TheAnalyticsTeam

Sprocket Central Pty Ltd

Data analytics approach

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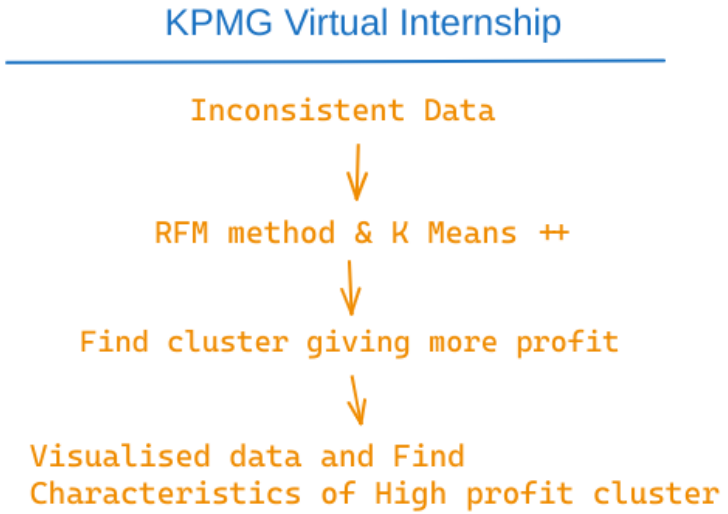
Agenda

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

Introduction

Task: Find target customers from new list using previous DATA

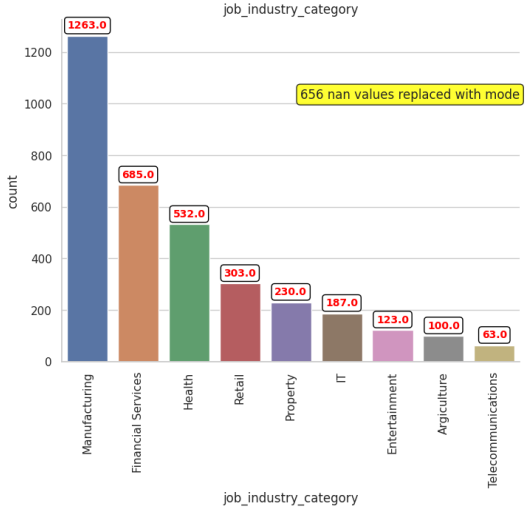
1. Clean data and remove inconsitencies
2. Use Recency, Frequency and Monetary Method to find profit generating customers
3. Use K Means Clustering to seprate customers in to different clusters.
4. Take the High profit generating customers cluster and Find there characteristics
5. Use these charcteristics to filter out customers from new list



