

**To:** Sprocket Central Limited

**From:** Rockwall Analytics

**Subject:** Analytics, Information & Modelling - DATA ANALYTICS

**Date:** December 18, 2020

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### **Data Insights**

Targeting high value customers based on customer demographics & attributes

#### THE INFORMATION

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

The marketing team at Sprocket is sure that, if correctly analysed, the data would reveal useful customer insights which could help optimise resource allocation for **targeted marketing**.  
*Hence, improve performance by focusing on high value customers*

#### RECAP

For context, Sprocket specialises in high-quality bikes and accessible cycling accessories to riders. Their marketing team is looking to boost business by analysing their existing customer dataset to determine customer trends and behaviour Using the existing 3 datasets *Customer demographic, customer address and transactions* as a labelled dataset, recommend which of these 1000 new customers should be targeted to drive the most value for the organisation

In building this recommendation, we need to start with a PowerPoint presentation which outlines the approach which we will be taking. The client has agreed on a 2 week scope with the following 3 phases as follows:

- Data Exploration
- Model Development
- Interpretation

*Data exploration is the process of going through the dataset, understanding its characteristics and discovering any possible relationships between the data elements i.e. THE STORY, & SHARING THE STORY WITH THE AUDIENCE*

*Model development is the representation of what the machine learning system has learned from the training data*

*Interpretation is the degree to which a model's predictions can be readily explained*

## OUR TASK

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

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

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