TheAnalyticsTeam

Sprocket Central Pty Ltd

RFM Segmentation Model

Qi Zhang

Agenda

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

Introduction

Identify and Recommend Top 1000 Customers to Target from Dataset

Outline of Problem:

• Sprocket Central is a company that specializes in high-quality bike and cycling accessories.

• Marketing team aiming to boost sales.

• Using 3 datasets to analyze and recommend 1000 customers that they should target to drive higher value for the company.

Contents Of Data Analysis:
• Age Distribution
• Wealth segmentation by age category
• Gender by Wealth segments
• Number of cars owned and not owned by state
• Car ownership by job industry
• Job industry distribution

• RFM Analysis and customer classification

Data Exploration

## Customer's Age Distribution

- The customers between 40 to 50 tend to purchase more orders than other age groups.
- 20-30, 30-40, 50-60 having similar customer quantity around 500.
- Majority of customers are between 20 to 70 years old. Not many are less than 20 or over 70 years old.

Old Gender with Age Distribution
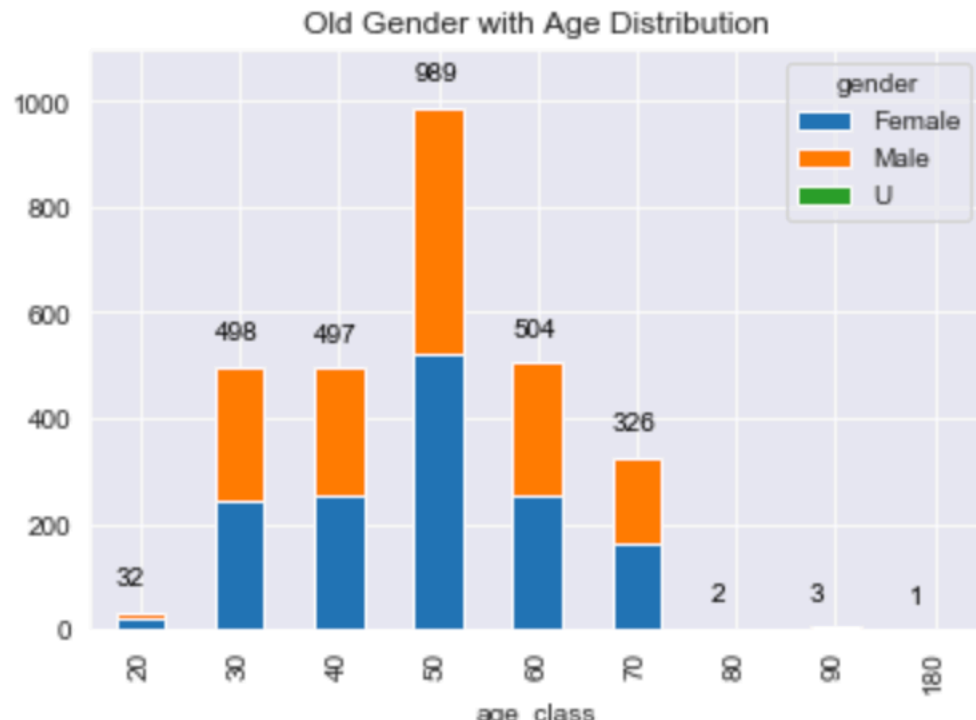
Data Exploration