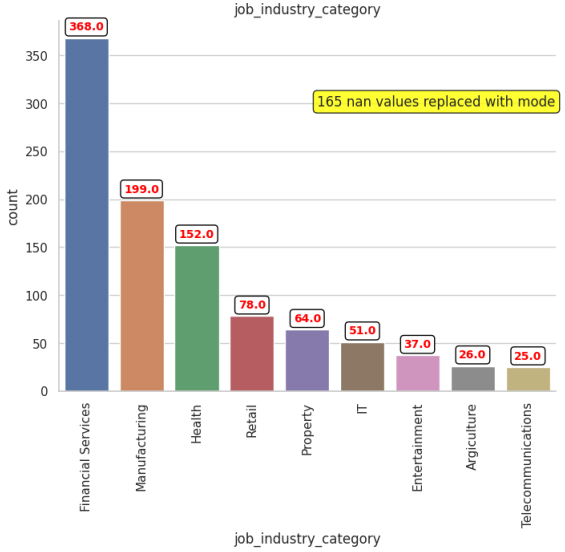
Data Exploration

Job Industry

- We have more buyers from
1. Manufacturing
2. Financial Serviecs
3. Health



Old

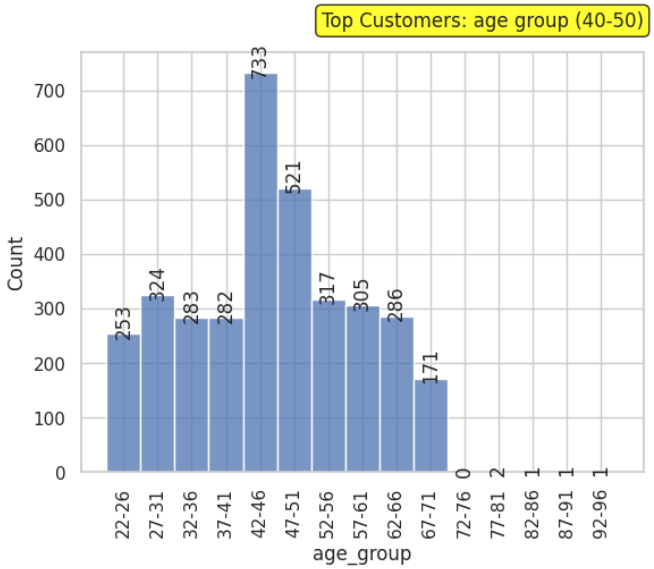


New

Data Exploration

Age

1. Majority of customers are between age of 40 – 50.
2. In new customers there is rise in customers between age of 20 to 30.



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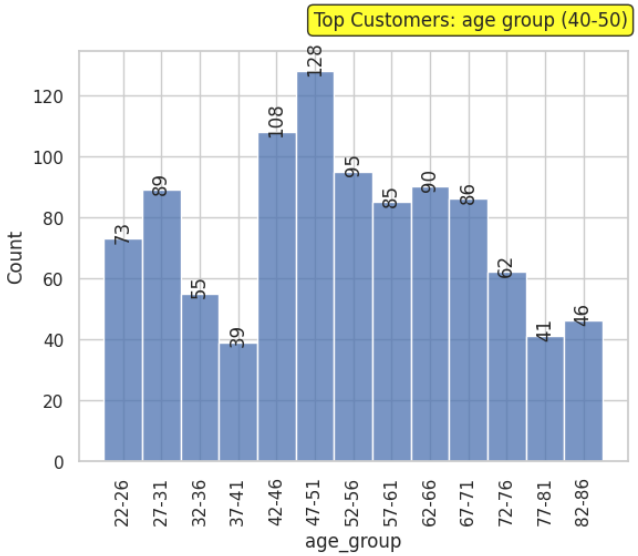
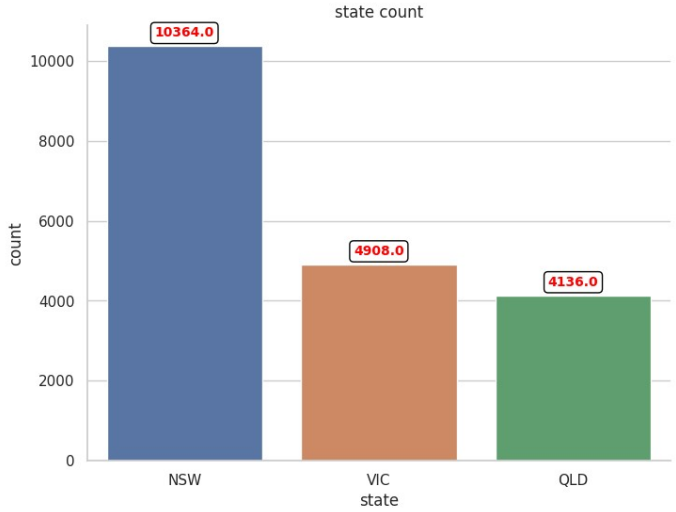


