CreditCo

Case: Increased Customer Defaults

Macondo Data Analysis LLC

Business Issue

- CreditCo provides credit scoring services to banks.
- Lately, the number of client loan defaults has increased
 - High risk of losing CreditCo business
 - Needs updated credit scoring method
- Goal of data analysis effort
 - Qualify a potential client as credit-worthy (i.e. lower risk of default)
 - Once qualified, what credit limit should the client be given?

Data Science Process

Analysis Plan

Data Collection

Exploratory Data Analysis (EDA)

Build Model

Recommendations

Basic questions:

- Method to approve customers?
- What credit limit?

Top level path:

Approval (y/n): Nominal

Decision tree model

Credit Limit: Continuous

· Regression model

Samples: 29,967 (after cleaning)

- Data location: Taiwan
- Data date collected: 2005
 Time period: April Sept
 Granularity: Monthly pyt.
 Types: Pyt. behavior, Bill due, Payment

 Correlation: Sum all Pay_n,
- Customer default: y/n
- NOTE: Missing client income (key metric)

Questions for EDA:

Is gender, education, age, or marital status a guide into delayed pyts. or amounts paid...what about credit given?

Correlation: Sum all Pay_n, Bil_Amt, Pay_amt then run correlate all variables.

Based on above, choose models.

Build two models

- To predicts default as acceptance of client (Decision Tree)
- To model to predict credit limit that uses predict as xvalue (Regression Model)

Performance Assessment:

- Accuracy
- Recall
- Precision

- Provide answer to initial questions
- · Report on model performance
- Comment on how to use model for client selection
- · Any additional comments

Program Management

- One analyst
- 10 working days (2 weeks)
- Fee as per contract