## Wealth segments with age groups

- The most customer are mass customer.
- Least customers are affluent customers.
- 40-50 has most affluent customer, high net worth and mass customers.
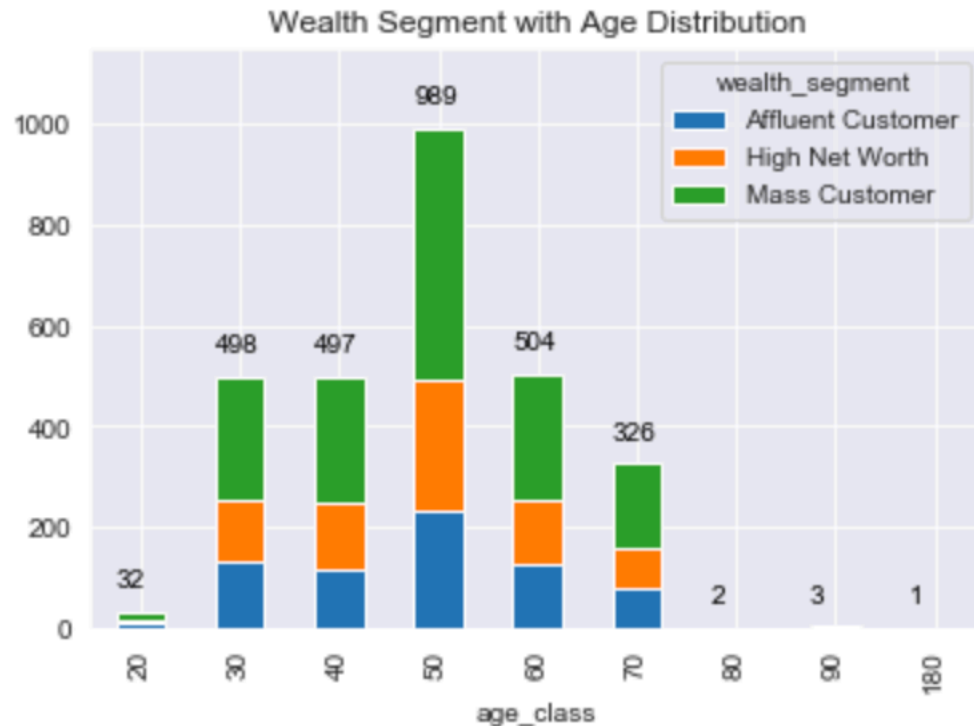
Wealth Segment with Age Distribution

Gender by Wealth Segments

• For wealth segments, in high net worth and Mass customer segments, female customers are more than male, but on Affluent Customer segment, male are more than female.

Old Gender by Wealth Segment

Legend: Female, Male

Affluent Customer: 698
High Net Worth: 729
Mass Customer: 1425
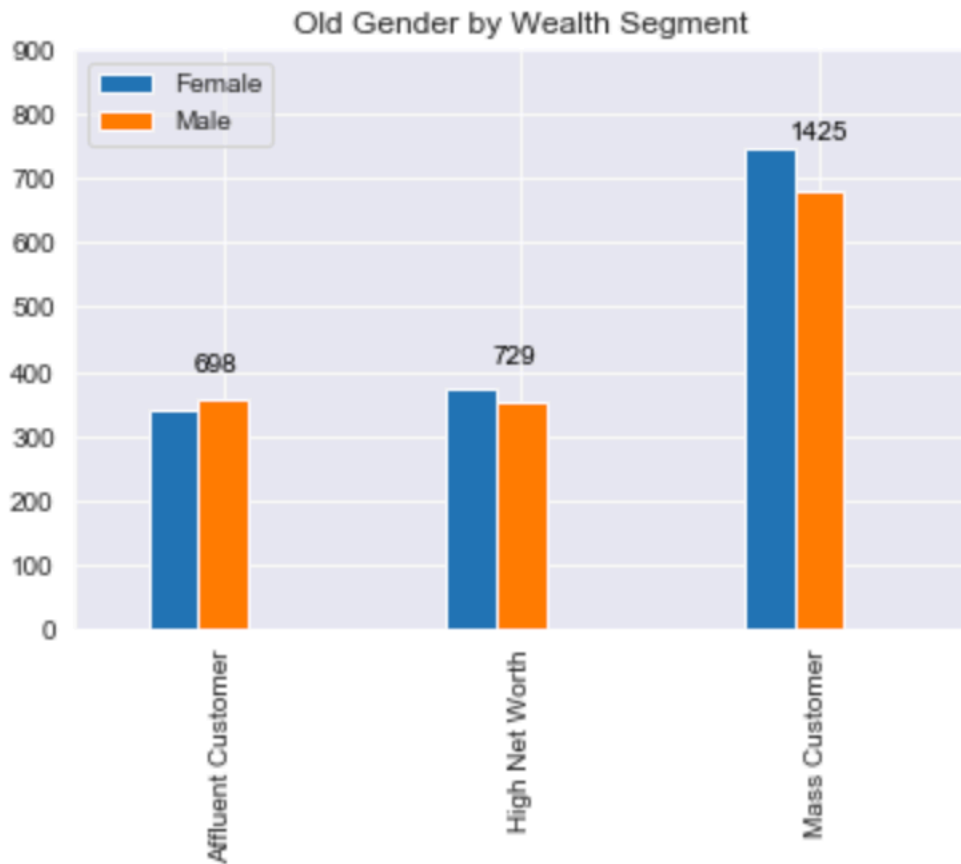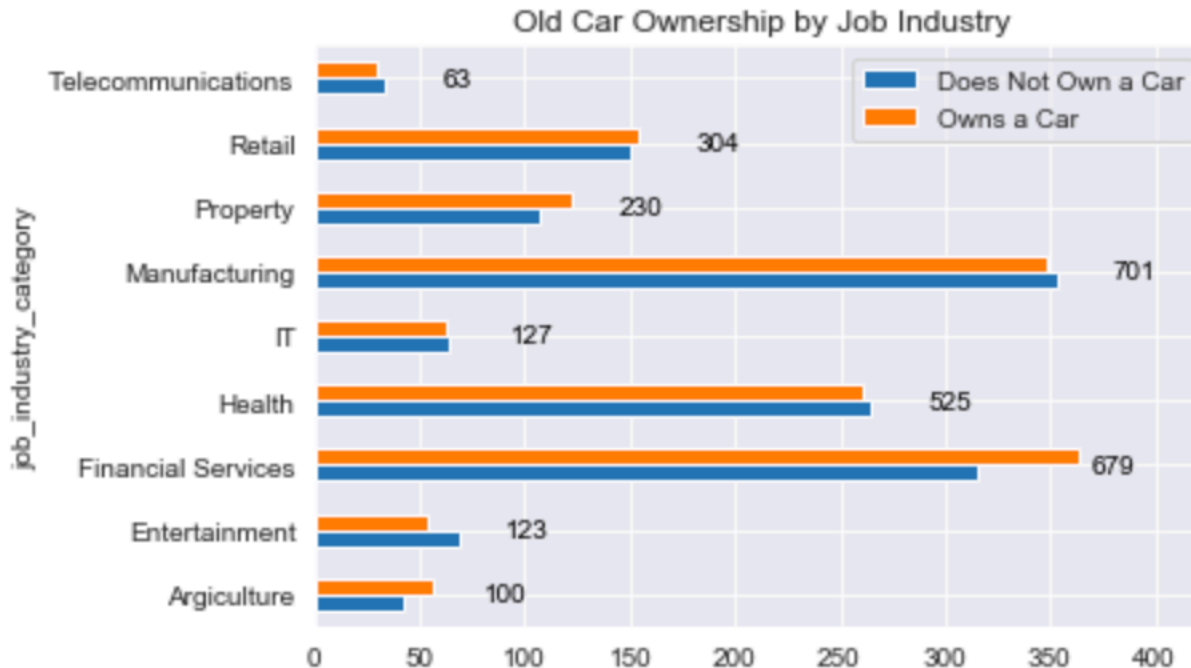
Data Exploration

