TheAnalyticsTeam

Sprocket Central Pvt Ltd

Data Modeling and visualization

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Agenda

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

Introduction

Identifying and Recommending High Value Customers

Problem Outline

- Sprocket Company is accompany which specializes in high quality bike and accessories.
- The marketing team is looking to boost sales.
- To target 10000 new customer who will bring the highest value to the business.

Approach for Data Analysis

- Bike related purchases for last three years based on gender.
- Number of cars owned in each state.
- Top industries contributing the maximum profit and bike related sales.
- Profit by age, state, brand, no. of sales by product size, wealth segment, product line and no. of sales by job industry category.

DATA EXPLORATION

Data Quality Assessment

Key Issue dealt with for the data quality issue:

|	Customer Demographics	Customer Addresses	Transactions
Accuracy	DOB has deceased customers		
Completeness	Last_name, DOB, job_title, tenure	Customer_id's missing	Online_order, brand, product_line, product_class, product_size, standard_cost are all missing values
Consistency	Gender has 3 values		No data on all customer_id
Currency	Deceased customers in table		Cancelled orders not necessary
Relevancy	Default column	country column	product_first_sold_date not necessary
Uniqueness			
Validity	Age column needed		List_price and standard_cost not needed

DATA INTERPRETATION

Bike Purchase Over The Last 3 Years Based On Gender

- Data shows, on average females have made more bike related purchases in last 3 years compared to males.

- On average females have made 2% higher bike related purchases compared to men in the last 3 years.
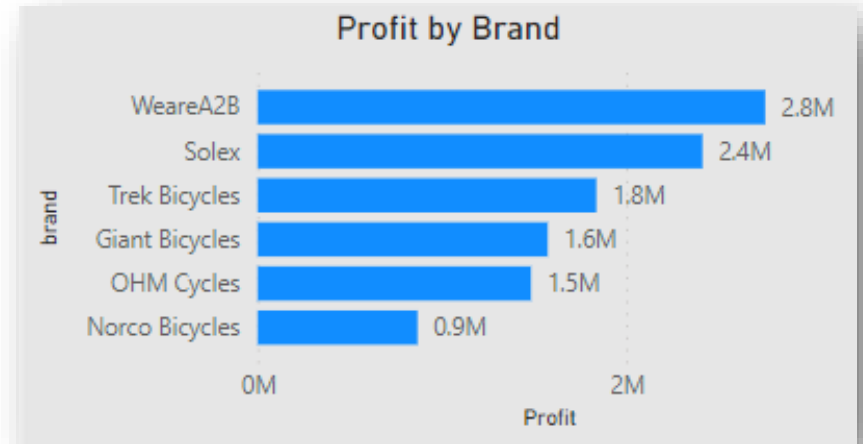

Past 3 years bike related purchase by gender

M 49% — F 51%

gender
- F
- M
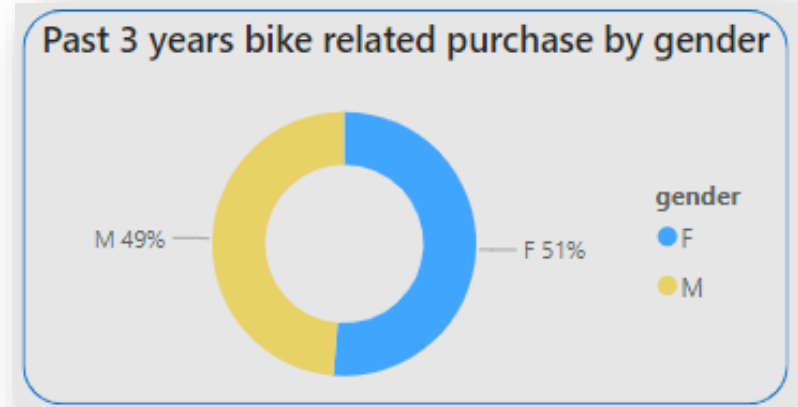
DATA INTERPRETATION

This shows that customers between the age of 41–60 bring in the highest profit followed closely by customers between the age of 21–40. Customers between the age of 81–100 bring in the least profit. This shows that old aged customers bring in the least profit.