New

Data Exploration

State

1. Majarity of customers are from NSW.



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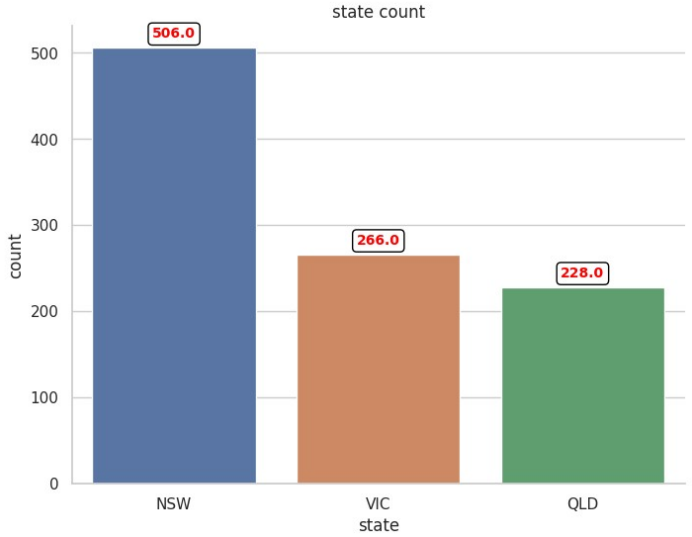
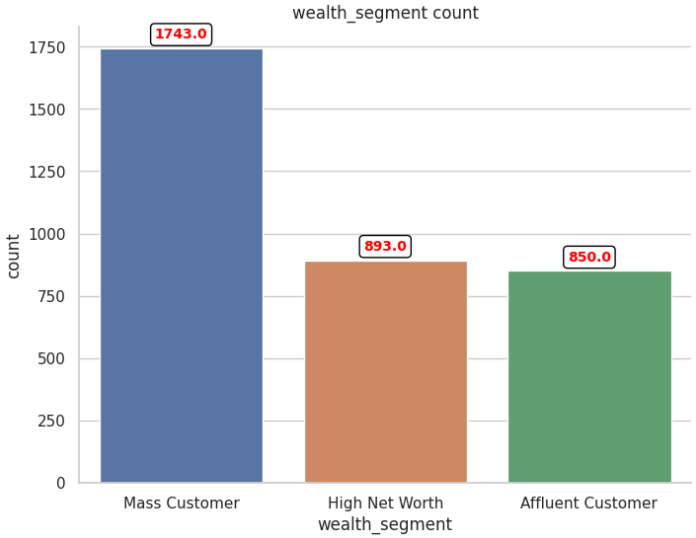


New

Data Exploration

Wealth Segment

1. Mass customers are generating more revenue.



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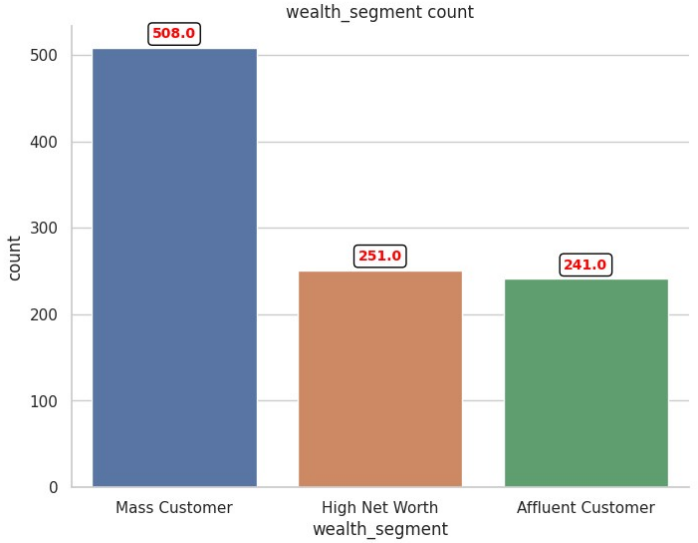
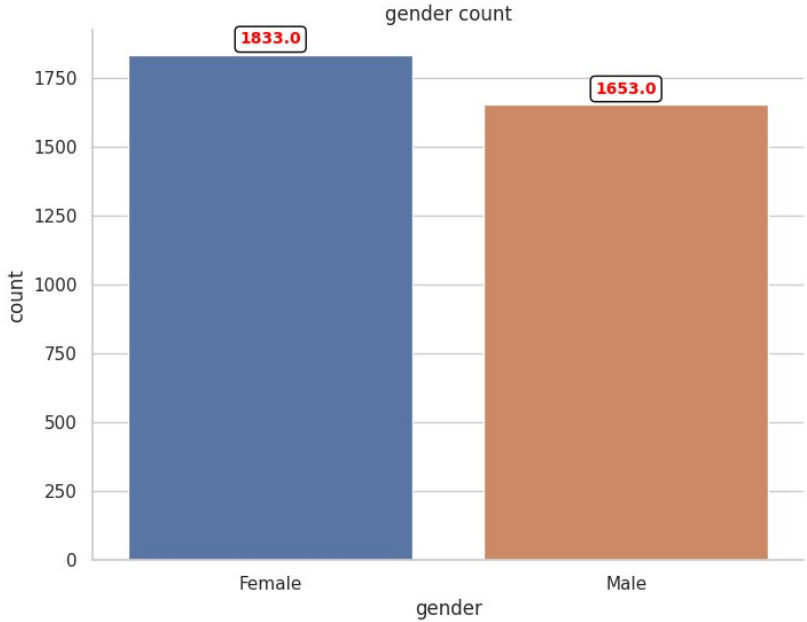


