TheAnalyticsTeam

Sprocket Central Pty Ltd

Data analytics approach

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Agenda

1. Introduction
2. Data Exploration
3. Model Development
4. Interpretation

Introduction

Identify and Recommend Top 1000 Customer to Target from Datasets

Outline of Problem

- Sprocket Central is a company that specializes in high quality bike and cycling accessories.
- Their marketing team is looking to boost business sales by analysing provided datasets.
- Using the 3 datasets provided the aim is to analyse and recommend 1000 customers that Sprocket Central should target to drive higher value for the company.

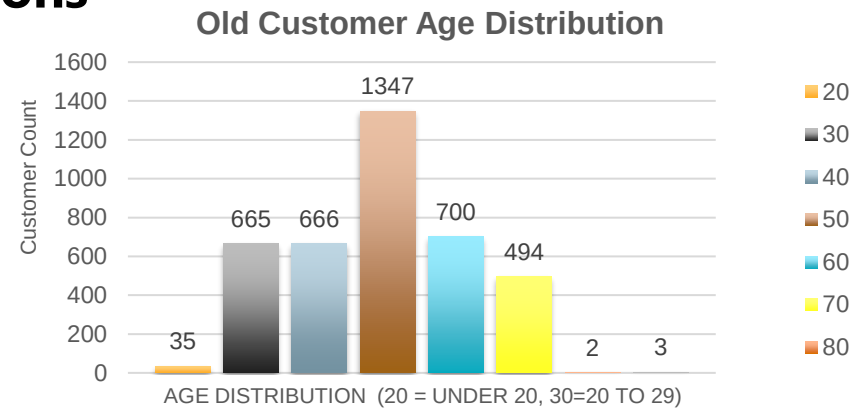
Contents of Data Analysis

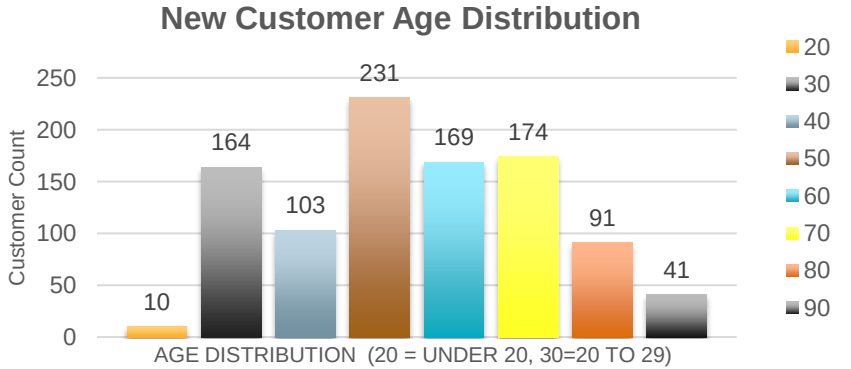
- ‘New’ and ‘Old’ Customer Age Distributions
- Bike related purchases over the last 3 years by gender.
- Wealth Segmentation by age category.
- Job industry distributions.
- Number of cars owned and not owner by state.
- RFM Analysis and customer classification.

Data Exploration

‘New’ and ‘Old’ Customer Age Distributions

- Most customers are aged between 40 – 49 in ‘New’. In ‘Old’ majority of customers are aged between 40-49 also.
- The ‘Old’ customer list suggests that age groups 20 – 69 are the most populated.
- The ‘New customer list also suggest 20-69.
- There is steep drop of customers in the 30-39 age group in ‘New’.

