

TheAnalyticsTeam

Sprocket Central Pty Ltd

Data analytics approach

Pitiphat Phetlertanan

Agenda

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

Introduction

Find new potential customers and insights to improve resource allocation for targeted marketing

Stakeholder: Marketing team (Sprocket Central Pty Ltd)

Product & Services: Bike and cycling accessories

Goal: Recommend the potential customers

Project period: 3 weeks



Data Exploration

Explore 3 datasets to understand data distribution

1. Customer demographic
2. Customer address
3. Transactions

Data Exploration

1. Customer demographic

- 13 columns and 4000 distinct id
- Gender (F, M, U, Female, Femal, Male)
- 87 of 4000 have no DOB
- 195 unique job title in 9 industries
- 3 segments; Mass, High net worth, Affluent
- Default column cannot be read

Data Exploration

2. Customer address

- 5 columns and 4000 distinct id but missing on id 3, 10, 22, 23 and 4001-4003 are additional id
- State consist of New South Wales (NSW), Queensland (QLD), Victoria (VIC) and all location are in Australia
- Property valuation in range 1-12 (unknown unit and currency)

Data Exploration

3. Transactions

- 13 columns and 20000 transaction id (3494 distinct customer id)
- The order date in 2017 (1/1/2017 – 30/12/2017)
- 6 brands; Giant Bicycles, WeareA2B, Norco, Bicycles, OHM Cycles, Solex, Trek Bicycles
- 4 product line; Standard, Road, Touring, Mountain
- 3 product class; high, medium, low
- 3 product size; large, medium, small
- 197 records with no data in some columns (all of these have product id 0)

Model Development

Transform data and discover the relations

1. Customer Demographic

- Transform gender column, deceased indicator to be consistent
- Create age range from DOB

Model Development

Transform data and discover the relations

2. Customer address

- Transform state into short form (NSW, VIC, QLD)

Model Development

Transform data and discover the relations

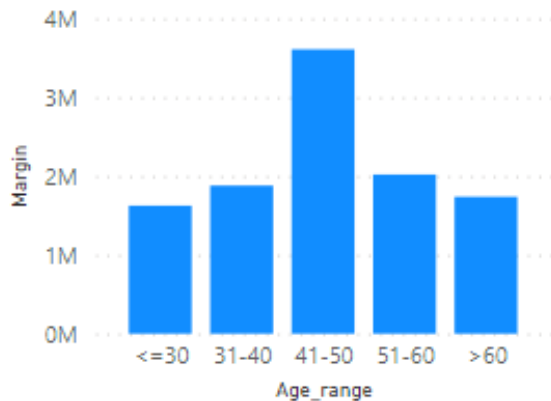
3. Transactions

- Remove records which empty in product information (brand, product line, product class, product size, standard cost, product first sold date)
- Calculate margin column from price and cost

