

LAB LECTURE 10

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R-Script

```
library(tidyverse)
library(caret)
library(e1071)

data <- read.csv("credit-approval.csv", sep = ",")
data
str(data)
summary(data)

data %>%
  filter(A1 != "?", A2 != "?", A4 != "?", A5 != "?", A6 != "?", A7 != "?", A14 != "?") -> data
data

data$A16 <- factor(ifelse(data$A16 == "+", 1, 0))
model <- glm(A16 ~ A2+A8 +A2:A8, data, family = binomial)
res1 <- predict(model, data, type = "response")
# res1
res1c <- factor(ifelse(res1 > 0.2, 1, 0))
# res1c
confusionMatrix(res1c, data$A16, mode = "prec_recall", positive = "1")
```

Console

```
          Reference
Prediction    0    1
          0 318    4
          1   39 292

          Accuracy : 0.9342
          95% CI   : (0.9123, 0.9519)
No Information Rate : 0.5467
P-Value [Acc > NIR] : < 2.2e-16

          Kappa    : 0.8685

McNemar's Test P-Value : 2.161e-07

          Precision : 0.8822
          Recall    : 0.9865
           F1       : 0.9314
          Prevalence : 0.4533
          Detection Rate : 0.4472
          Detection Prevalence : 0.5069
          Balanced Accuracy : 0.9386

          'Positive' Class : 1
```