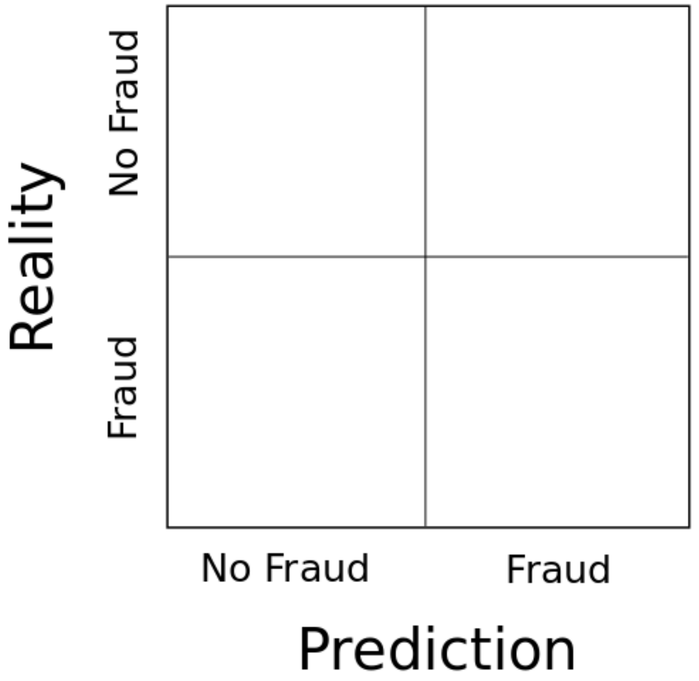
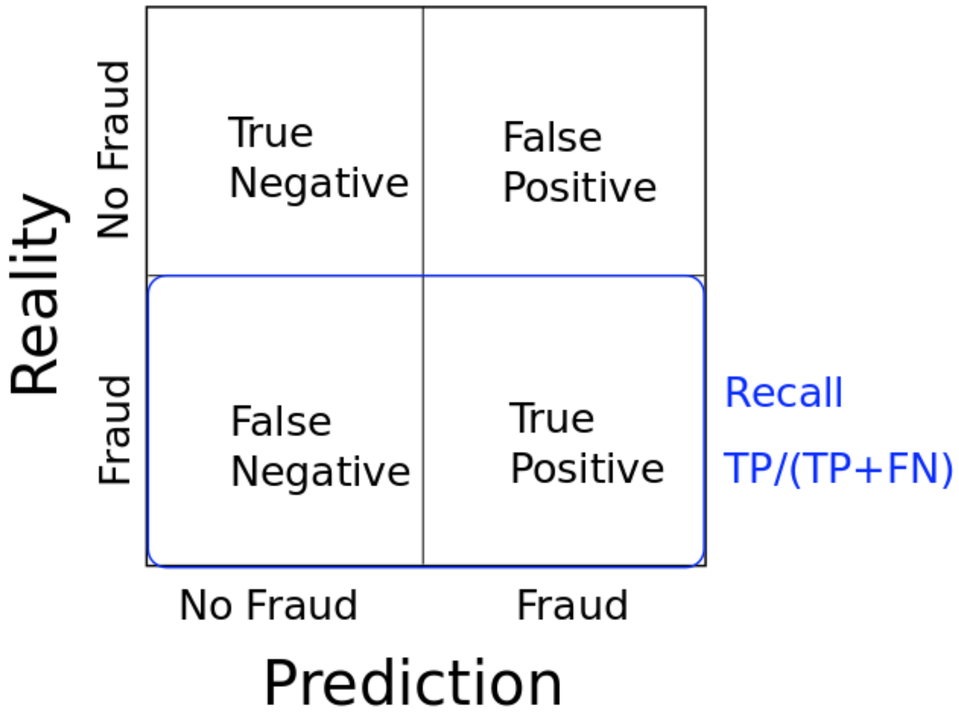
CONFUSION MATRIX