New

Data Exploration

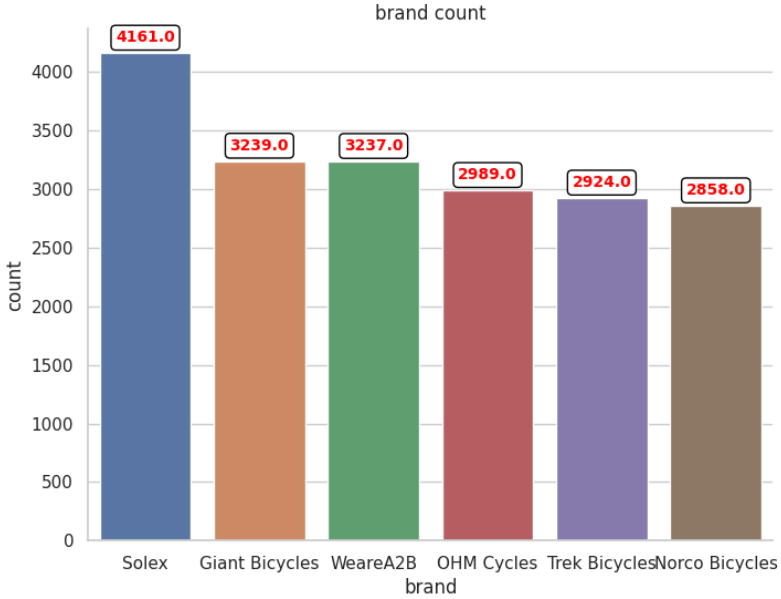
Gender

1. Females are slightly buying more bikes compared to males. Difference is negligible.



Brand

1. Solex is the most sold bike.
2. Other brands contribute to sell in almost same maner.



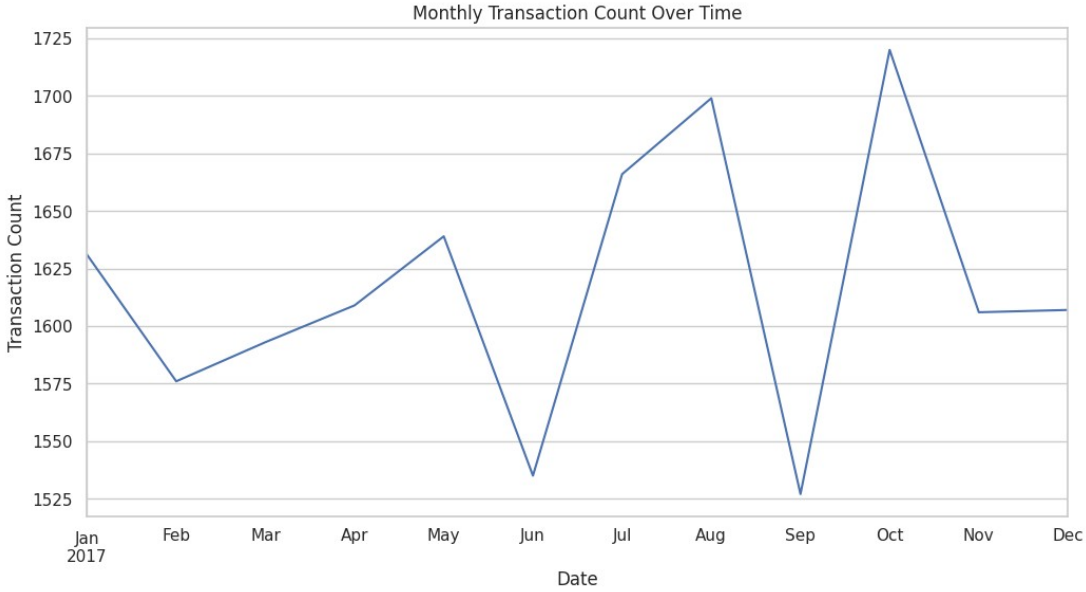
Data Exploration

Transactions Over Time

1. August and Octomber are peak months for bike purchase.

2. There is comparitively less sales in june and september month.

Old customers Transactions

