Checking with Logistic Regression:

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| Code | Results on test dataset |
| # 1. Best-accuracy : lr\_model <- train(Class ~ ., data = trainData\_SMOTE[, c(selected\_features\_rfe, "Class")],  method = "glm",  family = "binomial",  trControl = trainControl(method = "cv", number = 5)) |  |
| # # 2.  lr\_model <- train(Class ~ ., data = trainData\_SMOTE[, c(selected\_features\_rfe, "Class")],  method = "glm",  family = "binomial",  trControl = trainControl(method = "cv", number = 5),  weights = ifelse(trainData\_SMOTE$Class == 0, 1.5, 1)) |  |
| #3:  lr\_model <- train(Class ~ ., data = trainData\_SMOTE[, c(selected\_features\_rfe, "Class")],  method = "glm",  family = "binomial",  trControl = trainControl(method = "cv", number = 5),  weights = ifelse(trainData\_SMOTE$Class == 1, 2, 1)) |  |
| Changed the number to 10, but it did not increase the sensitivity and specificity.    lr\_model <- train(Class ~ ., data = trainData\_SMOTE[, c(selected\_features\_rfe, "Class")],  method = "glm",  family = "binomial",  trControl = trainControl(method = "cv", number = 10)) |  |
| ## editing the best accuracy model  **lr\_model** <- train(Class ~ ., data = trainData\_SMOTE[, c(selected\_features\_rfe, "Class")],  method = "glm",  family = "binomial",  trControl = trainControl(method = "repeatedcv", number = 5, repeats = 10)) |  |