RECALL

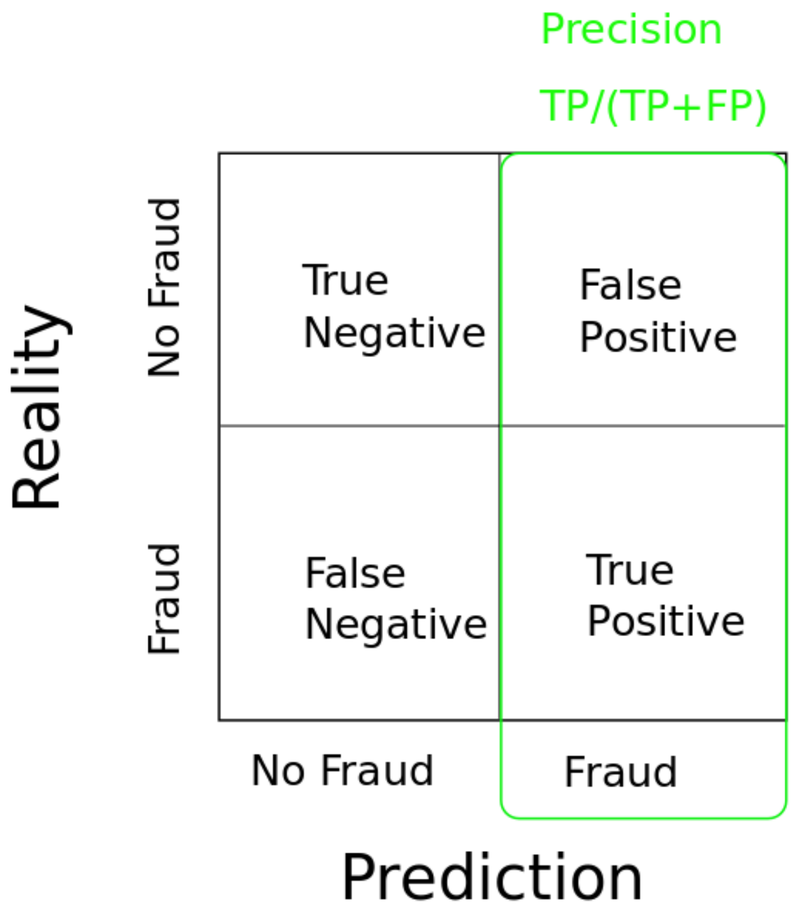
Important for many imbalanced datasets, e.g. cancer detection or fraud detection -> should be as high as possible.

Did we catch all positives?



PRECISION

Of all positive predictions (fraud), how many are correct?