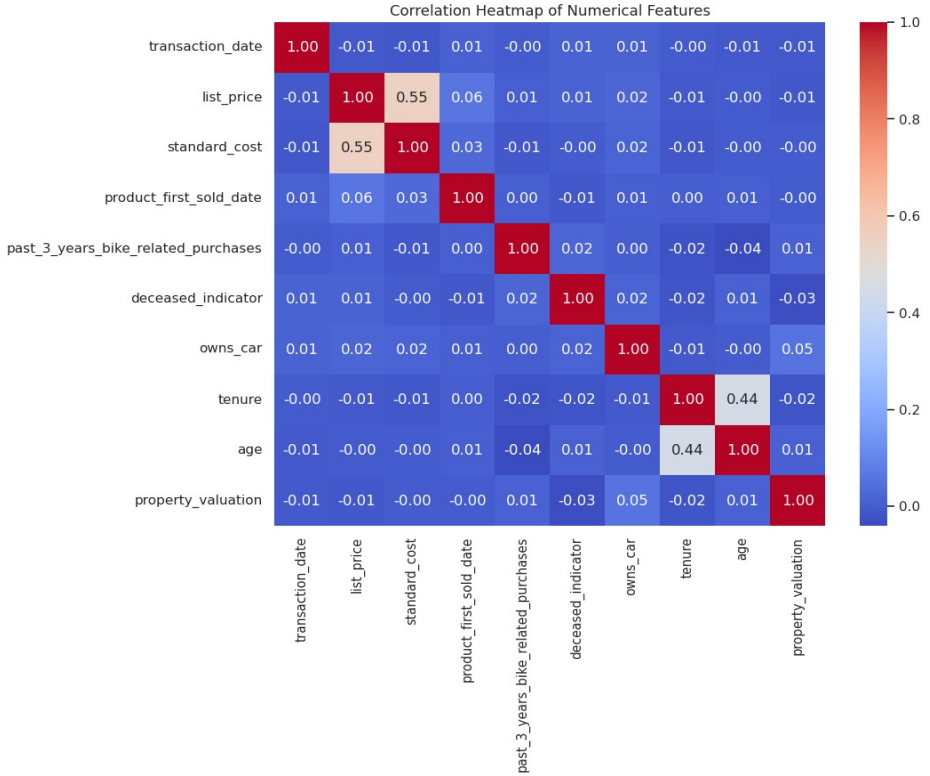


Data Exploration

Transactions Over Time

1. There is slightly positive correlation between age and tenure. People
of the older brackets have a longer tenure.

Correlation between features

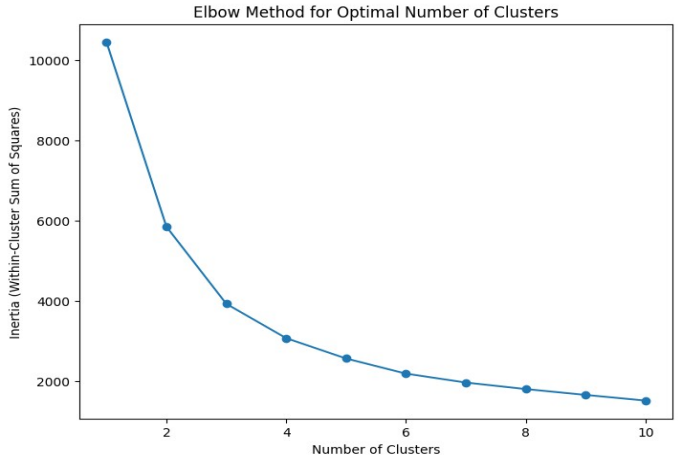


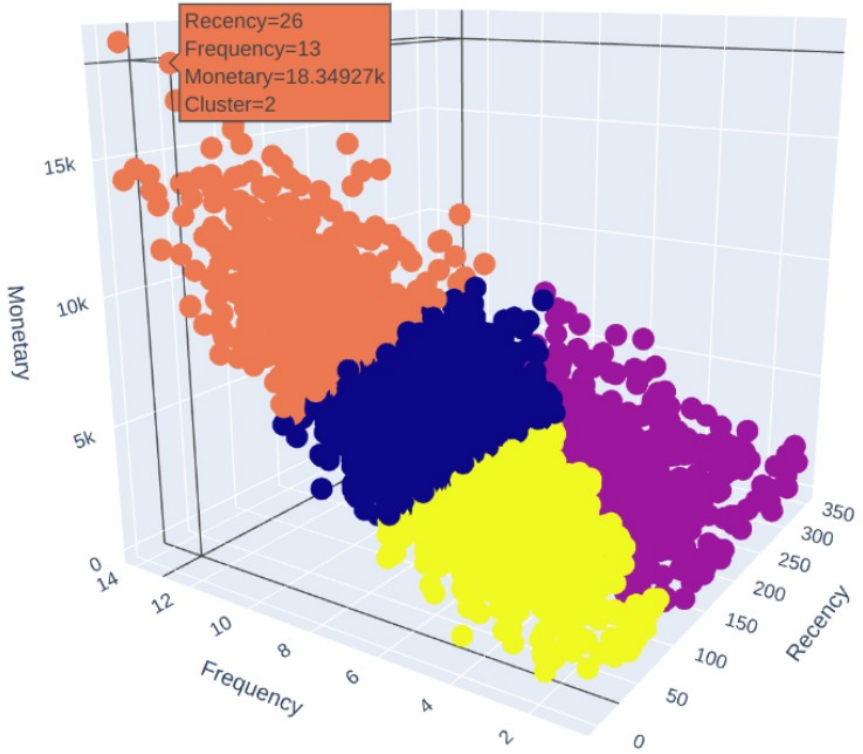
Model Development

K Means ++ Clustering

Cluster 2 is Highest revenue generating group of customers, so we will Try to understand characteristics of these customers.