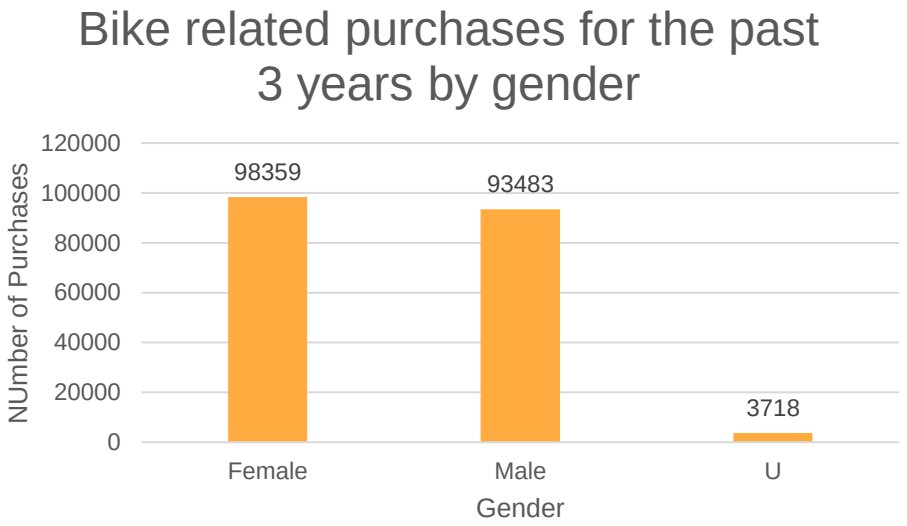




Data Exploration

Bike related purchases

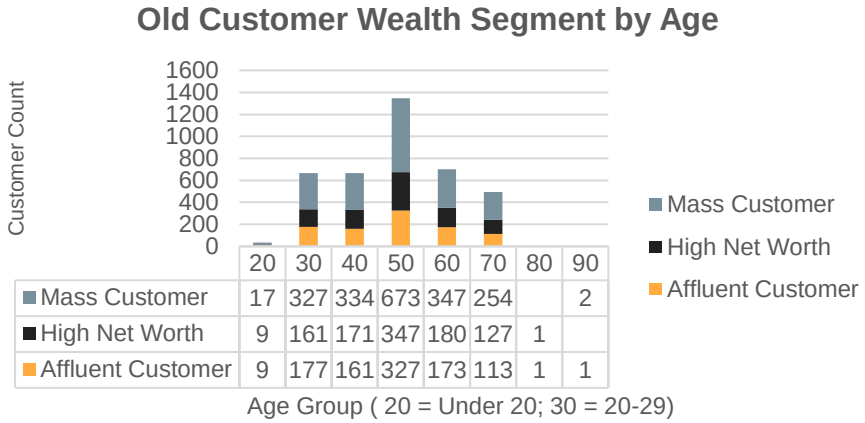
- Over the last three years, About 50% of bike related purchases were made by females to 48% of purchases made by males. Approximately 2% were made by unknown gender.
- Numerically, females purchases almost 5000 more than males.
- Females make up majority of bike related sales.



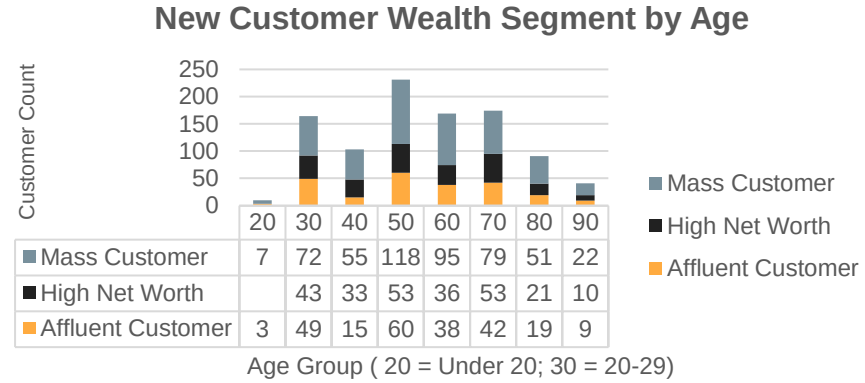
Data Exploration

Wealth Segmentation by Age

- In all age categories the largest number of customers are classified as ‘Mass Customer’.
- The next category is the High Net Worth’ customers.
- The ‘Affluent Customer’ can outperform the ‘High Net worth’ customer in the 40-49 age group.



	20	30	40	50	60	70	80	90
Mass Customer	17	327	334	673	347	254		2
High Net Worth	9	161	171	347	180	127	1	
Affluent Customer	9	177	161	327	173	113	1	1

