



E-commerce AI Recommendation Engine

By Team Pricefirehouse Consulting:

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1 Executive Summary



SMART Goals



Specific



Measurable



Actionable



Relevant



Timebound

2 Data Analysis



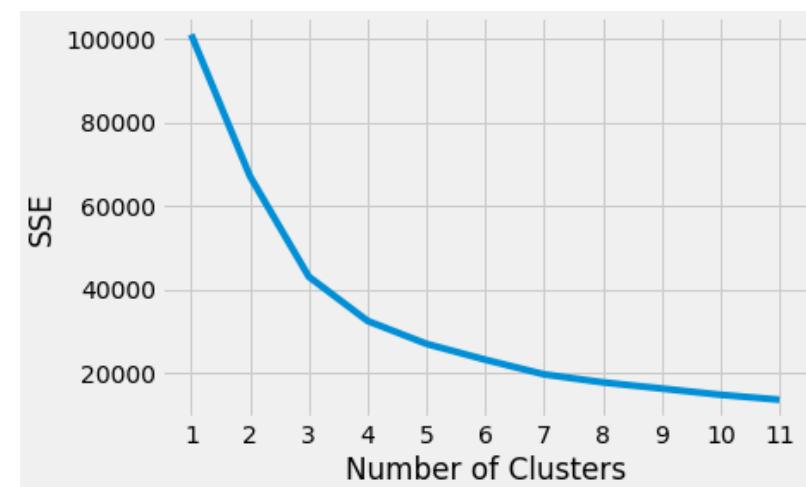
Data Modeling

Data Cleansing and Pre-processing:

- Exploratory Data Analysis
- Removal of anomalies
- Dimension Reduction
 - Recency, Frequency, Monetary Value

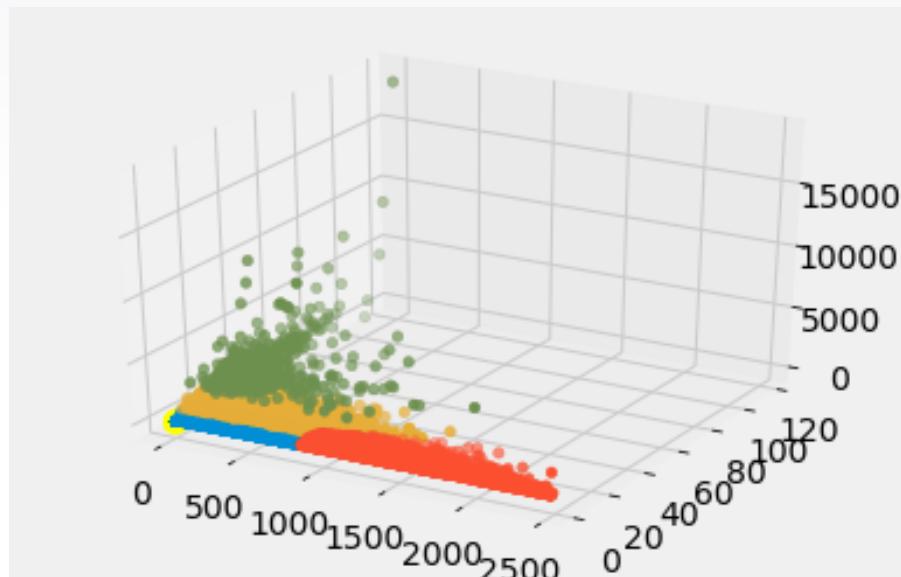
Clustering Model:

- K-means clustering model with 3 dimensions
- 4 clusters



Model Outputs

Clustering Plots:



Clustering Rules:

Clusters	Clustering Rules	No. of Records
Inactive New Customers	Recency < 800 & Overall Monetary < 1000 - 80*Overall Frequency	20,262
Inactive Old Customers	Recency > 800 & Overall Monetary < 1000 - 80*Overall Frequency	7,199
Medium-level Active Customers	1000 - 80*Overall Frequency < Overall Monetary < 2500 - 55*Overall Frequency	5,641
High-level Active Customers	Overall Monetary > 2500 - 55*Overall Frequency	607