K = 4

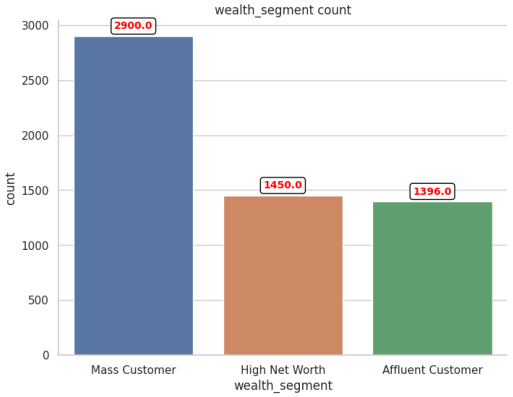


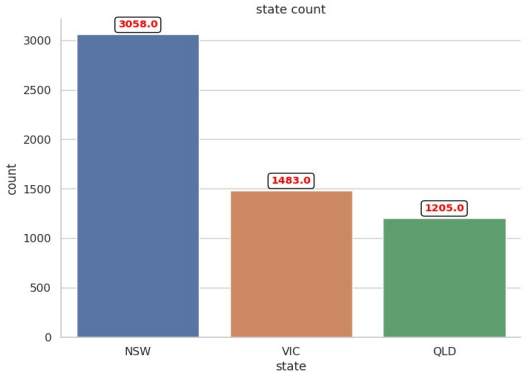


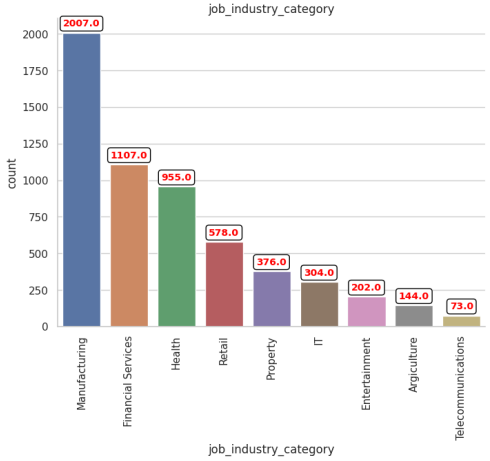
Interpretation

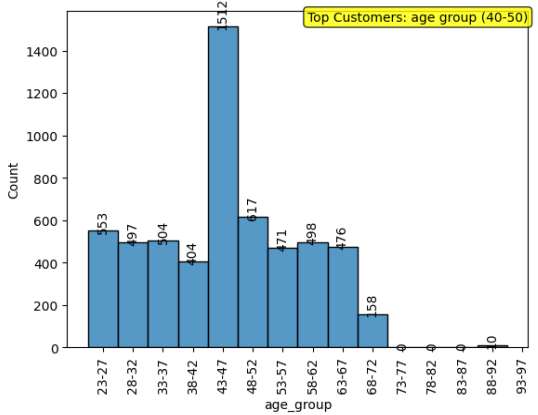
Cluster 2 Analysis - Target Customers Features:

`Mass Customers` From `NSW`
In (`Manufacturing` > `Financial Services` > `Health Care`)
Job_Industry_Category
with age ranging from `40 - 50` as round figure.









Note: The data and information in this document is reflective of a hypothetical situation and client. This document is to be used for KPMG Virtual Internship purposes only.

List of Target Customers from New Customers List

	full_name	age	gender	tenure	job_industry_category	wealth_segment	owns_car	Rank	Value	past_3_years_bike_related_purchases	state
6	Rutledge Hallt	48	Male	8	Financial Services	Mass Customer	No	6	1.671875	23	NSW
55	Martelle Tuppeny	43	Female	9	Manufacturing	Mass Customer	No	54	1.381250	52	NSW
82	Esther Rooson	43	Female	5	Financial Services	Mass Customer	No	78	1.337500	14	NSW
127	Ricki Dobrowski	49	Male	9	Manufacturing	Mass Customer	Yes	127	1.250000	13	NSW
138	Daryl Pauncefort	45	Female	12	Financial Services	Mass Customer	Yes	133	1.237500	12	NSW
164	Emilie Brody	45	Female	3	Financial Services	Mass Customer	Yes	163	1.182031	3	NSW
183	Harlin Mazin	50	Male	13	Manufacturing	Mass Customer	Yes	181	1.158125	34	NSW
218	Dorian Stollen	44	Male	18	Financial Services	Mass Customer	Yes	219	1.125000	78	NSW
