Sprocket Central Pty Ltd User Profile Analyse

- **Abstract**

Sprocket Central Pty Ltd, a bicycle manufacturer from Australia, provided their annual data. The profile analysis was based on the transaction data and basic customer information for the whole year last year, and the old customers were grouped and features were extracted before the data modelling was done to discover the value of potential users, and the extracted features will be added to the subsequent data modeming process as the main data basis.

- **Segment**

In the first step, We divide customers into groups according to their total **annual consumption**, and set those whose annual personal consumption is less than 4000 as normal customers, those whose annual consumption is more than 4000 and less than 8000 as high customers, and those whose annual consumption is more than 8000 as very high advanced customers. Among the three customer groups, **normal customers** are our **core customers** accounting for **71%,** while those whose consumption is higher than 8000 account for only 1.57%. Next, we will conduct in-depth analysis on the portraits of each user group in groups, and construct the user profile from the **basic attributes, social attributes, behaviour habits and consumption behaviours** of each user group.
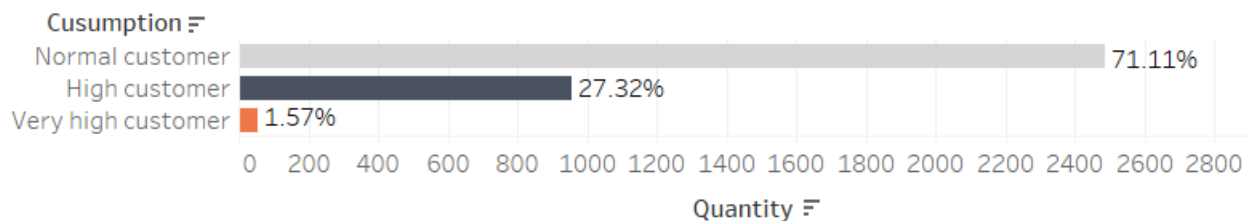

Figure1: Group of users

- **Basic attributes(Gender age property)**

As shown in Figure 2, in the three groups, the proportion of male and female professionals tends to be **balanced** without significant difference. In the age distribution, normal customers in their **30s, 40s and 50s** account for a significantly higher proportion than other age groups, while high customers in their **40s and 50s** account for the largest proportion. The proportion of very High Customer users aged around **45** is slightly higher than that of other age groups. In terms of salary, we found that the proportion of high-income and middle-income customers in normal customers and high customers was much higher than that of low-income customers. The main customers of Very High Customer are high-income people.

Figure2: Basic attributes

- ## Social attribute(Industry own car)

As shown in Figure 3, customers from the **Manufacturing, health and Financial** Services industries account for more than half of the core users, among which cars have little influence on customers' purchase of the company's products. Among High customers, customers serving the **Financial service, manufacturing and health** industries account for more than half, which is much higher than other industries. Those who own cars in the Financial industry seem to be more willing to buy our products. The distribution of Very High Customer is almost the same as core users.
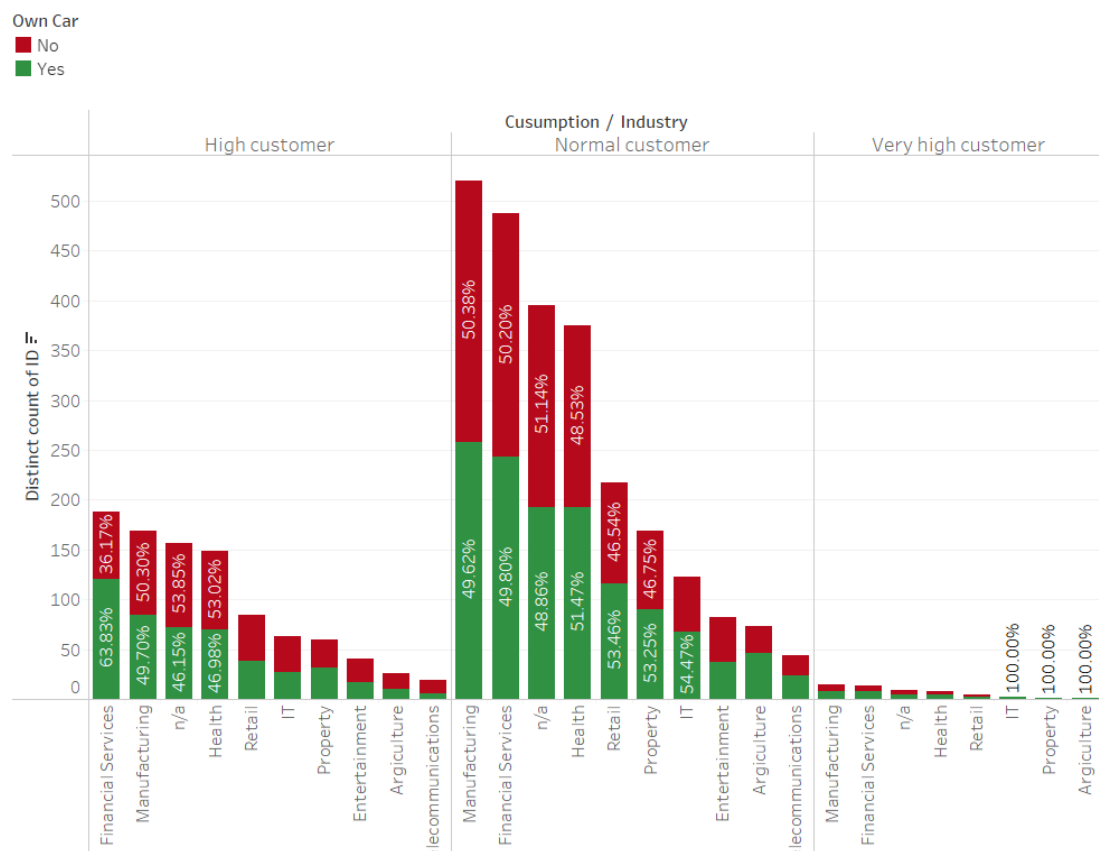