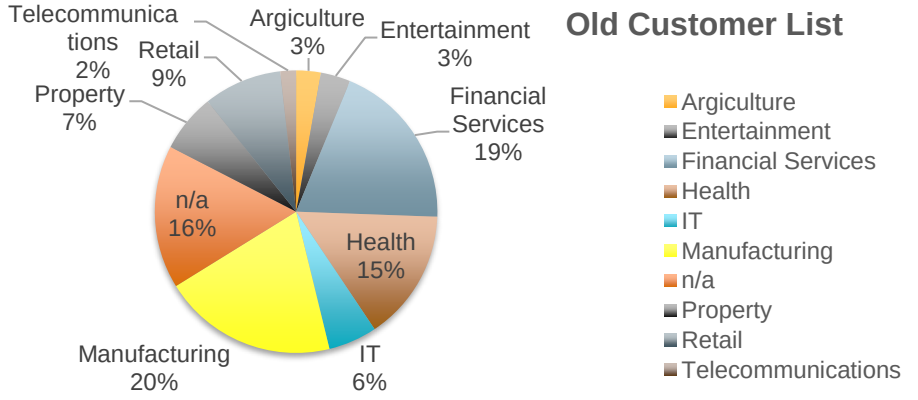


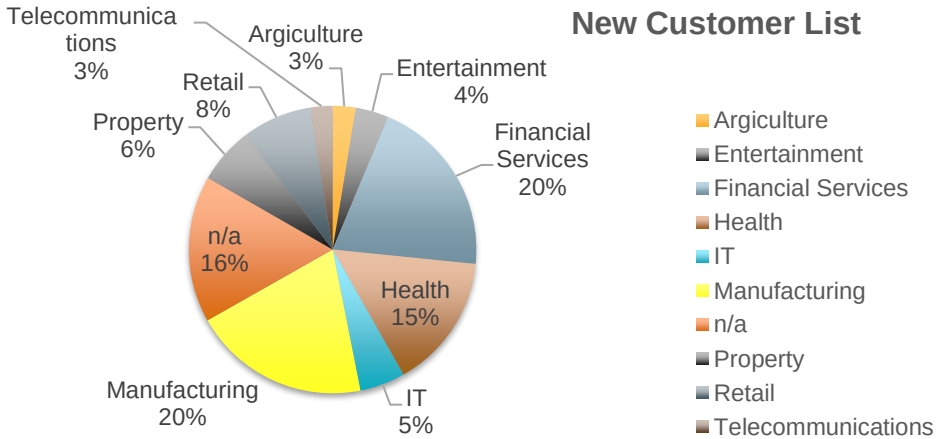
	20	30	40	50	60	70	80	90
Mass Customer	7	72	55	118	95	79	51	22
High Net Worth		43	33	53	36	53	21	10
Affluent Customer	3	49	15	60	38	42	19	9

Data Exploration

Job Industry Distributions

- 20% of ‘New’ Customers are in Manufacturing and Financial Services.
- The smallest number of customers are in Agriculture and Telecommunications.
- Similar pattern in ‘Old’ customer list, at 20% and 19% in Manufacturing and Financial Services respectively.