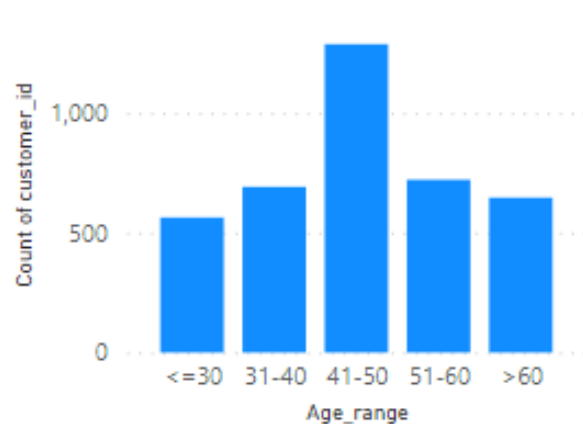
Interpretation

Company gain significant margin from customers at age 41-50

Margin by Age_range



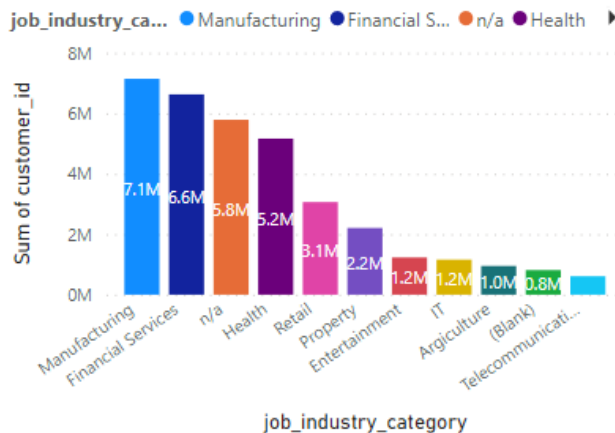
Count of customer_id by Age_range



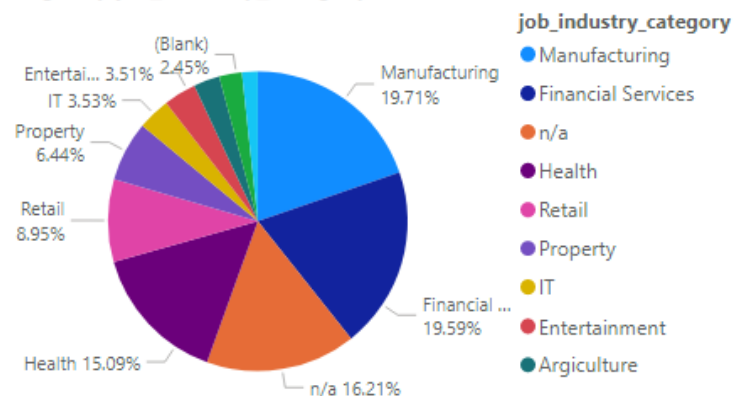
Interpretation

Company gain over 70% margin from customers who work in Manufacturing, Financial services, n/a and Property

Sum margin by job_industry_category



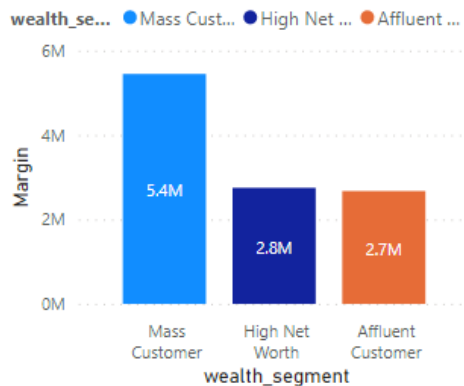
Margin by job_industry_category



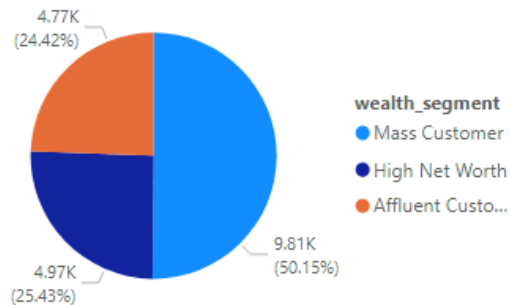
Interpretation

Half customers are Mass customer, which make 5.4M margin

Margin by wealth_segment and wealth_segment



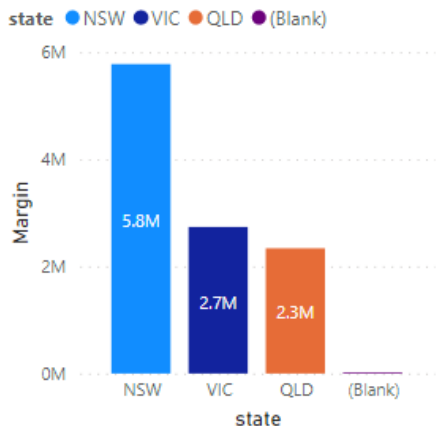
Count of customer_id by wealth_segment



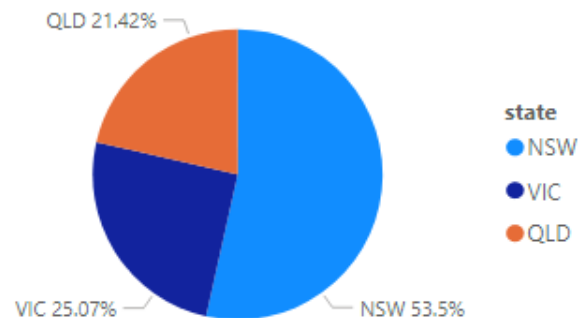
Interpretation

Half customers are live in NSW, which make 5.8M margin

Margin by state and state



Count of customer_id by state



Conclusion

From provided data, we discover that the company gain profit from customer who

1. Age 41-50
2. Work in Manufacturing, Financial services, Property or n/a
3. Half margin and customers classify as Mass customer
4. Half Mass customer customers live in New South Wales