

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 1000 Customer based on the Datasets

- Sprocket Central Pty Ltd is a long-standing KPMG client specializes in high-quality bikes and accessible cycling accessories to riders.
- Their marketing team is looking to boost business by analyzing their existing customer dataset to determine customer trends and behavior.
- Using the existing 3 datasets, the goal is to recommend which of these 1000 new customers should be targeted to drive the most value for the organization.

Contents of Data Analysis:

- ❖ Customer Age distributions
- ❖ Number of bike related purchases in past 3 years by gender
- ❖ Job industry category distributions.
- ❖ Wealth segmentations by age category
- ❖ RFM analysis and customer classification

Data Exploration

Data Quality Assessment and ‘Clean Up’

Summary

Key Issues

- Accuracy : Correct Values
- Completeness : Data Fields with Values
- Consistency : Values free from Contradiction
- Currency : Values up to Date
- Relevancy : Data items with Value Meta-data
- Validity : Data containing allowable values
- Uniqueness : Records that are Duplicated

Quality Issues	Customer Demographic	Customer Addresses	Transaction in the past 3 months
Accuracy	DOB : inaccurate Age : missing		Profit : missing
Completeness	Job_title : blanks last_name : incomplete		Online_Order : incomplete Brand : incomplete Product_line : incomplete
Consistency	Gender : inconsistency	States : inconsistency	
Currency			
Relevancy	Default column : delete		
Validity			List_price : does not conform to a specific format Product_first_sold_date : doesn't conform to a specific format
Uniqueness			

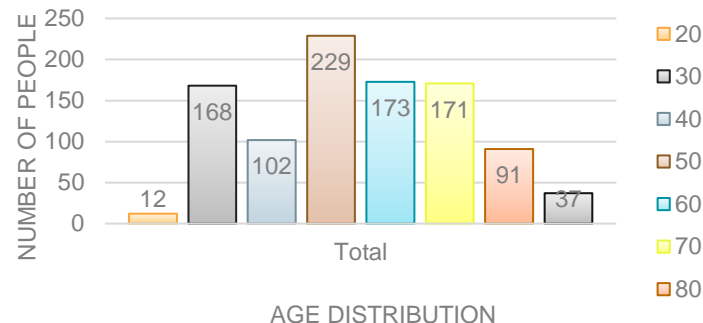
Data Exploration

Customers' age distribution

- ❖ As we can see, mostly our 'New' and 'Old' customers are between 40 to 49 years old.
- ❖ The lowest age groups are under 20 and 80+ for both 'New' and 'Old' customer lists
- ❖ In the New customer Age distribution, the age groups of 20-29 and 40-69 are most popular while age group of 20-69 are most popular in old customer distribution.
- ❖ Drop of customers in 30-39 age group in New customer distribution

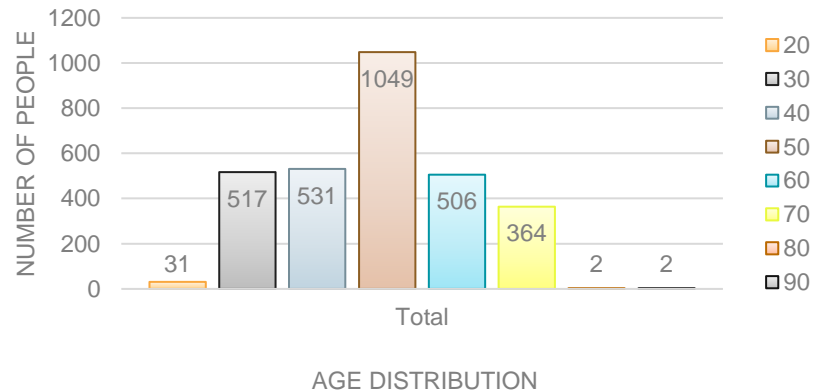
New

New Customer Age Distribution



Old

Old Customer Age Distribution

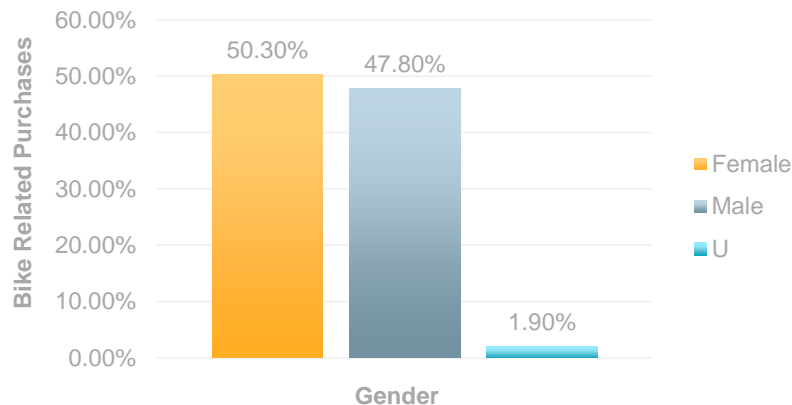


Model Development

Bike purchases last 3 years

- ❖ Over the last 3 years about 50% of bike related purchases were made by females to 48% of purchases made by males and approximately 2% were made by unknown gender.
- ❖ Numerically, female purchases almost 10,000 more than males
- ❖ So we should focus on advertisements on Female customers than Male customers

