TheAnalyticsTeam

Sprocket Central Pty Ltd

Data analytics approach

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Agenda

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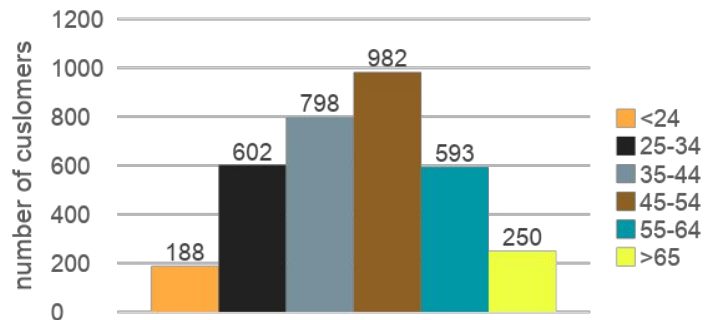4. Interpretation

Data Quality Assessment

Summary Table

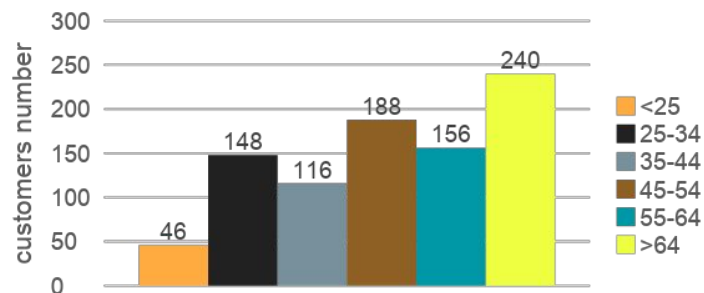|	Accuracy	Completeness	Consistency	Currency	Relevancy	Validity	Uniqueness
Customer Demographic	Inaccurate DOB Missing age	Blank job titles Blank DOB	Inconsistent gender		Delete irrelevant data		No duplicated records
Customer Address			Inconsistent states				No duplicated records
Transactions	Missing profit column	Blank online orders Blank brands		Outdated transaction dates	delete cancelled orders	list_price and product_sale_date forlat	No duplicated records
New Customer List		Blank job titles					No duplicated records

Data Exploration

'Old' vs 'New' Customer Distribution

- Most of the old customers are aged between 45 and 54 while the most of the new customers are older than 64.

- The lowest aged group is always those who are younger that 24 in both cases.

- The most active age category in the old customers dataset are those who are between 45-54 and 35-44.

- The most active age category in the old customers dataset are those who are older than 64 and between 45-54.

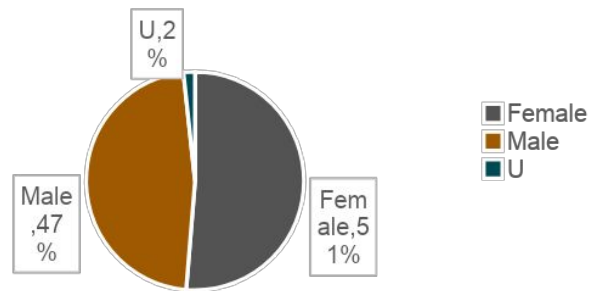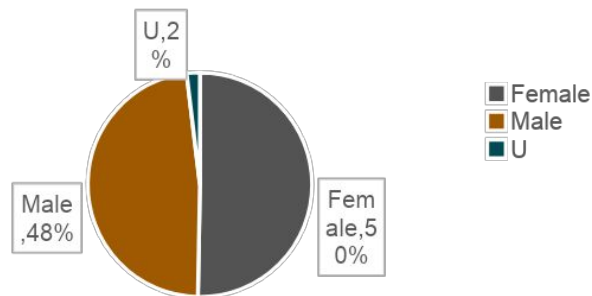## 'Old' vs 'New' Customers Past 3 Years Purchases by Gender

- Females make 51% of the past 3 years purchases while males make 47% of the purchases and the rest 2% are made by unknown gender.

- The most purchases are made by females.