Metrics Overview

Accuracy: TP+TN / TP+TN+FP+FN

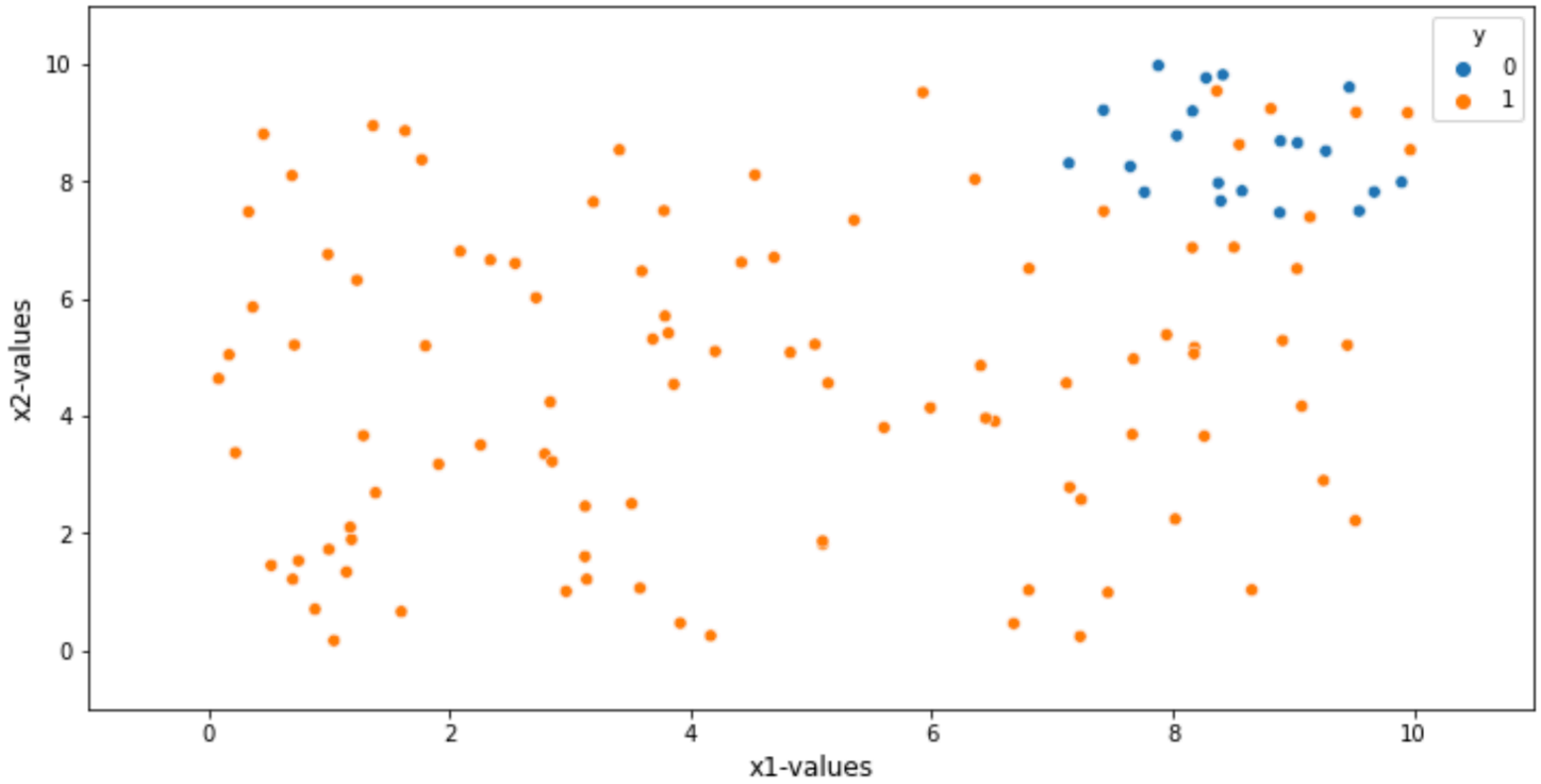
Precision: TP / TP+FP

Recall: TP / TP+FN

F1-Score: 2*(Precision*Recall)/ Precision + Recall
(Harmonic mean of precision and recall)