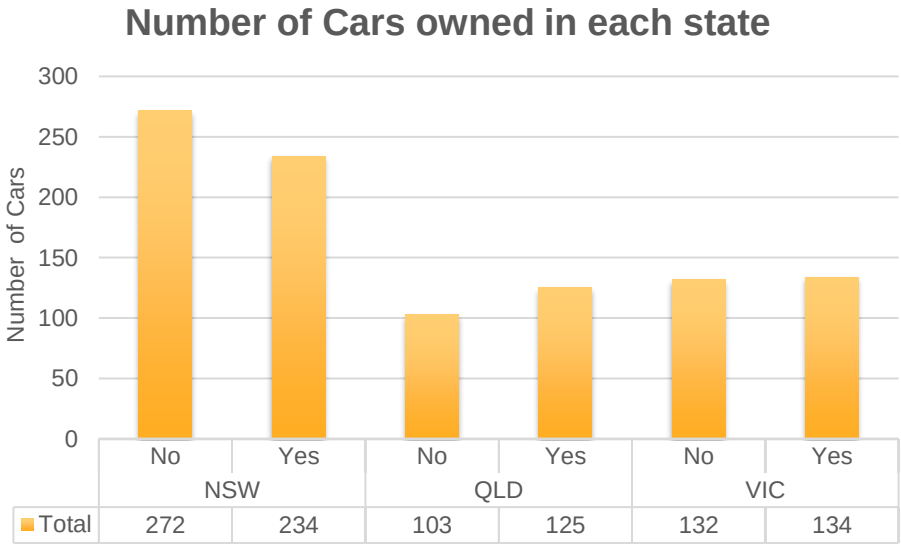




Data Exploration

Number of cars owned

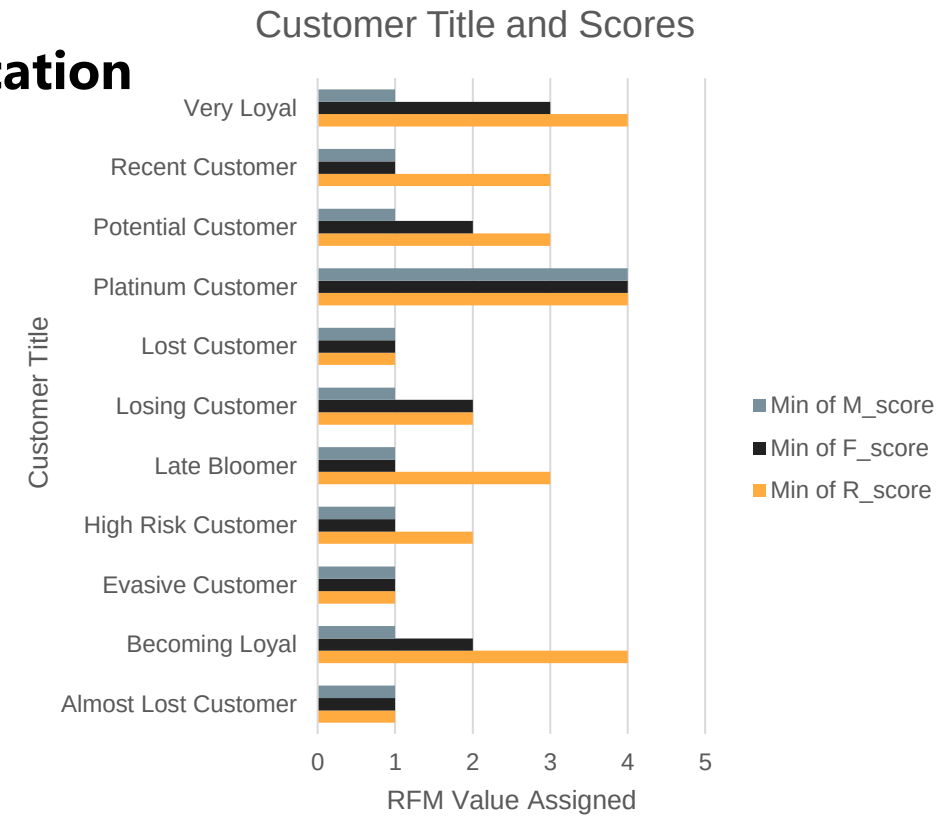
- NSW has the largest amount of people that **do not** own a car. NSW seems to have higher number of people from which data was collected.
- Victoria is also split quite evenly. But both numbers are significantly lower than those of NSW.
- QLD has a relatively high numbers of customers that own a car.



Model Development

RFM Analysis and Customer Classification

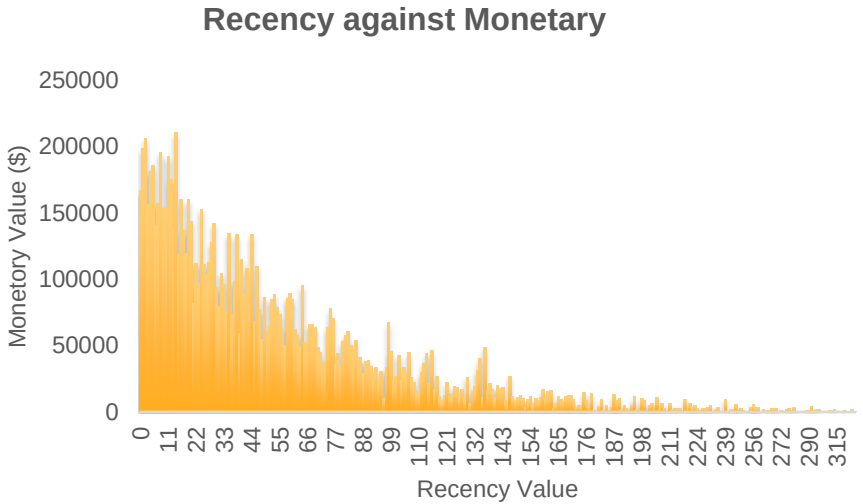
- RFM analysis is used to determine which customers a business should target to increase revenue and value.
- The RFM(Recency, Frequency, and Monetary) model shows customers that have displayed high level of engagement with the business in the three categories mentioned.



Model Development

Scatter Plot Based off RFM Analysis

- The chart shows that customer who purchased more recently have generated more revenue, than customer who visited a while ago.
- Customers from recent post (50 – 100 days) also show to generate a moderate amount of revenue.
- Those who visited more than 200 days ago generate amount of revenue low revenue.