Past 3 Years Purchases Distribution By Gender for New Customers

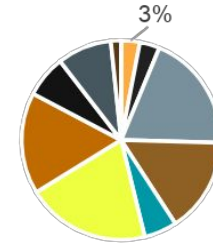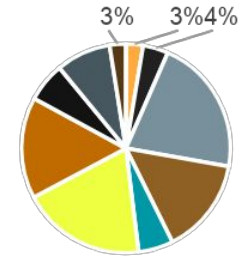Past 3 Years Purchases Distribution By Gender for Old Customers

'Old' vs 'New' Past 3 Years Purchases by Job Industry

- Most purchases are made by the financial services industry in the new customer list with 21% while the manufacturing industry made the most purchases by 20 % for the old customers list.

- The industry that make the less purchases is telecommunication in both cases.
- The financial and the manufacturing industries make the most purchases.
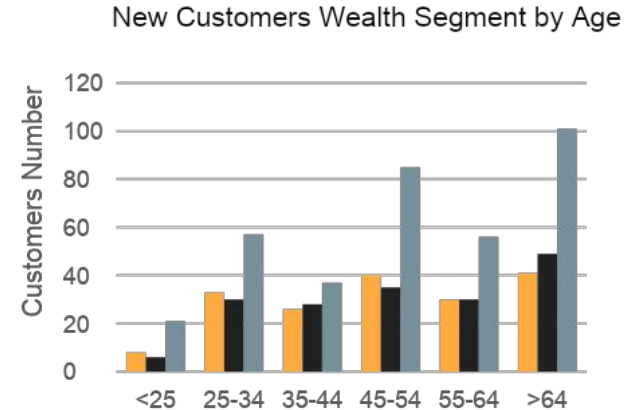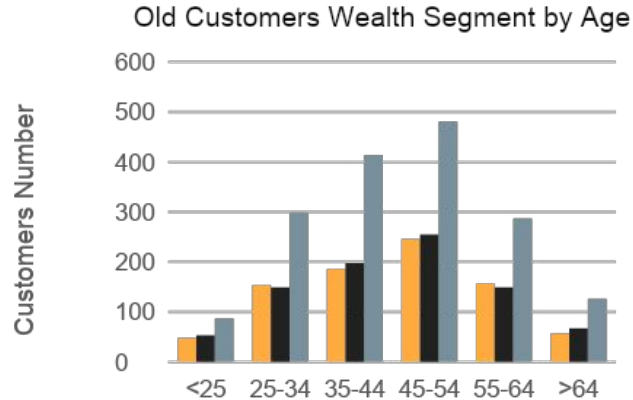
Old Customers

New Customers

3%

3% 3%4%

- Argiculture
- Entertainment
- Financial Services
- Health
- IT
- Manufacturing
- n/a
- Property
- Retail
- Telecommunications

Data Exploration

## 'Old' vs 'New' Wealth Segmentation by Age Category

- The 'Mass Customer' class got the most of the customers in all the age categories.
- The 'High Net Worth' and the 'Affluent Customer' got almost the same number of customers for all the age categories.

Old Customers Wealth Segment by Age

New Customers Wealth Segment by Age

Data Exploration

## 'Old' vs 'New' Number of Cars Owned and Not Owned by State

- Both Old and New customers list provide the same results.

- NSW has the largest number of customers who got cars and do not got a cars.

- Most of the Customers are from the NSW state.

- The sates QLD and VIC got a lower customers number and split evenly.