Profit by Age Group
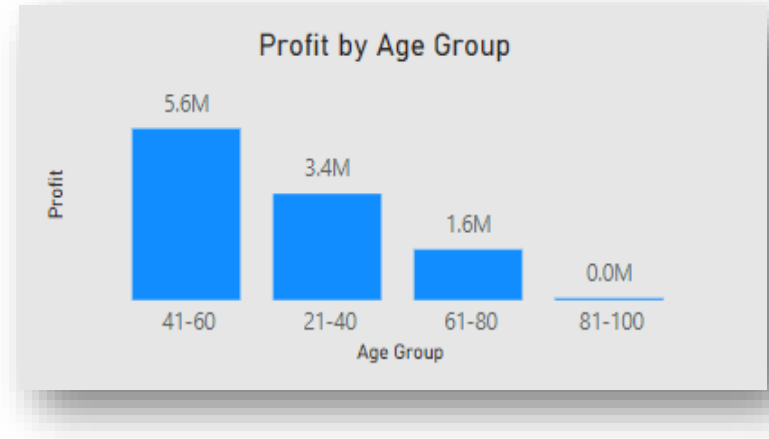
DATA INTERPRETATION

This visual shows that more customers buy the "WeareB2B" brand products, closely followed by "Solex" product. The product generating the least profit is "Norco Bicycles".
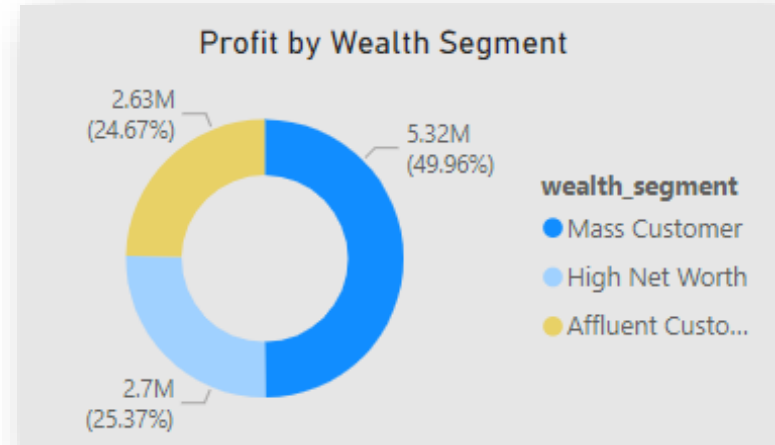

Profit by Brand

brand	Profit
WeareA2B	2.8M
Solex	2.4M
Trek Bicycles	1.8M
Giant Bicycles	1.6M
OHM Cycles	1.5M
Norco Bicycles	0.9M

DATA INTERPRETATION

This shows that customers who reside in New South Wales(NSW) patronize Sprocket Central more. The company also generates the most profit from them. The difference between those in New South Wales(NSW) and Victoria(VIC) is highly significant. This places a stronger emphasis on those who reside there.
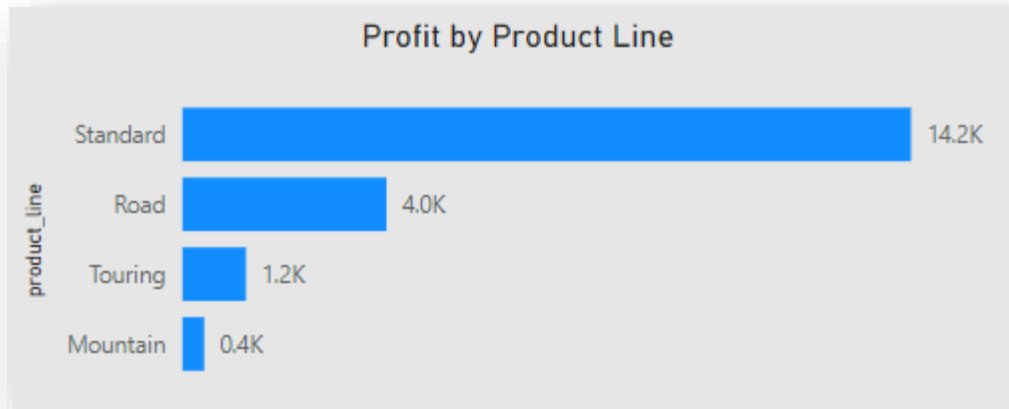