Car Ownership by State

- NSW has most customers while QLD state has least customers.
- In all 3 states, number of people own cars are more than number of customer does not own a car.

Old Car Ownership by State
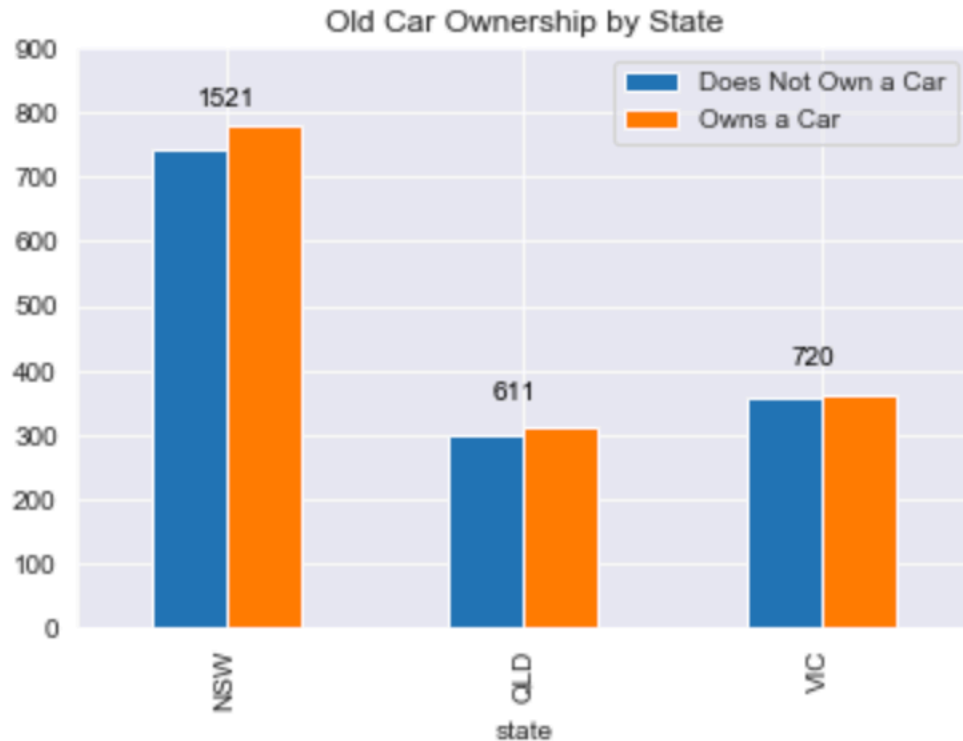
Data Exploration