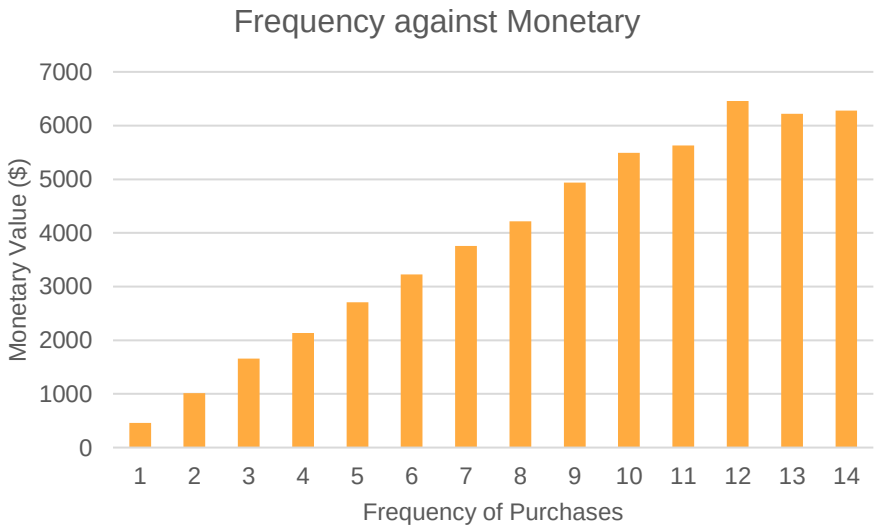


Model Development

Bar-Plot Based off RFM Analysis

- Customer classified as “Platinum Customer”, “Very Loyal” and “ Becoming Loyal” visit frequently, which correlated with increased revenue for the business.

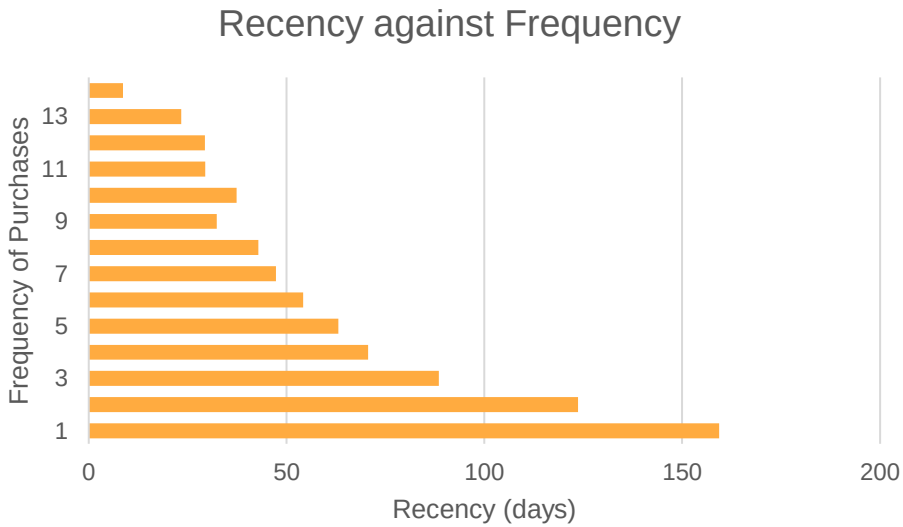
- Naturally, there is a positive relationship between frequency and monetary gain for the business.



Model Development

Bar-Plot Based off RFM Analysis

- Very low frequency of 0-2 correlated with high recency values. i.e. More than 250 days ago.
- Customers that have visited more recently (0-50) have a higher chance of visiting more frequently (6+).
- Higher frequency has a negative relationship with recency values. Such that very recent customers are also frequent customers.