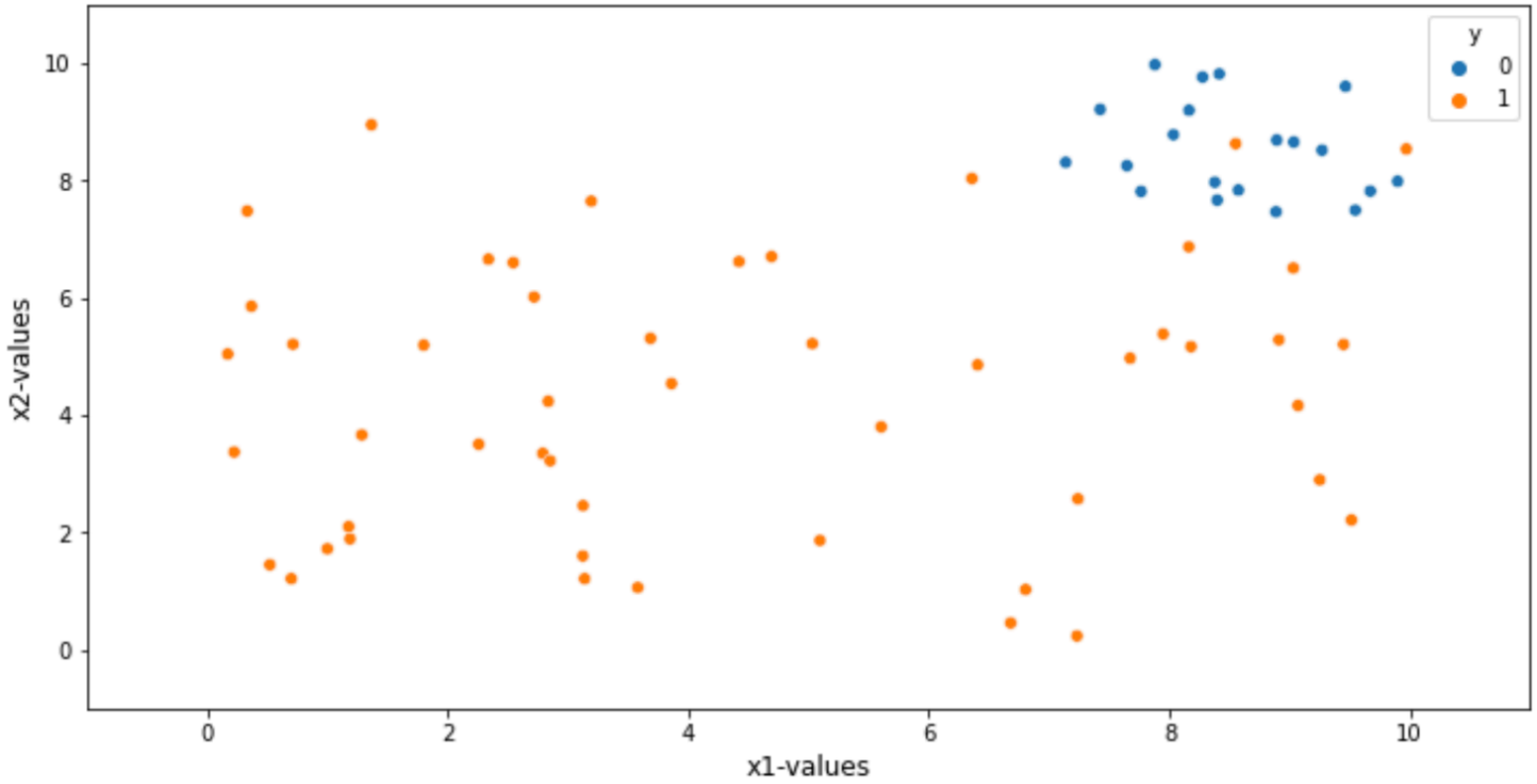
Random Undersampling

Original unbalanced data



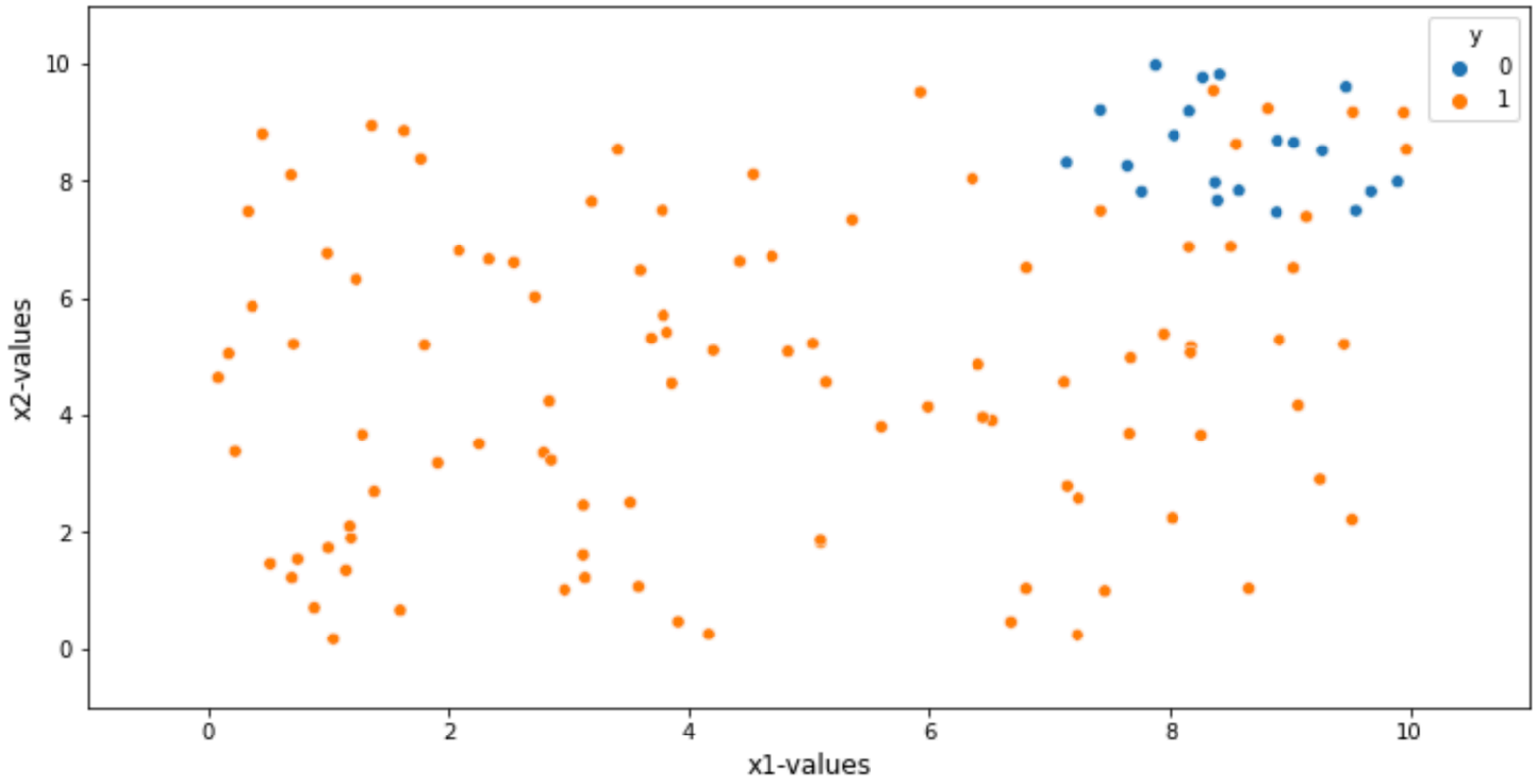
