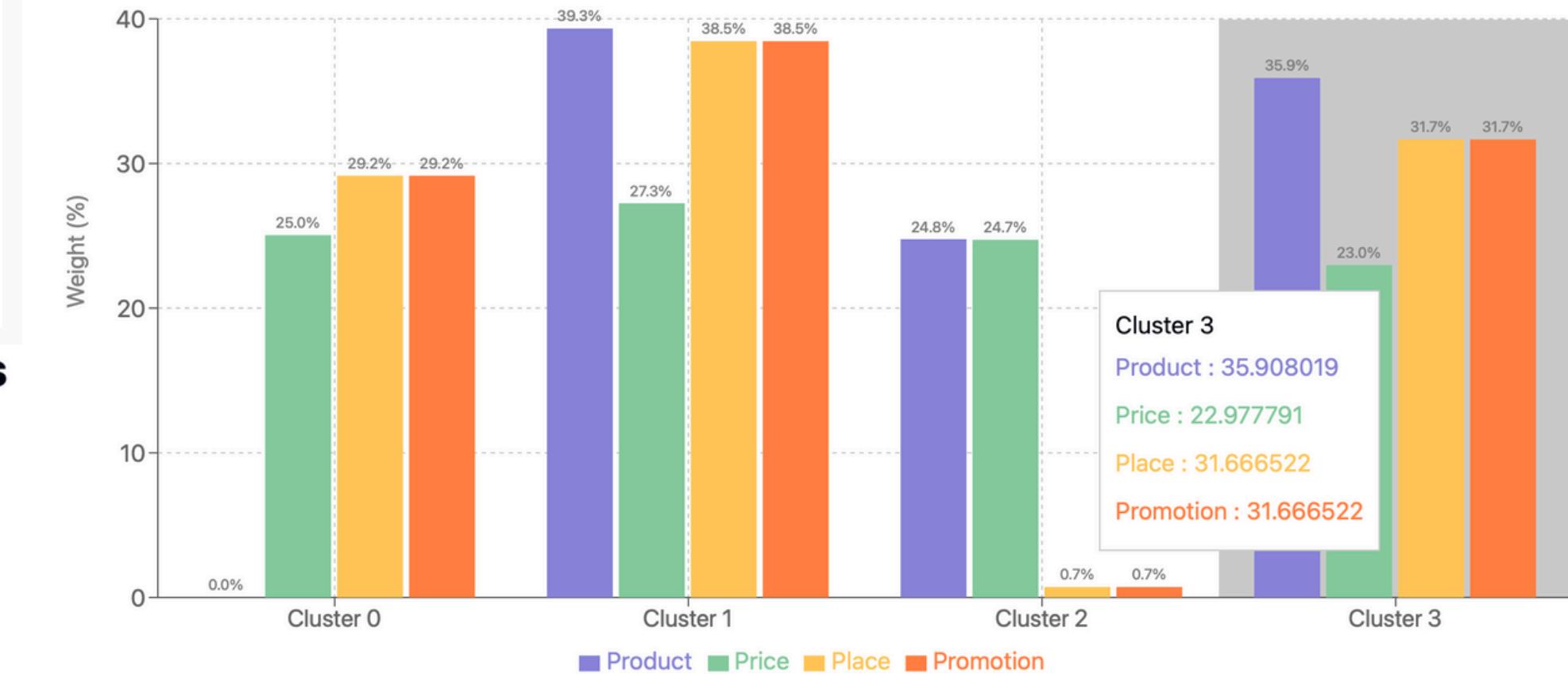
Cluster 1 - Wealthy Seniors



Cluster 3 - Low-Income Retirees



4 Ps Weights Comparison Across Clusters



■ Product ■ Price ■ Place ■ Promotion

■ Product ■ Price ■ Place ■ Promotion

Summary and Recommendations

Key Takeaway:

- Focus marketing efforts on high-value Segments 0 and 1 with personalized offers to increase ROI.

Cluster 0: Young Professionals

- Products: Affordable, quality products with modern features.
- Place: Digital platforms.
- Promotion: Use personalized online promotions and loyalty programs.

Cluster 1: Wealthy Seniors

- Products: High-end, premium products.
- Place: Traditional stores or a mix of online and offline options.
- Promotion: Offer loyalty rewards and targeted promotions.

Cluster 2: Moderately Engaged Professionals

- Products: Practical, mid-range products at good prices.
- Place: Less focus on any specific platform.
- Promotion: Use value-based promotions and simple pricing strategies.

Cluster 3: Low-Income Retirees

- Products: Affordable, basic products.
- Place: Local stores or simple online options.
- Promotion: Use community-focused campaigns and affordable pricing.



Limitations and Challenges

Limitations:

Missing/inconsistent data reduces accuracy.

Small Sample Size.

External factors (e.g., economic changes) impact segment behaviour.

Challenges:

Rapid market shifts require constant updates.

High cost of personalized promotions and loyalty programs.

Engaging less tech-savvy groups (e.g., retirees).

Suggestions:

Use real-time data for segmentation updates.

Automate promotions with AI tools.

Partner with local communities for Cluster 3 retention.

Pilot strategies to minimize risk and measure ROI.



Supporting Data

Include supporting files and visualizations:

Files:

phyton codes

segmented_data.csv: Full segmentation details.

marketing_strategies.json: Detailed strategies for all segments.

Visualizations:

Age distribution by segment.

Income distribution by segment.

Engagement and spending patterns (stacked bar chart).

Pie charts summarizing 4 Ps for each segment.



Thank you!