Marketing Strategies

3



Loyalty Program



Main Object

- Partnering with other relevant brands:
Physical bookstores/Coffee bars
- Social media contests
- Remember customers' special days
- Different membership levels
- Encourage Referrals

Specific:

- Points for free drinks and dessert / Poster promotion/Free gifts with website logo
- Photo competition
- Birthday/ Membership anniversary
- Based on overall consumption/Special offer
- Additional points/Discounts

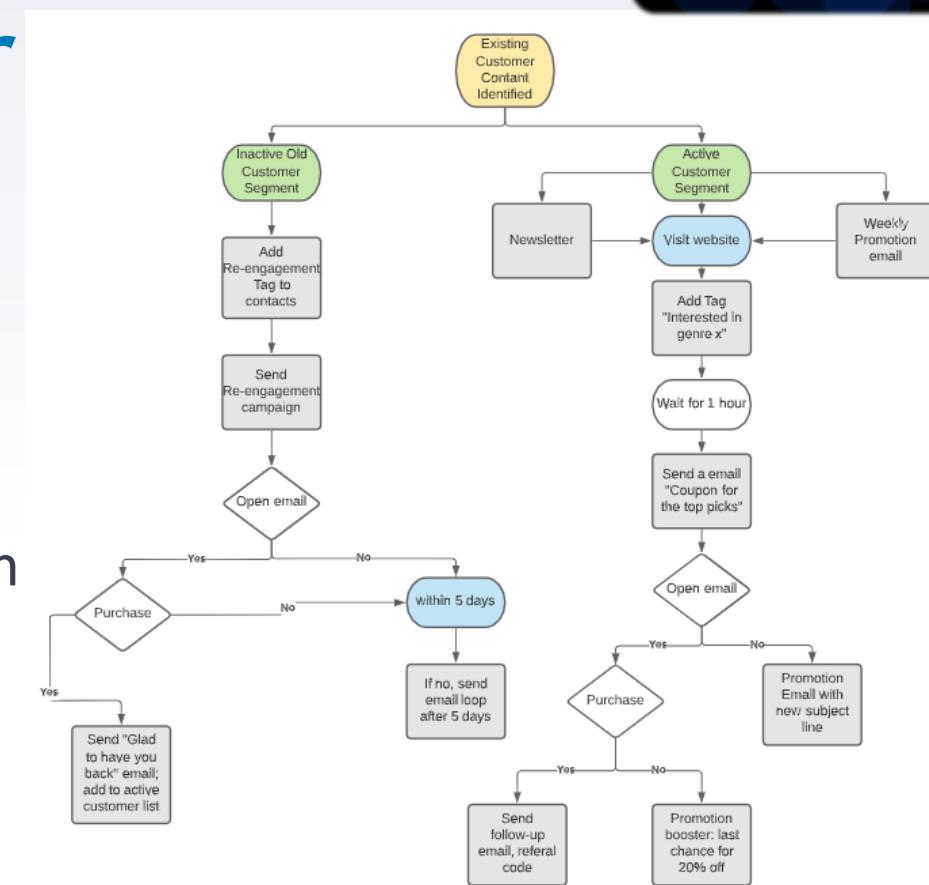
Inactive Former Customer

Main Object

- Find out why customers stopped buying
- Research the customer's present situation.
- Make the contact and win back our customers
- Win back 8-10% of former customer

