Customer Targeting Analysis – Sprocket Central Pty Ltd

Data Analytics Virtual Internship (KPMG)

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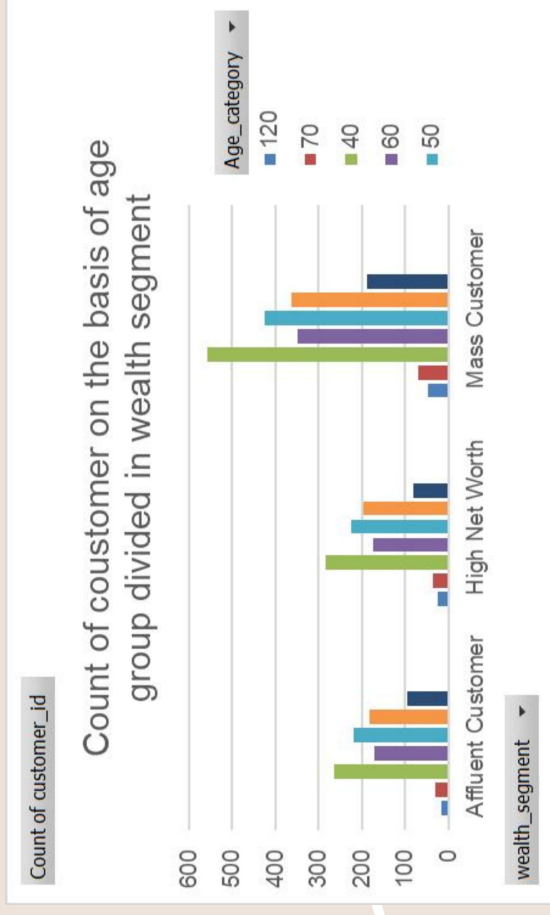
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DATA EXPLORATION

- Initial data understanding was performed.

- Data quality issues were checked.

- Exploratory analysis was conducted using graphs.

- Customer behaviour patterns were analysed.

Customer Age Analysis

Date of Birth was converted into Age.

Age distribution was analysed to understand customer spread.

Different age groups show different purchasing behaviour.

Count of customer_id

Count of coustomer on the basis of age group divided in wealth segment

Age_category

- 120
- 70
- 40
- 60
- 50

wealth_segment

Age Group Analysis

Customers were grouped into age categories.

This helps identify which age groups are more valuable.

Age grouping simplifies modelling and interpretation.

Customer By Age Group

Count of Age

Count of Customer by age_group

Age_category ▼

■20 ■30 ■40 ■50 ■60 ■70 ■80 ■120
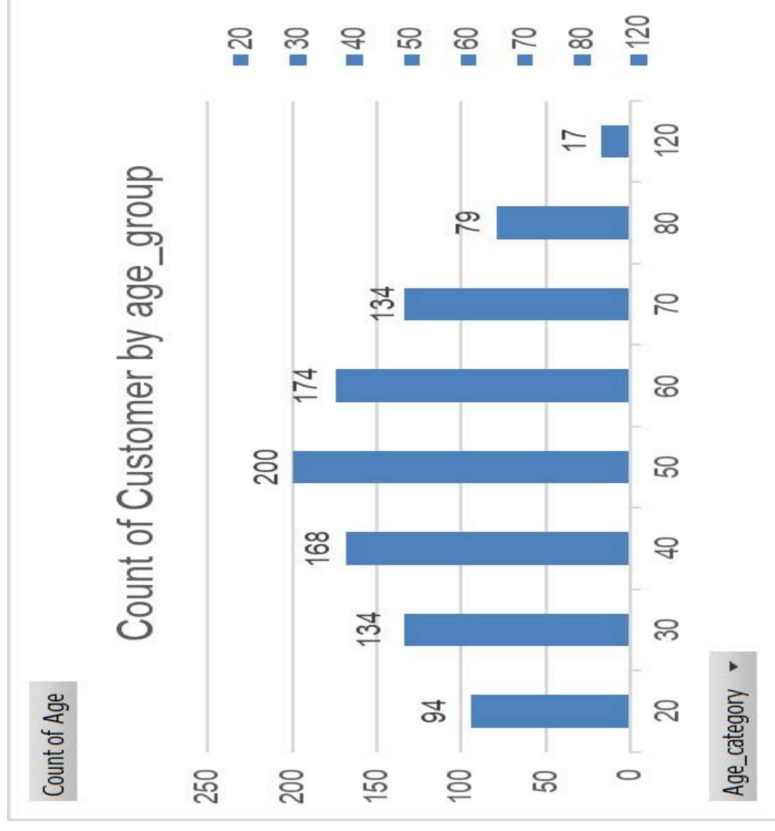
Wealth Segment Analysis

Wealth segment data was analysed.