Cars Owned by State for Old Customers

Cars Owned by State for Old Customers
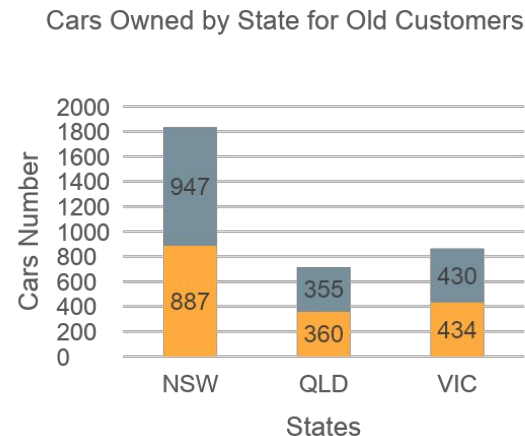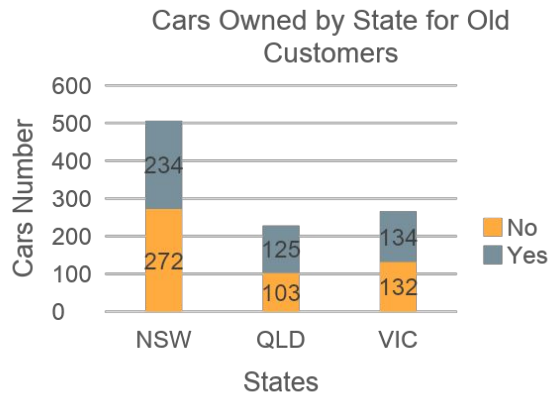
RFM Analysis and Customer Classification

- The RFM analysis is a marketing technique used to group customers base on the recency, frequency and monetary total of their recent transactions to identify the best customers category in order to target them.
- The most of the customers are 'Silver customers' and 'Platinum customers'.
- The customer's profile that contain the lowest number of customers is the 'bronze customer'.

Customer Distribution by Their Profile
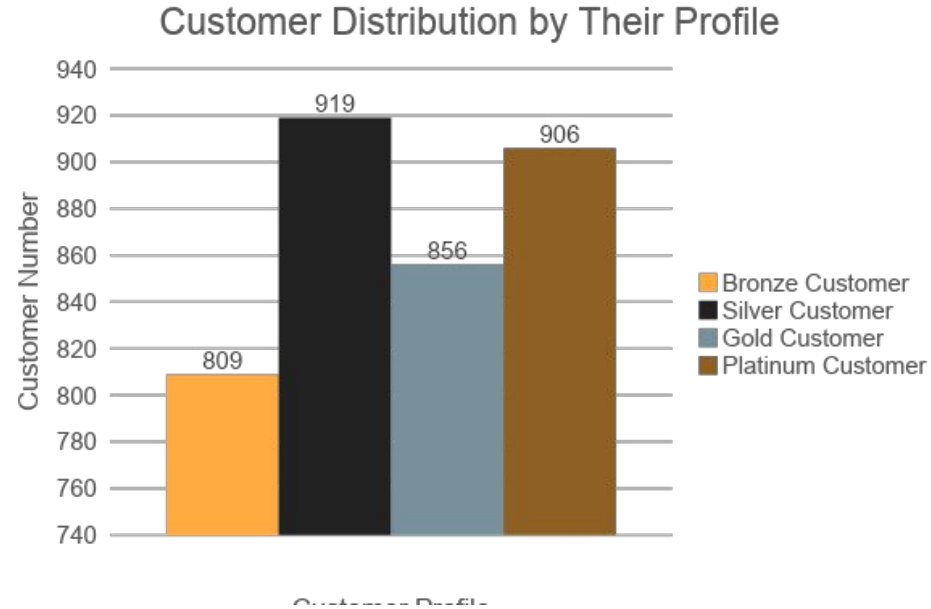
Customers Profit by Age Category

- The age category with the largest profit is 45-54.