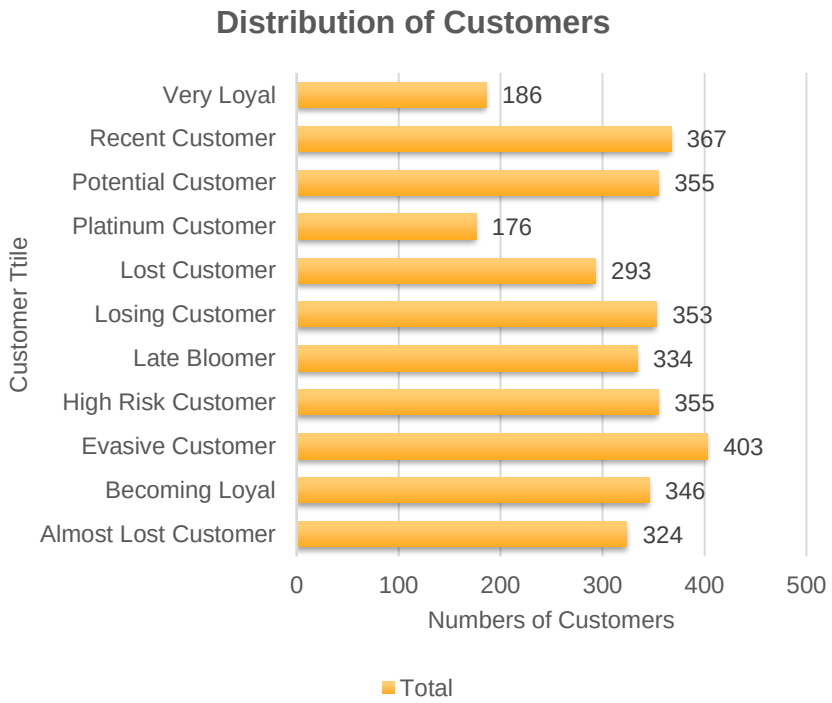
Model Development

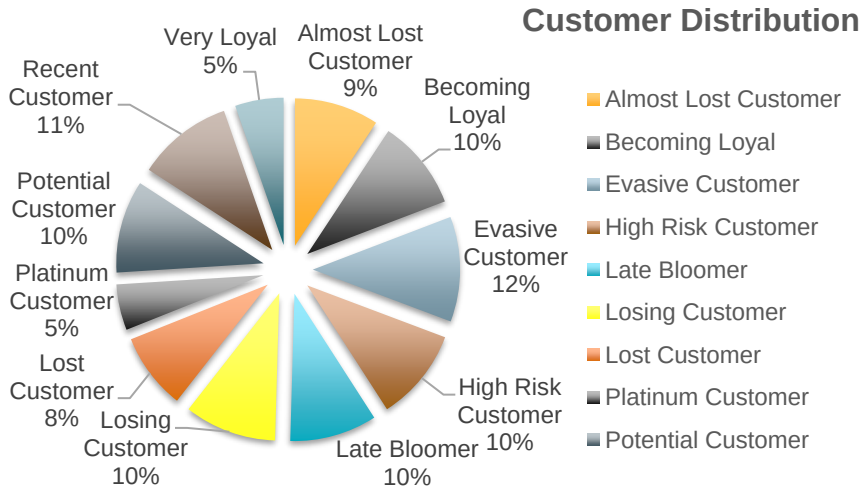
Customer Title Definition list with RFM Values assigned

Rank	Customer Title	Description	RFM Value
1	Platinum Customer	Most recent buy, buys often, most spent	444
2	Very Loyal	Most recent, buys often, spend large amount of money	433
3	Becoming Loyal	Relatively recent, bought more than once, spends large amount of money	421
4	Recent Customer	Bought recently, not very often, average money spent	344
5	Potential Customer	Bought recently never bought before, spent small amount	323
6	Late Bloomer	No purchases recently, but RFM value is larger than average	311
7	Losing Customer	Purchases was a while ago, below average RFM Value	224
8	High Risk Customer	Purchases was long time ago, frequency is quite high, amount spent is high	212
9	Almost Lost Customer	Very low recency, low frequency, but high amount spent	124
10	Evasive Customer	Very low recency very low frequency, small amount spent	112
11	Lost Customer	Very Low RFM	111

Model Development

Customer Title Distributions in Dataset





Interpretation

Summary Table of the Top 1000 Customers to Target

Rank	Customer Title	Description	Number of Customers	Cumulative	Customer Selection
1	Platinum Customer	Most recent buy, buys often, most spent	176	176	176
2	Very Loyal	Most recent, buys often, spend large amount of money	184	360	184
3	Becoming Loyal	Relatively recent, bought more than once, spends large amount of money	344	704	344
4	Recent Customer	Bought recently, not very often, average money spent	368	1072	296
5	Potential Customer	Bought recently never bought before, spent small amount	355	1427	0

Interpretation

Summary Table of the Top 1000 Customers to Target

Rank	Customer Title	Description	Number of Customers	Cumulative	Customer Selection
1	Platinum Customer	Most recent buy, buys often, most spent	176	176	176
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- Filter through the top 1000 customer by assigning the condition discussed in the table above.
  The 1000 customers discovered would have bought very frequently in the past and tend to spend more than other customers.

Appendix

Appendix

This is an optional slide where you may place any supporting items.