



## **About Sprocket**

Sprocket Central Pty Ltd, a medium-size bikes & cycling accessories organization, has approached Darlytics Consulting. Sprocket Central Pty Ltd about some assistance with its customer and transaction data.

The organization has a large dataset relating to its customers, but their team is unsure how to effectively analyze it to help optimize its marketing strategy.

## **Case Scenario**

Sprocket Central Pty Ltd has given us a list of 1000 potential customers with their demographics and attributes. However, these customers do not have prior transaction history with the organization.

The marketing team at Sprocket Central Pty Ltd is sure that, if correctly analyzed, the data would reveal useful customer insights that could help optimize resource allocation for targeted marketing. Hence, improve performance by focusing on high-value customers.

## **Your Tasks**

Using the existing 3 datasets (Customer demographic, customer address, and transactions) as a labeled dataset, please recommend which of these 1000 new customers should be targeted to drive the most value for the organization.

In building this recommendation, we need to start with a presentation slide which outlines the approach which we will be taking. The client has agreed on a 3-week scope with the following 3 phases as follows - Data Exploration; Model Development and Interpretation.

Prepare a detailed approach for completing the analysis including activities – i.e. understanding the data distributions, feature engineering, data transformations, modeling, results interpretation, and reporting. This detailed plan needs to be presented to the client to get a sign-off. Please advise what steps you would take.

Please ensure your presentation slide includes a detailed approach for our strategy behind each of the 3 phases including activities involved in each - i.e. understanding the data distributions, feature engineering, data transformations, modeling, results interpretation, and reporting. This detailed plan needs to be presented to the client to get a sign-off.

### **⇒ Link to the Australian Bureau of Statistics**

View [THIS WEBSITE](#) to find other datasets that may be relevant to this task.

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Tips: Raw data fields may be transformed into other calculated fields for modeling purposes (i.e. converting D.O.B to age or age groups). Tips: You may source external data from the ABS / Census to add additional variables that may help support your model.