CreditOne

Case: Increased Customer Defaults

Macondo Data Analysis LLC

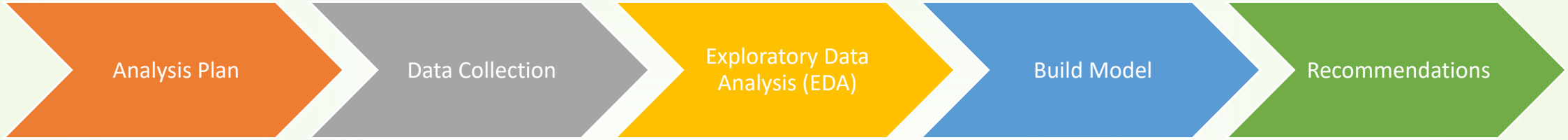
Business Issue

- CreditOne provides credit scoring services to banks.

- Lately, the number of client loan defaults has increased
  - High risk of losing CreditOne 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



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
- **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
1. To predicts default as acceptance of client (Decision Tree)
2. To model to predict credit limit that uses predict as x-value (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