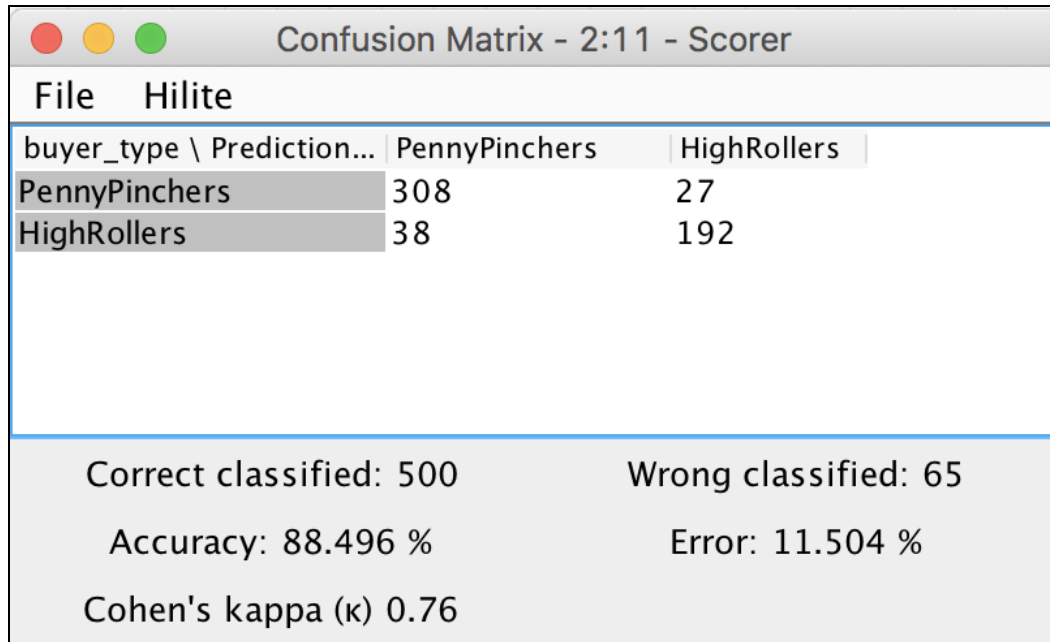


## Evaluation

A screenshot of the confusion matrix can be seen below:



File	Hilite
buyer_type \ Prediction...	PennyPinchers    HighRollers
PennyPinchers	308                  27
HighRollers	38                    192
Correct classified: 500                  Wrong classified: 65	
Accuracy: 88.496 %                  Error: 11.504 %	
Cohen's kappa ( $\kappa$ ) 0.76	

As seen in the screenshot above, the overall accuracy of the model is **88.496%**.

From the confusion matrix we can see that from all 565 users (rows) used as test dataset (308+38) were classified as PennyPinchers and (27+ 192) were classified as HighRollers.

It is important to validate our model in order to verify for each user, if the classification model predicts its category accurately. As the accuracy of our model is not 100% it suggest that some users were classified with the wrong category.

Indeed, for PennyPinchers category it shows that 308 users were classified correctly; but 38 users (originally HighRollers) were wrongly classified as PennyPinchers.

For HighRollers category it shows that 192 users were classified correctly; but 27 users (originally PennyPinchers) were wrongly classified as HighRollers.

Notice that the number of wrong classified users in both categories (38 + 27 = 65 ) represent exactly the 11.50% error of our model.