- The age category with less profit is <25.
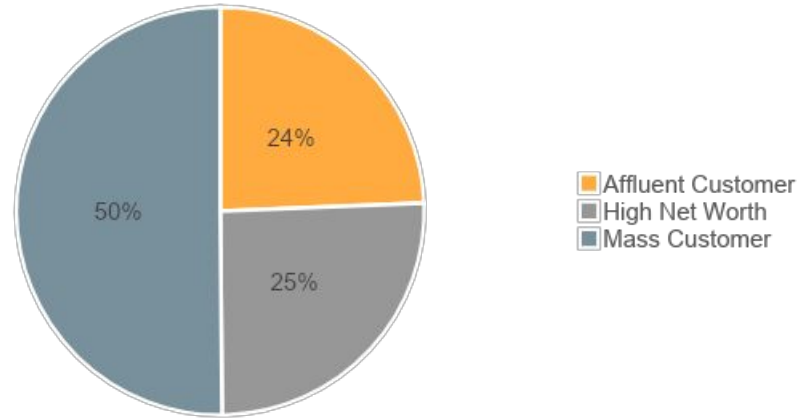
- The most popular categories ae (45-54 and 35-44).
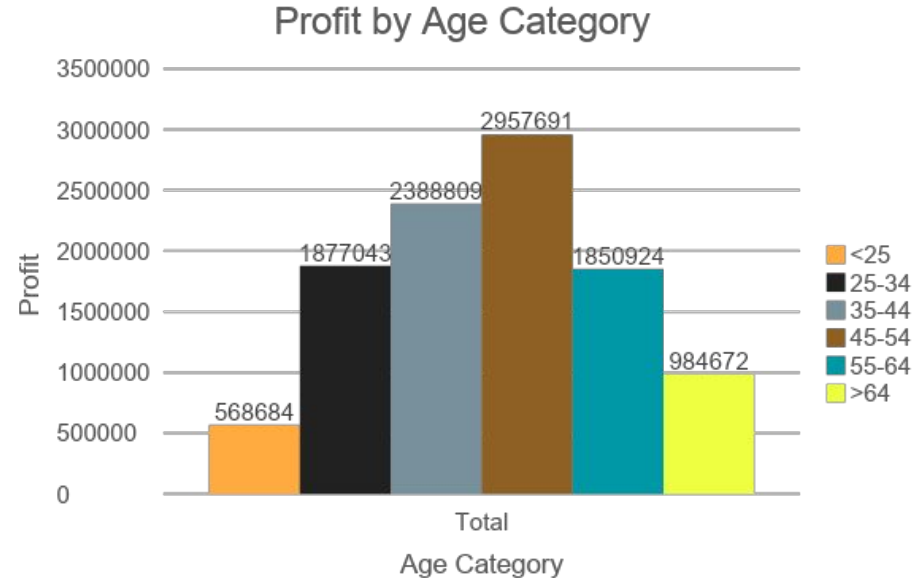
Profit by Age Category

Profit By Wealth Segment

- The most active wealth category is the 'mass customer ' with 50% of profit.

