A Personal Loan Acceptance

Universal Bank is a relatively young bank growing rapidly in terms of overall customer acquisition. The majority of these customers are liability customers(depositors) with varying sizes of relationship with the bank. The customer base of asset customers (borrowers) is quite small, and the bank is interested in expanding this base rapidly to bring in more loan business. In particular, it wants to explore ways of converting its liability customers to personal customers (while retaining them as depositors).

A campaign that the bank ran last year for liability cutomers showed a healthy conversion rate of over 9% success. This has encouraged the retail marketing department to devise smarter campaigns with better target marketing.

The goal is to build a logistic regression model to classify whether a new customer will accept a loan offer. This will serve as the basis for the design of a new campaign.

The data set UniversalBank.mtw contains data on 5000 customers. The data include customer demographic information (age, income, etc.), the customer’s relationship with the bank (mortgage, securities account, etc.), and the customer’s response to the last personal loan campaign (Personal Loan). Among these customers, only 480 (= 9.6%) accepted the personal loan that was offered to them in the earlier campaign.

**UniversalBank**

Courtesy - Statistics.com

Data Description:

ID Customer ID

Age Customer's age in completed years

Experience #years of professional experience

Income Annual income of the customer ($000)

ZIPCode Home Address ZIP code.

Family Family size of the customer

CCAvg Avg. spending on credit cards per month ($000)

Education Education Level. 1: Undergrad; 2: Graduate; 3: Advanced/Professional

Mortgage Value of house mortgage if any. ($000)

Personal Loan Did this customer accept the personal loan offered in the last campaign? (1 = Yes, 0 = No)

Securities Account Does the customer have a securities account with the bank?

(1 = Yes, 0 = No)

CD Account Does the customer have a certificate of deposit (CD) account with the bank? (1 = Yes, 0 = No)

Online Does the customer use internet banking facilities? (1 = Yes, 0 = No)

CreditCard Does the customer use a credit card issued by UniversalBank? (1 = Yes, 0 = No)