250	Sunny Christescu	49	Female	11	Financial Services	Mass Customer	No	250	1.075000	90	NSW
272	Theresa Cowper	48	Female	3	Manufacturing	Mass Customer	No	271	1.060000	99	NSW
405	Dodi Kiggel	44	Female	13	Financial Services	Mass Customer	Yes	405	0.930000	5	NSW
426	Jobie Runacres	49	Female	18	Financial Services	Mass Customer	Yes	427	0.912500	96	NSW
490	Alexina Mabley	49	Female	10	Manufacturing	Mass Customer	Yes	486	0.875000	72	NSW
501	Clevey Aisthorpe	48	Male	8	Financial Services	Mass Customer	Yes	502	0.858500	27	NSW
504	Kissiah Foat	49	Female	19	Financial Services	Mass Customer	Yes	504	0.850000	30	NSW
508	Katleen Arnoult	48	Female	13	Manufacturing	Mass Customer	Yes	507	0.850000	6	NSW
531	Amabel	43	Female	9	Financial Services	Mass Customer	Yes	530	0.828750	71	NSW
596	Lanie Cobbold	46	Male	9	Financial Services	Mass Customer	Yes	595	0.775625	57	NSW
607	Ajay Worham	45	Female	12	Manufacturing	Mass Customer	Yes	606	0.765000	80	NSW
647	Aldin Newsome	43	Male	17	Financial Services	Mass Customer	No	648	0.725000	24	NSW
651	Israel Brough	48	Male	8	Financial Services	Mass Customer	Yes	651	0.722500	29	NSW
691	Rockie MacKibbon	46	Male	13	Financial Services	Mass Customer	Yes	691	0.690625	42	NSW
720	Brendis Pineaux	46	Male	5	Manufacturing	Mass Customer	No	719	0.675000	12	NSW

Appendix

Data Sources : Data Provided from Client

Methodology : RFM Analysis for Customer Segmentation

Technical Details: K Means ++

Tech Used : Python, Pandas, Seaborn, Matplotlib, Scikit-Learn Library, Power BI, Power Point.

Thank You !