

# Predictive Analytics: Credit Risk Scorecard Application

## Case study: Group 15

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### **Abstract**

TODO Abstract

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# **1 Introduction**

## **1.1 Abstract**

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# **2 Predictive Analytics Research Methodology**

## **2.1 Predictor Variable Transformation**

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## **2.2 Logistic Regression Analysis**

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## **2.3 Building Scorecards**

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## **2.4 Forecasting Scorepoints and default Probabilities**

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## **2.5 Forecasting Accuracy Testing**

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# **3 Empirical results**

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## **3.1 Loading external data**

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## **3.2 Splitting filtered data into train and test samples**

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## **3.3 Weight-Of-Evidence (WOE)-Binning**

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## **3.4 Generalized linear model (glm): Regressing response w.r.t. predictors**

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### **3.4.1 Logistic regression w.r.t. WOE-transformed predictors (data\_woe.list\$train)**

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### **3.4.2 Logistic regression w.r.t. GRP-transformed predictors (data\_grp.list\$train)**

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### **3.5 Building the scorecard-model**

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#### **3.5.1 Calculating scorepoints for the splitted sample (train and test)**

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### **3.6 Predicting probabilities and scorepoints**

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### **3.7 Testing prediction accuracy**

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## **4 Summary**

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