Bike Related Purchases in last 3 years

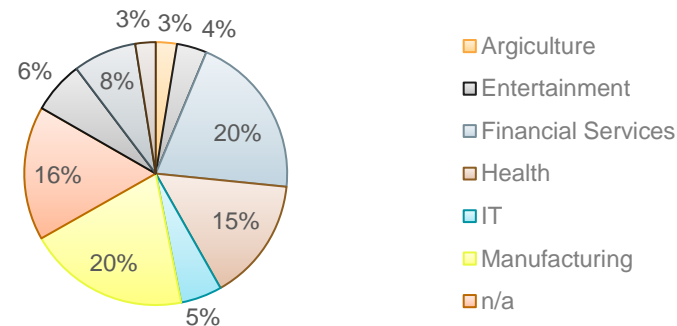


Interpretation

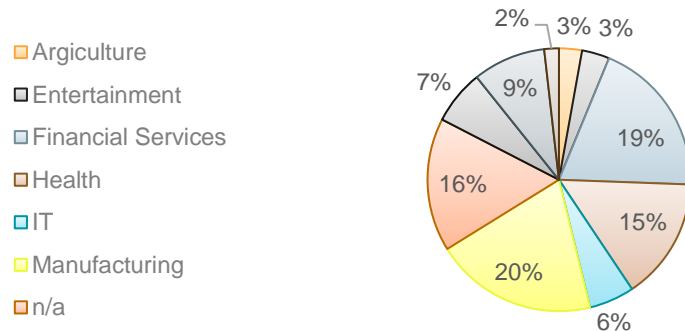
Job industry category.

- ❖ As we can see in the chart, mostly our 'New' customers are on Finance industry and our Manufacturing customers are still on top 2.
- ❖ The smallest number of customers are in Agriculture and Telecommunications at 3%
- ❖ We can see similar pattern in 'Old' customer list. Approximately 20% in Manufacturing and 19% in Financial Services respectively.

New Customer Job Industry Distribution



Old Customer Job Industry Distribution



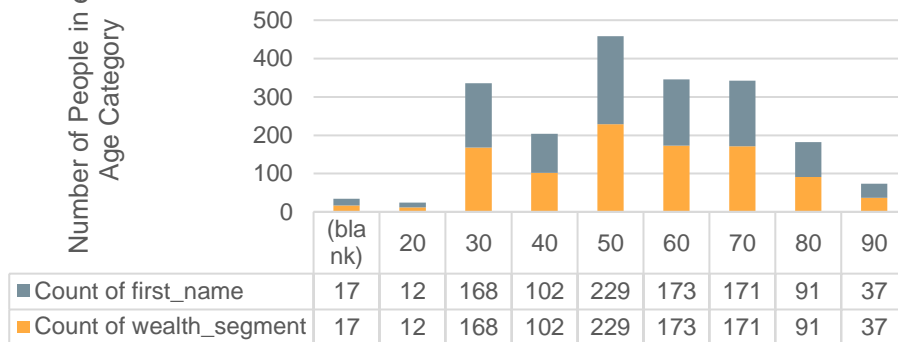
Interpretation

Wealth segmentation by Age Category

- ❖ In all ages, the number of Mass Customers is the highest so we should focus on this social class.
- ❖ After that, we should focus on High Net Customer.
- ❖ The 'Affluent Customers' can outperform the 'High Net Worth' customer in the 40-49 age group

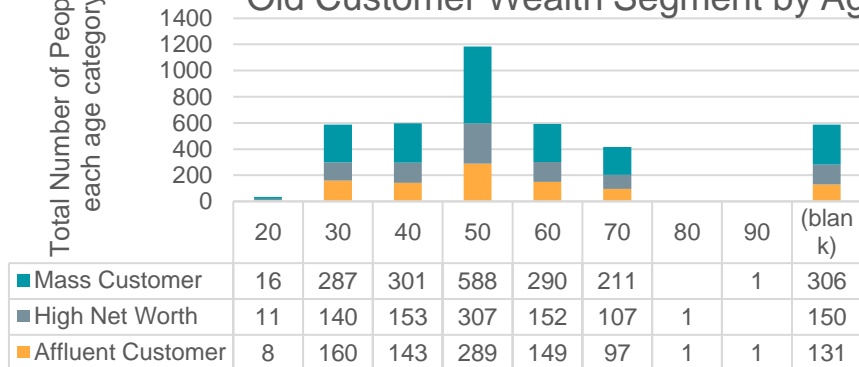
Number of People in each Age Category

New Customer Wealth Segment by Age



Total Number of People in each age category

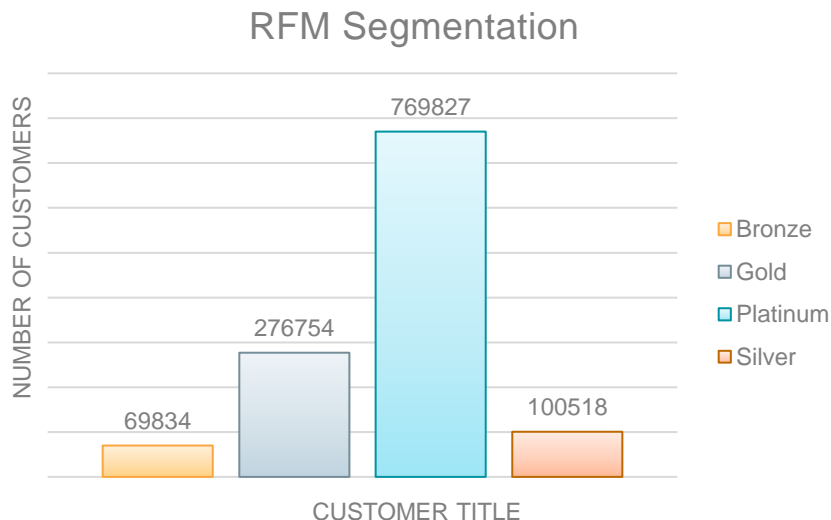
Old Customer Wealth Segment by Age



Interpretation

RFM Analysis and Customer Classification

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



Appendix

Appendix

https://github.com/shruti-shah05/KPMG_Virtual_Internship