Northwestern MSDS-498 Artificial

Model #101: Credit Card Default Model

Model Development Guide

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# Introduction

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# The Data

University of California Irvine hosts a Machine Learning Repository (Dua and Graff 2019) which includes the default of credit card clients in Taiwan prepared to compare the predictive abilities of selected data mining methods (Dua and Graff 2019). The response variable of the dataset is a binary indicator for whether a customer defaulted on their credit card debt. Delinquency is defined as missing a single payment due date, while default is not making a specific number of consecutive payments (Cagan 2020). Entering default involves collections actions and likely losses for the creditor, so a company would seek customers unlikely to default.

The predictor variables included in the dataset can be divided into two categories about the customer: demographic attributes and billing/payment history. The demographic attributes are comprised of SEX, EDUCATION, MARRIAGE, and AGE. The billing/payment history variables comprise six months of history including repayment status, billing amount, and payment amount. The dataset was checked for empty values, and zero percent nullity was reported across all fields.

# Feature Engineering

Models.

# Exploratory Data Analysis

algorithms.

# Predictive Modeling: Methods and Results

In the

results.

# Comparison of Results

adsfasdf

# Conclusions

score.

# Bibliography

1. Dua, D. and Graff, C. (2019). UCI Machine Learning Repository [http://archive.ics.uci.edu/ml]. Irvine, CA: University of California, School of Information and Computer Science.
2. Yeh, I. C., and Lien, C. H. (2009). The comparisons of data mining techniques for the predictive accuracy of probability of default of credit card clients. Expert Systems with Applications, 36(2), 2473-2480.
3. Cagan, Michele. Debt 101: From Interest Rates and Credit Scores to Student Loans and Debt Payoff Strategies, an Essential Primer on Managing Debt. First Adams Media hardcover edition, Adams Media, 2020.
4. Liu, and

# Appendix A: Data Dictionary