Marketing Engineering & Analytics
Customer Analytics Project

Segmentation and Predictive Modeling for WWW

The project goal is to provide students with some practical experience in analytical marketing approaches. Thus, students will have at their disposal a database of Wonderful Wines of the World (a fictitious company). The description of the customer signature table can be found below), where two main analytical tasks can be carried out: (a) Customer segmentation and (b) Predictive modeling.

The software used will be SAS Enterprise Miner.

Most of the project will be done during the classrooms, although students are expected to present slightly different marketing decision options. The report will also be developed off-classes. The two tasks are:

I. Develop a customer segmentation - The teachers will present a "product segmentation" perspective. The students must present the same segmentation perspective.

II. Predictive modeling - The teachers will develop a predictive model for one specific variable (SPCORK), whereas students will then apply some methodology to another dependent variable (HUMID).

The deliverables of the project will be a pdf report. This report must contain a brief presentation of each analytical task's main steps (segmentation and predictive modeling) together with a more in-depth discussion about the results obtained and how they should be used for marketing initiatives. **This report should not exceed 3.500 words.**

The delivery date of the project is June 13th, 2021, 11:59 pm by Moodle.

Our Imaginary Enterprise: Wonderful Wines of the World

Wonderful Wines of the World (WWW) is a ten-year-old enterprise that seeks out small, unique wineries worldwide and brings its wines to its customers. Its mission is to delight its customers with well-made, unique, and exciting wines that would never travel far beyond their points of origin.

WWW sells wines through catalogs (electronic and physical), websites, mobile app, and ten small stores in major cities around the USA. Customers can purchase at the stores, by telephone (after looking at the catalog), or through the website/mobile app.

Through aggressive promotion in wine and food magazines, WWW now has 350,000 customers in its database. Most customers are highly involved in wine, entertain frequently, and have sufficient money to indulge their passion for wine. WWW sometimes offers wine accessories as well – wine racks, cork extractors, etc.

WWW is trying to make use of the database it started about five years ago. So far, it has simply mass-marketed everything. All customers get the catalog, and there are no loyalty programs or attempts to identify target markets for cross-selling opportunities.

Now, WWW wants to "get smart" about its database, start differentiating customers and develop more focused programs. In other words, develop marketing analytics.

WWW has provided one random sample of its customers from its active database. These customers have purchased something from WWW in the past 12 months (after 12 months with no purchase, a person is eliminated from the active database).

Variables in the customer signature table

Variable	Description
CUSTID	customer ID number
DAYSWUS	number of days as a customer
AGE	customer's age
EDUCATION	highest academic degree earned
INCOME	household net income
KIDHOME	1=has child under [0y – 12y] living at home
TEENHOME	1=has teen [13y -19y] living at home
FREQ	number of purchases in past 12m.
RECENCY	number of days since last purchase
MONETARY	total sales to this person in 12m.
LTV	customer lifetime value (derived variable)
PERDEAL	% purchases bought on discount
DRYRED	% of wines that were dry red wines
SWEETRED	% sweet or semi-dry reds
DRYWH	% dry white wines
SWEETWH	% sweet or semi-dry white wines
DESSERT	% dessert wines (port, sherry, etc.)
EXOTIC	% very unusual wines
WEBPURCH	% of purchases made on website/app
WEBVISIT	average # visits to website/app per month
EXPRESSEDPREF.	explicitly preferred line of business (LOB)
NPS	net promotor score
SMRACK	1=customer bought the small wine rack $50
LGRACK	1=bought the large wine rack $100
HUMID	1=bought wine cellar humidifier $75
SPCORK	1=silver-plated cork extractor $60
BUCKET	1=bought silver wine bucket $150
ACCESS	number of accessories (without SPCORK)

Note: DRYRED + SWEETRED + DRYWH + SWEETWH + DESSERT = 100%