Profit by State
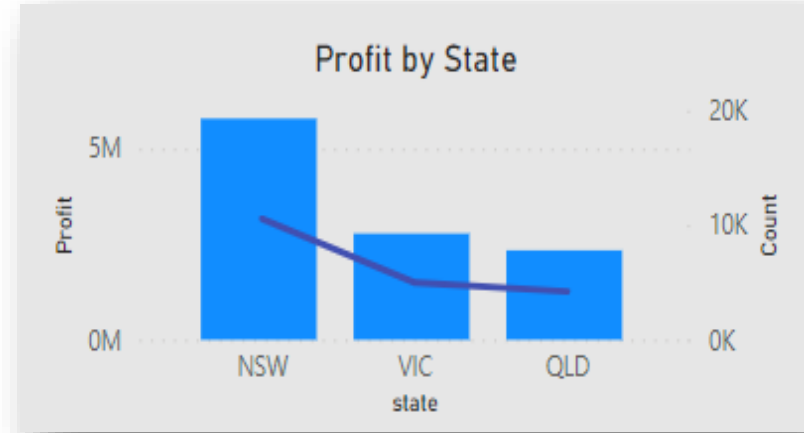
DATA INTERPRETATION

The wealth segment divides the customers into "High Net Worth", "Affluent" and "Mass Customers". This analysis shows that the company generates the most profit (5.32M) from mass customers.
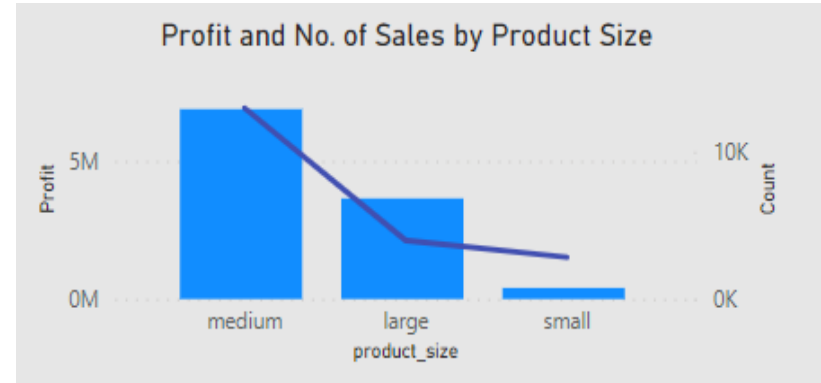

Profit by Wealth Segment

2.63M (24.67%)

5.32M (49.96%)

2.7M (25.37%)

wealth_segment
- Mass Customer
- High Net Worth
- Affluent Custo...

DATA INTERPRETATION

This analysis shows that customers mostly buy standard products.

DATA INTERPRETATION

This analysis shows that customers prefer medium-sized products than the large and small ones. Medium-sized products bring in the most profit and have the highest number of sales.

Profit and No. of Sales by Product Size

DATA INTERPRETATION

This analysis shows that customers who work in the "Manufacturing" industry bring in the most profit while customers working in the "Financial Services" industry buy the most products. Customers that work in "Health" industry closely follow in terms of profit and sales.

Profit and No. of Sales by Job Industry Category

MODEL DEVELOPMENT

After proper analysis, the following variables will be used to develop an optimized model that will be used in identifying potential **profitable** customers.

Age_Group: 41- 60

Gender: Male & Female

Brand: WeareB2B

Job Category: Manufacturing

State: New South Wales(NSW)

Wealth_Segment: Mass Customer

Product_Size: Medium

Product_Line: Standard

CONCLUSION & RECOMMENDATIONS

 Based on the insights , I recommended to the company that:

• Sprocket should have marketing strategies directly targeted to customers within the age of 20–60 and customers who reside in New South Wales. Since there's no significant difference between the genders, the company should make their marketing campaign more male-focused and enticing to bring in more male customers.

• Sprocket should increase sales and promotion of the "WeareA2B" brand and medium-sized products, while evaluating the promotion and marketing strategy for the other brands.

• The company should direct their marketing campaign and focus to customers who work in the manufacturing industry and financial services .

Thank you!