Random Undersampling

Randomly undersampled data



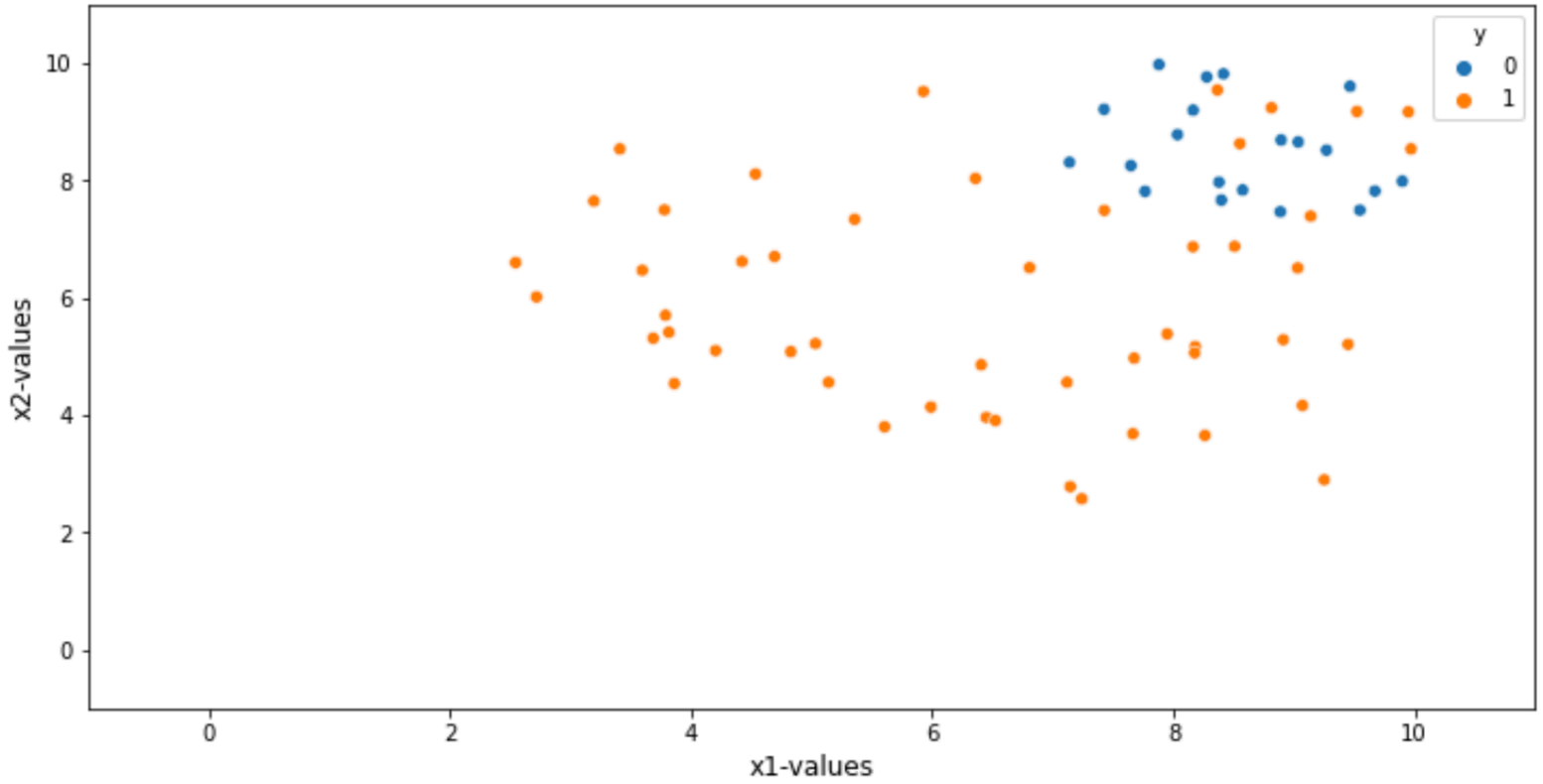
NearMiss Undersampling