Car Ownership by Job Industry

- Manufacturing industry and financial service have more customers than other industries
- In financial services, much more customers own car than other that do not own car.
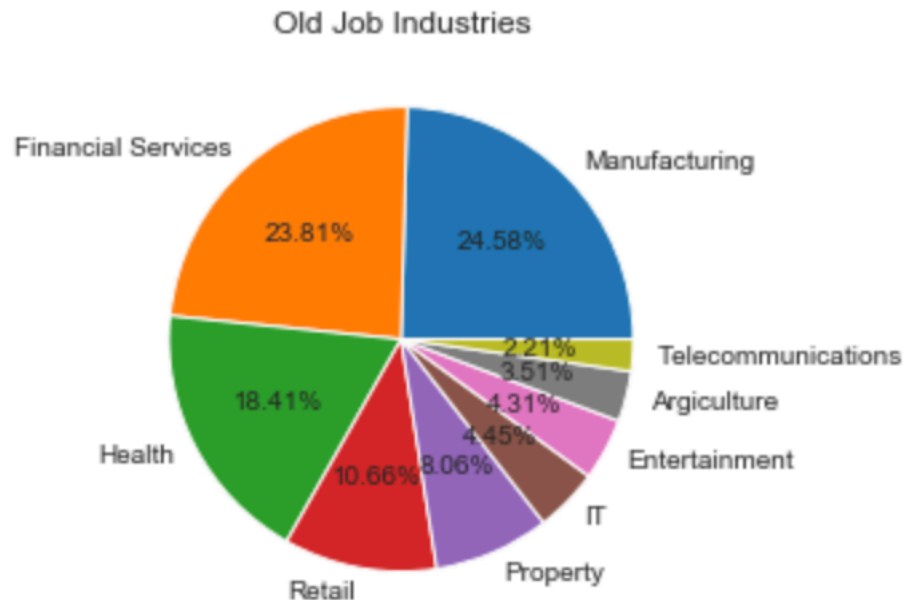

Old Car Ownership by Job Industry

Data Exploration

Job Industry Distribution

- Manufacturing, Financial Services and Health industries have most customers
- Telecommunications, Agriculture, Entertainment and IT together only consist of 14% customers.

Old Job Industries

Model Development

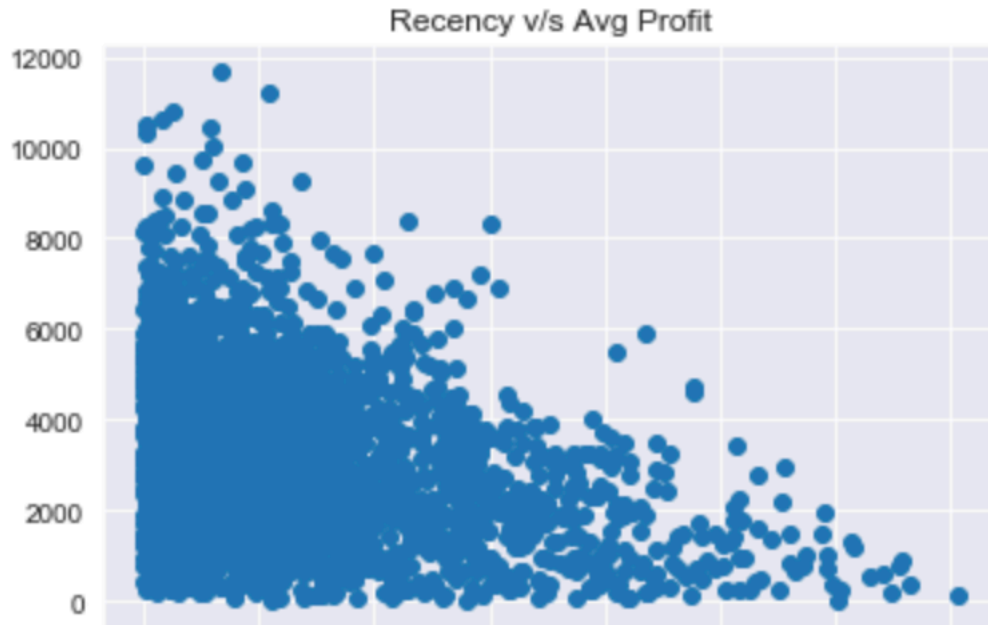## RFM Analysis and Customer Classification