Higher wealth segments tend to contribute more value.

This feature is important for customer targeting.

Count of past_3_years_bike_related_purchases

Customer who owns cars on the basis of wealth segment

owns_car ▸

■ No
■ Yes

wealth_segment ▸
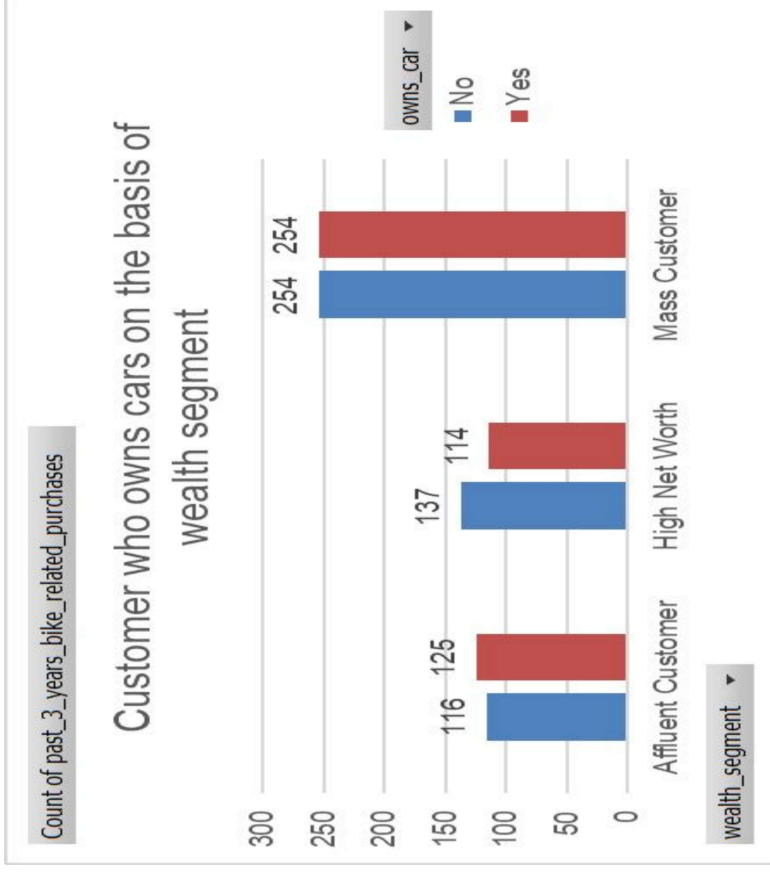
FEATURE ENGINEERING & DATA TRANSFORMATION

New variables were created from raw data:

- Age
- Age Category
- Profit
- Recency
- frequency

These features better represent customer value.

Age	Age_category	Profit	
68	60	$509.97	F
55	50	$1,660.88	F
51	50	$1,028.76	M
46	40	$167.21	M
60	60	$45.96	F
74	70	$751.02	M
49	40	$15.08	F
53	50	$802.26	F
53	50	$957.02	F
40	40	$217.51	F
30	30	$771.12	F
26	20	$431.33	M
35	30	$1,069.55	M
49	40	$509.97	F
61	60	$693.76	M
71	70	$167.21	M
32	30	$43.97	F
49	40	$1,544.61	F
87	80		
71	70		

RFM Analysis

How RFM Was Applied

- **Recency**: How recently a customer made a transaction.
- **Frequency**: Number of transactions made by a customer.
- **Monetary**: Total transaction value of the customer.

Why RFM Was Used

- To segment customers based on purchasing behaviour.
- To support identification of high-value customers for targeting.