- The affluent and high net customers have almost the same profit with 24% 26%

Profit By Wealth Segment
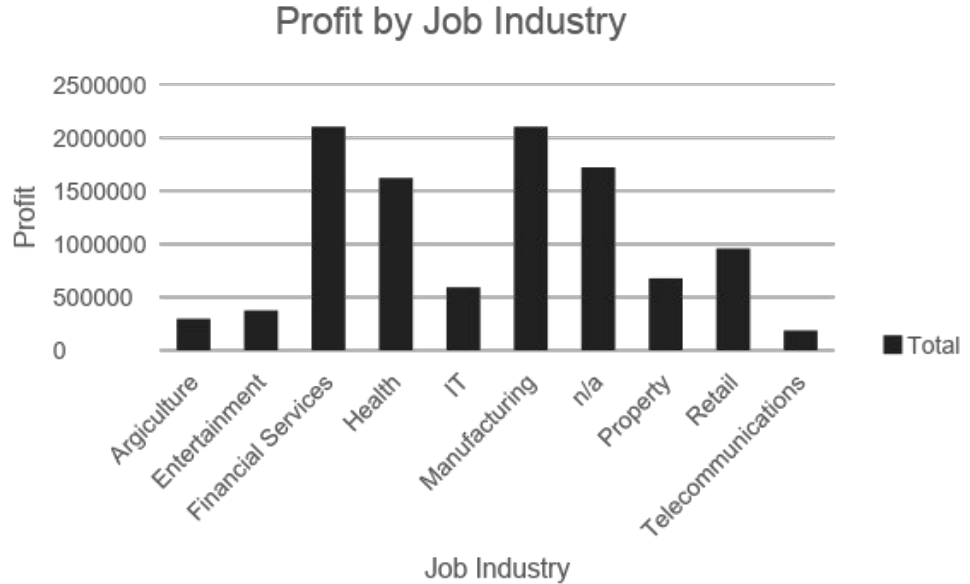
24%

50%

25%

Affluent Customer
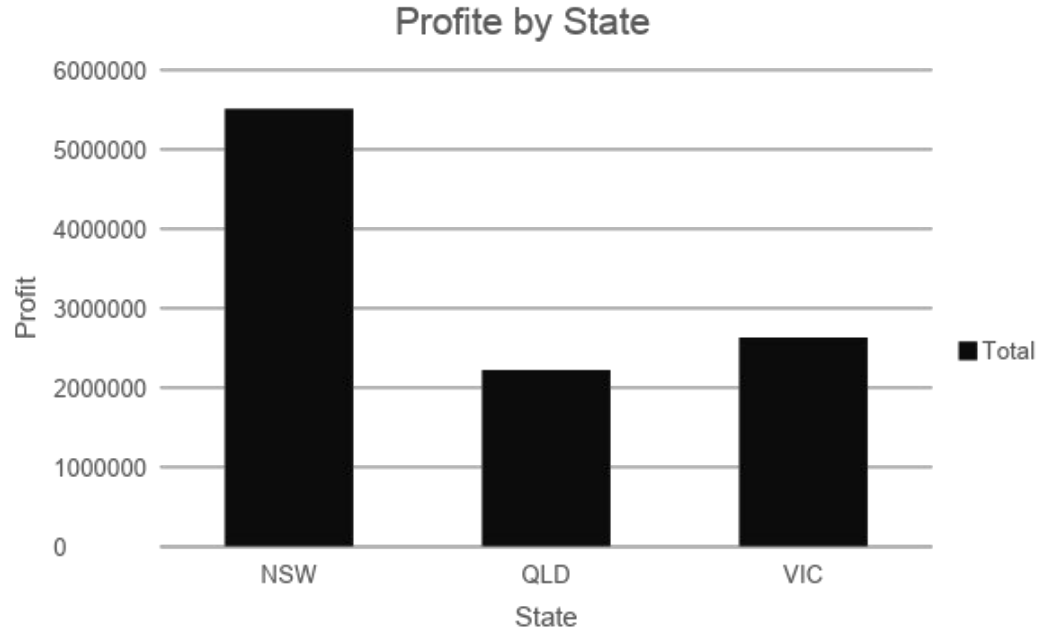High Net Worth
Mass Customer

Profit by Job Industry

- The most profitable job industries are the financial and manufacturing industry.

- The less profitable industries are telecommunication and agriculture.

Profit by State

- The most profitable State is NSW.

- The less profitable state is Victoria.

High Value Customers

- Most of the high value customers are:

- ✔ females
- ✔ Aged between 35 and 54
- ✔ Working in the financial and manufacturing industries
- ✔ Living in NWS and VIC.
- ✔ Mass customers.

High Value New Castumers

A snapshot of a part of customers that will classified as high value customers

first_name	last_name	job_title	state	age
Winnifred	Beswetherick	Actuary	VIC	46
Sybilla	MacCart	Paralegal	NSW	36
Colene	Fishleigh	Design Engineer	VIC	37
Gale	Disbrow	Cost Accountant	VIC	45
Martelle	Tuppeny	Marketing Assistant	NSW	42
Chanda	Mensler	Computer Systems Analyst IV	NSW	51
Daryl	Pauncefort	Community Outreach Specialist	NSW	43
Sunny	Christescu	Cost Accountant	NSW	47
Antonietta	Egle	Actuary	VIC	49
Theresa	Cowper	Accountant III	NSW	46
Raye	Roo	Database Administrator I	VIC	46
Sherrie	Godleman	Associate Professor	VIC	44
Biddie	Gorce	Senior Financial Analyst	NSW	35
Daisi	Tinwell	Business Systems Development Analyst	NSW	51
Alexina	Mabley	Web Designer IV	NSW	47

Thank you