Original unbalanced data



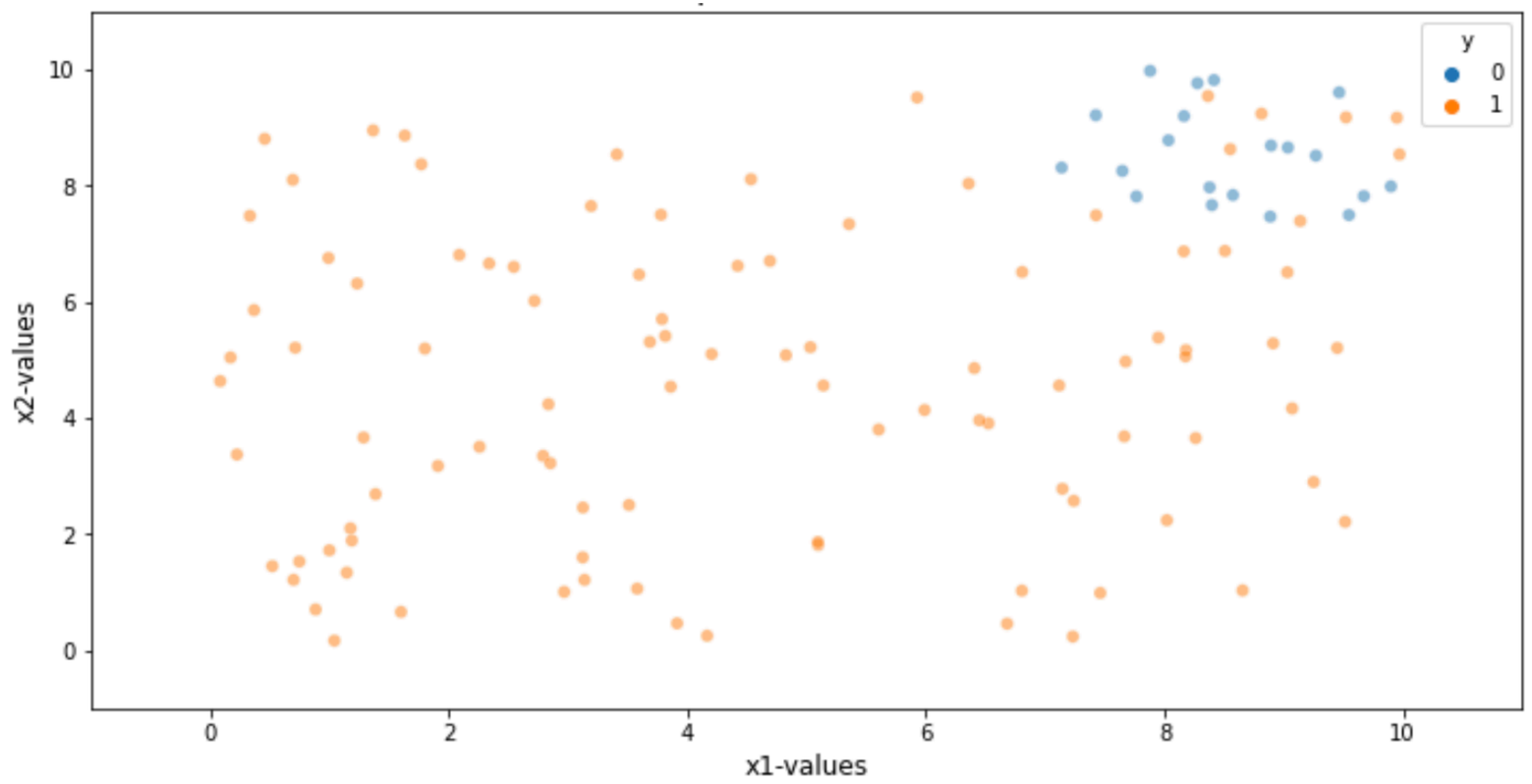
NearMiss Undersampling

With NearMiss undersampling