F_Score	R_Score	M_Score	RFM_Scor	Customer_title
4	4	3	443	Platium
1	1	2	112	Bronze
4	1	3	143	Bronze
1	1	1	111	Bronze
2	4	2	422	Platium
2	2	3	223	Silver
1	1	1	111	Bronze
4	3	4	344	Gold
2	2	2	222	Silver
2	3	4	324	Gold
2	2	3	223	Silver
3	2	3	233	Silver
3	3	4	334	Gold
1	2	2	212	Silver
2	3	1	321	Gold
2	1	4	124	Bronze
2	4	2	422	Platium
3	1	3	133	Bronze
1	1	3	113	Bronze
1	3	3	313	Gold
2	4	3	423	Platium
4	1	4	144	Bronze
3	4	4	434	Platium

Quartiles

Frequecy	Recency		Monetory		RFM	
min	min	1	min	2899	min	15.08	111
q1	q1	4	q1	2916	q1	1905.95	211
median	median	6	median	2943	median	2918.2	311
q3	q3	7	q3	2984	q3	4273.4	411
max	max	14	max	3252	max	11668.95	444

4 best	4 best	4 best	Platium
3 v good	3 v goood	3 v good	gold
2 good	2 good	2 good	silver
1 low	1 low	1 low	bronze

Sheet1 | Transactions | Sheet2 | Sheet5 | NewCustomerlist | Sheet4 | Custo...

Transaction Frequency Analysis

Number of transactions per customer was calculated.

Frequent customers show loyalty.

Frequency is a strong indicator of customer value.

Count of Customer on RFM_Score
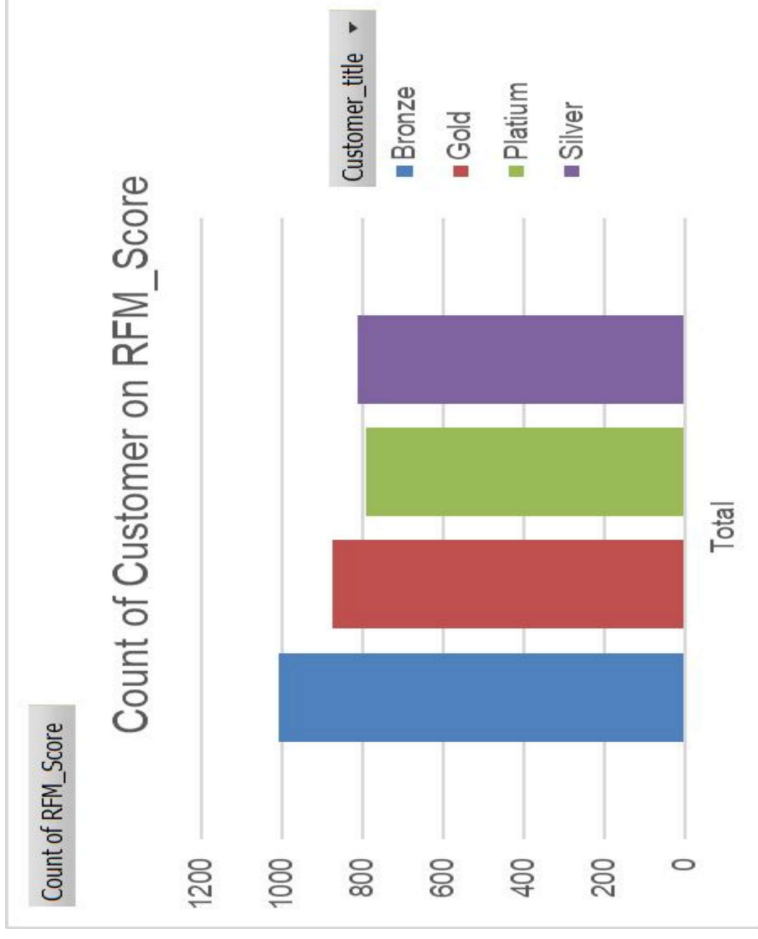
Key Insights

Middle-aged and older customers tend to spend more.

Higher wealth segments show higher transaction value.

Customers with higher transaction frequency are more valuable.

Certain states contribute more high-value customers.

Recommendation

Target customers with:

- Higher wealth segments
- Higher predicted transaction value
- Higher transaction frequency

Focus marketing resources on top-ranked customers.

Thank You