Figure 3: Social attributes

- ## Behaviour habits(state postcode online order)

As shown in Figure 4, **online ordering is evenl**y distributed among the three groups of customers, with a 50/50 split in almost every region. In terms of customer residence address, **NSW** has the largest number of core customers, accounting for more than 50%. VIC and QLD have almost the same number of customers. High customers and core customers have the same geographical distribution.
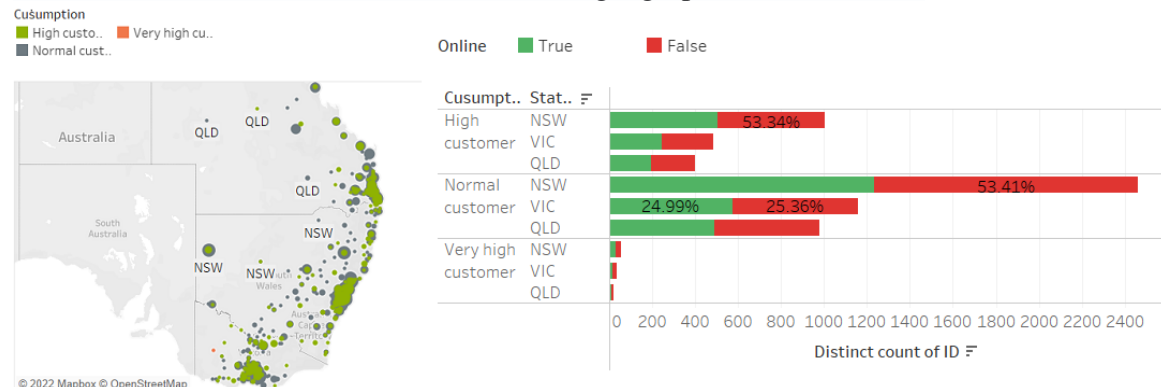

Figure4: Behaviour habits

- **Consumption Behaviours(Brand class)**

As shown in Figure 5, **Solex and Giant Bicycles** are the most popular brands among the three customers. In terms of size, **medium** is the most popular among the three customers, and the choice of low and high is slightly different. Core customers and High customers have a balanced choice between the two sizes. However, Very High Customer prefers to buy the high size.

Figure 5: Consumption behaviour

- **Summary**

In the user profile analysis, four dimensions to the user's portrait characteristics were analysed, and the results show that some characteristics in the three groups of users more apparent, can extract the user group, thus draws the outline of users, in addition, the extracted features of follow-up data modelling provides a good information. The user portrait is shown in Table 1.

User group	Basic attribute	Social attribute	Behaviour	Consumption
Normal user	• 30s,40s and 50s • middle/high salary	• Financial (own car) • Manufacturing • Health	• NSW • Victoria	• Solex Giant • Medium
High user	• 40s and 50s • High/middle salary	• Financial • Health • Manufacturing	• NSW • Victoria	• Solex Giant • Medium
Very high user	• 45s • High salary	• Manufacturing • Financial	• NSW • Victoria	• Solex Giant • Medium • High class

Table1 : User profile(red for labels are different, green for the same attribute)