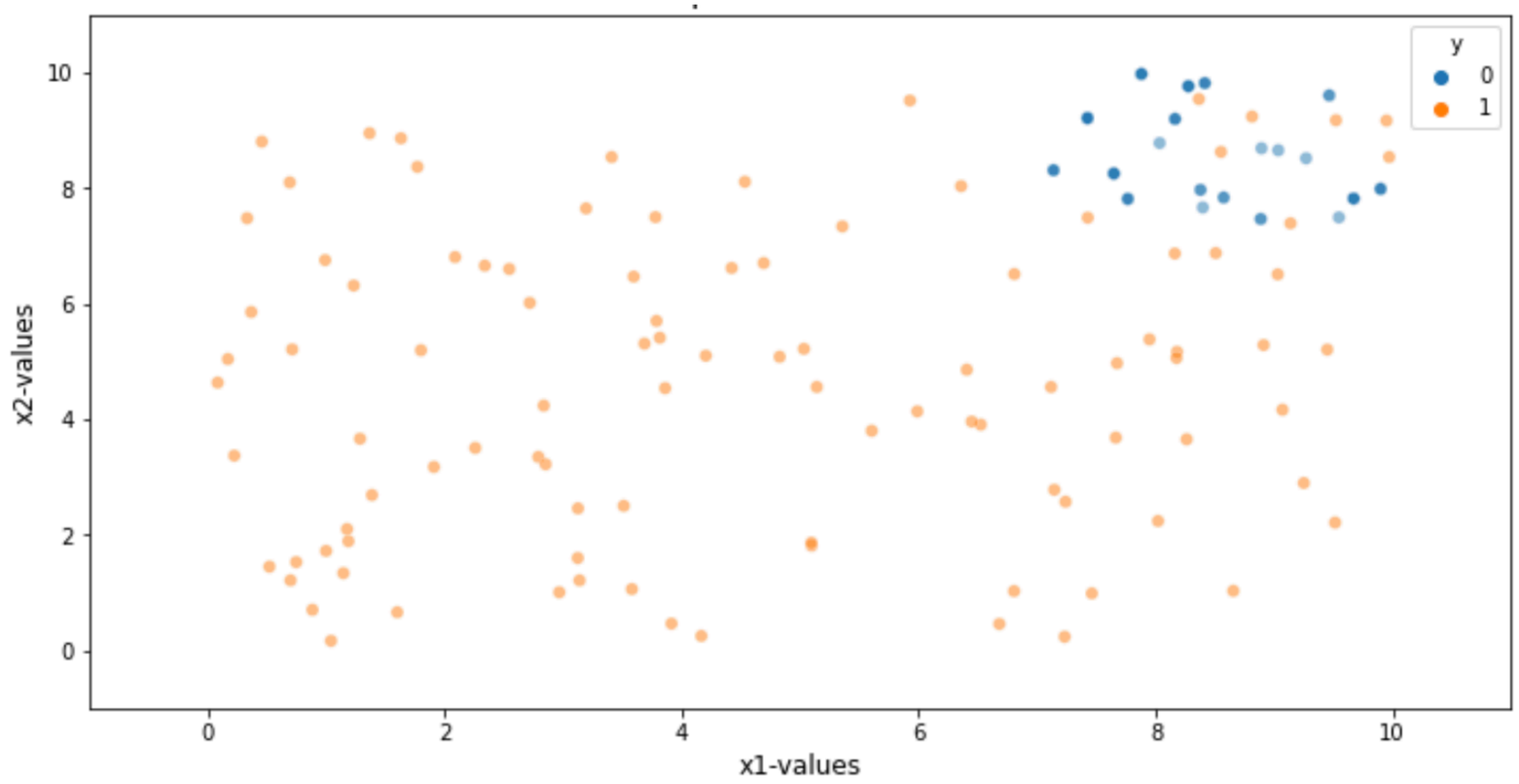
Random Oversampling

Original unbalanced data



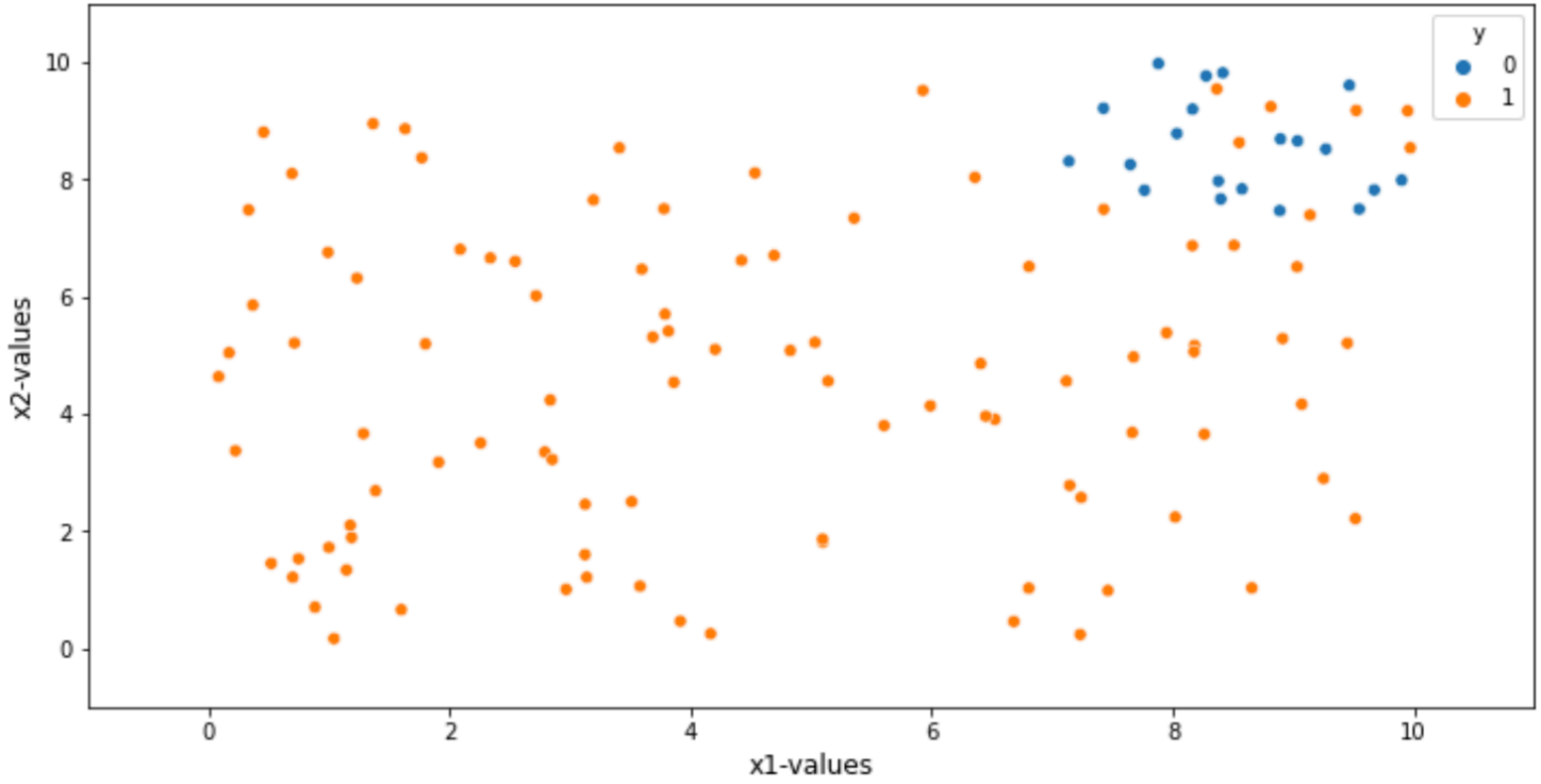
Random Oversampling

With Random oversampling



SMOTE Oversampling

Original unbalanced data



SMOTE Oversampling

SMOTE Oversampling