Approach

1. Re-engagement campaign
 - Email
 - Direct mail
2. Collect feedbacks
 - Future Improvement
 - Reasons to disconnected



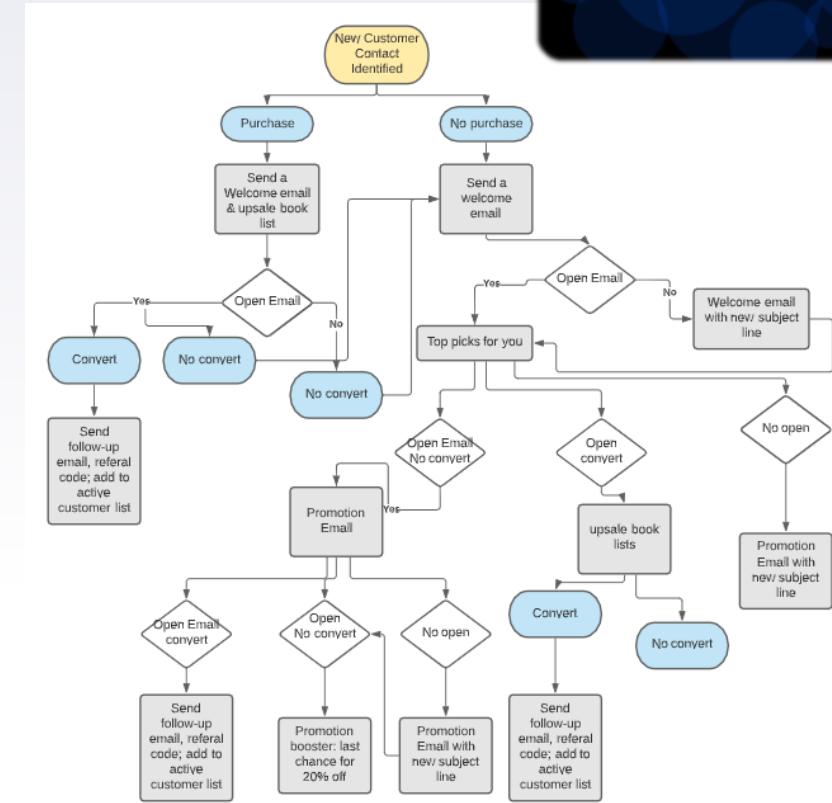
Inactive New Customer

Main object

- ▶ Build Customer Trust & Loyalty
- ▶ Improve brand awareness
- ▶ 15% sales increase

Approach

1. Send a welcome email
2. Offer free trial
3. Encourage them to join our loyalty program
4. Take advantage of online ratings and review sites



Medium-level Active Customer

Main object

- ▶ Increase customer satisfaction
- ▶ Increase customer retention
- ▶ Promote them to higher level
- ▶ 15% sales increase

Approach

1. Follow up experience feedback.
2. Provide discounted or even free user experience.
3. Optimize product pricing based on the characteristics and habits of generally active customers.

High-level Active Customer

Main object

- ▶ Maintain customer relationships
- ▶ Targeted promotion
- ▶ Hope them continue to maintain the status now
- ▶ 30% sales increase

Approach

1. Offer free shipping through our ecommerce warehouse
2. Exclusive discount offer
3. First access to the new products

Task Team

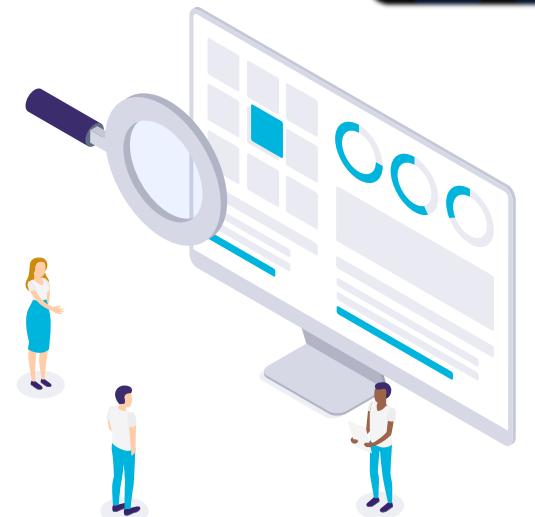
Data Sector:

- *Data Engineer*
- *Data Scientist*



Customer Relation Sector:

- *Customer Retention Manager*
- *Customer Research Analyst*



Marketing Sector:

- *Website Analyst*
- *Marketing Analytics Manager*



Engine Implantation to All Segments --- *Looking towards the future*

- *Establishment of Cultural Community*
- *Expansion of Product Lines(E-Book Retail, Book Accessories, etc.)*
- *Off-line Activities(Exhibition, Speech, etc.)*
- *Corporate/Author Collaboration*
- *Increase of Brand Awareness*



“Not only we are booksellers, but beyond that...”

THANKS!

Any questions?

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