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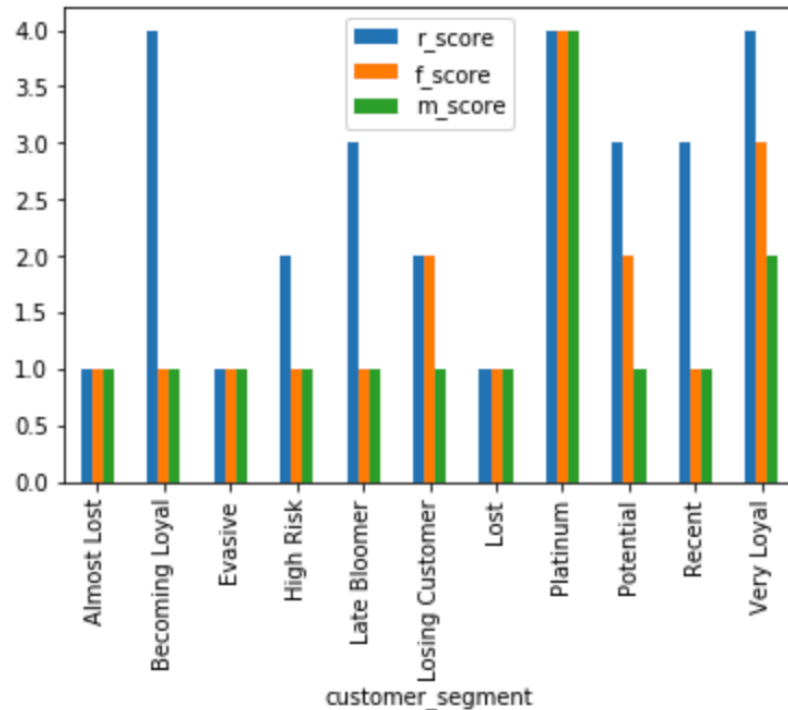
Model Development

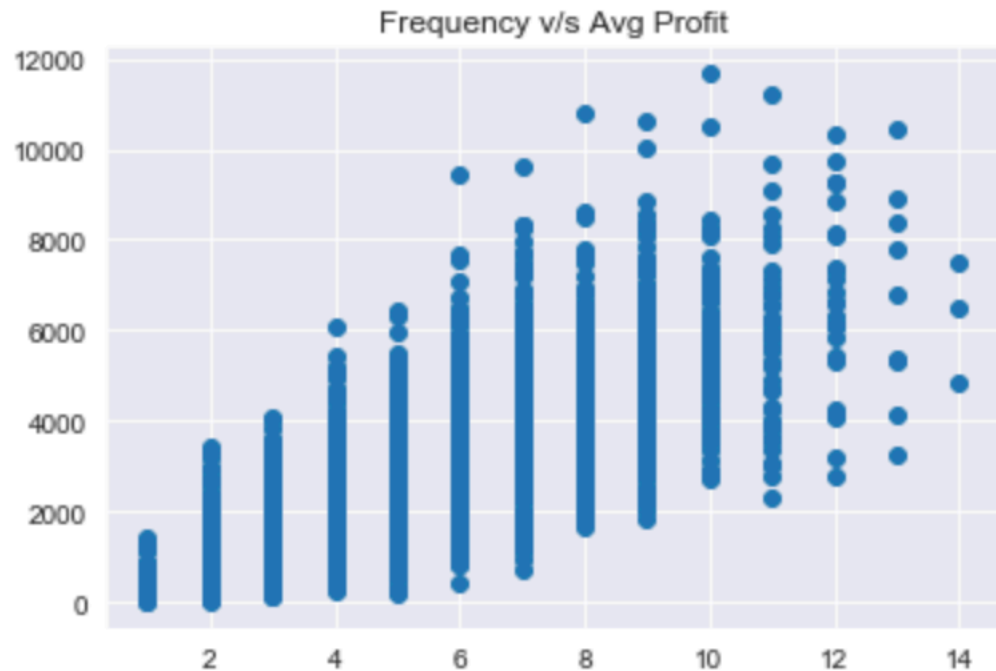## Scatter Plot based off RFM Analysis

- The scatter plot showed a negative relationship between recency and average profit, the more recent the purchase is, the more profit was generated.
- Customer that purchase long time ago have much lower value than the ones purchase more recent.

Recency v/s Avg Profit

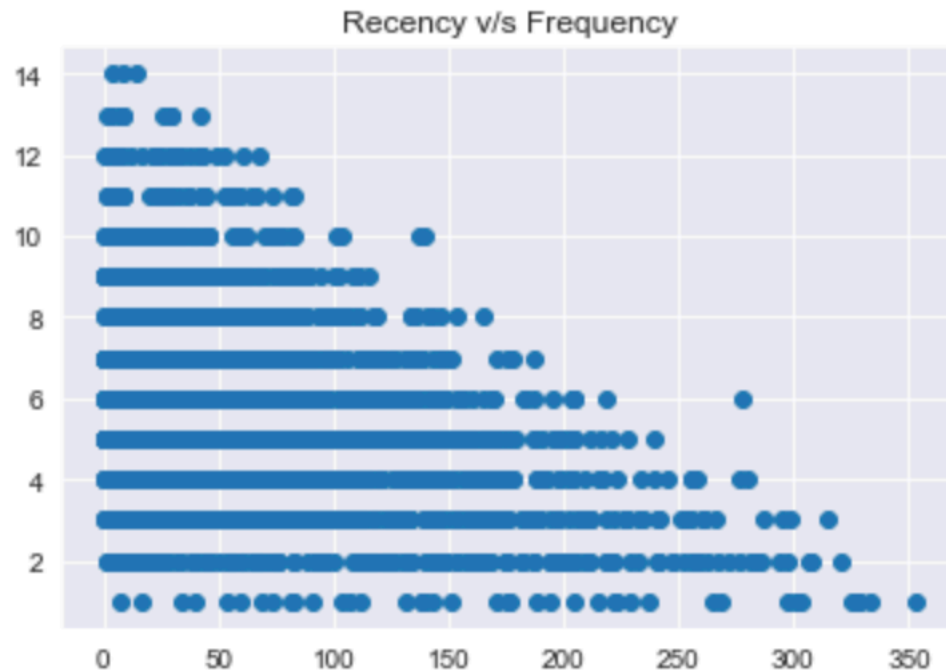# Model Development

Scatter 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
- There is a positive relationship between frequency and monetary value.

Frequency v/s Avg Profit

Model Development

Scatter Plot based off RFM Analysis

- Very low frequency of 0-2 correlated with high recency values.
- Customers that have visited more recently have a higher chance of visiting more frequently.
- There is a negative relationship between recency and frequency which means that very recent customers are also frequent customers.

Recency v/s Frequency

Model Development

Customer Title with RFM values assigned

	rfm_class	Customer_Title	Description
0	444	Platinum	Most rencent buy, buy often, most spent
1	432	Very Loyal	Most recent buy, buy often, spent a large amount
2	413	Becoming Loyal	Most recent buy, buy not very often but spend a lot
3	343	Recent	Relatively recent buy, buy often, spend a lot
4	322	Potential	Relatively recent buy, bought more than once, not spend a lot of money
5	311	Late Bloomer	Relatively recent buy, not buy frequent, low money value
6	223	Losing Customer	Bought a while ago, average frequent and money value
7	212	High Risk	Bought a while ago, not frequent and didt spend much
8	123	Almost Lost	Bought long time a go, average frequent and money value
9	112	Evasive	Bought long time a go, low frequency, small amount spent
10	111	Lost	Lowest value customer

Interpretation

Summary Table of the Top 1000 Customers to Taget

	rfm_class	Description	customer_segment	customer_number	cumulative
0	444	Most rencent buy, buy often, most spent	Platinum	129	129
1	432	Most recent buy, buy often, spent a large amount	Very Loyal	165	294
2	413	Most recent buy, buy not very often but spend a lot	Becoming Loyal	285	579
3	343	Relatively recent buy, buy often, spend a lot	Recent	310	889
4	322	Relatively recent buy, bought more than once, not spend a lot of money	Potential	338	1227

Top 1000 customer we are choosing are the customers with rfm_class equal and higher than 332.
inclusing 4 cusotmer segments: Platinum, Very Loyal Customers, Becoming Loyal, Recent
Customers and Potential Customers.

Appendix