

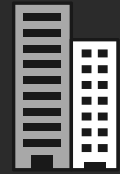
Classifying Company Bankruptcies Using Random Forest

Jamie Stephens

Metis

June 11, 2021

Business Utility

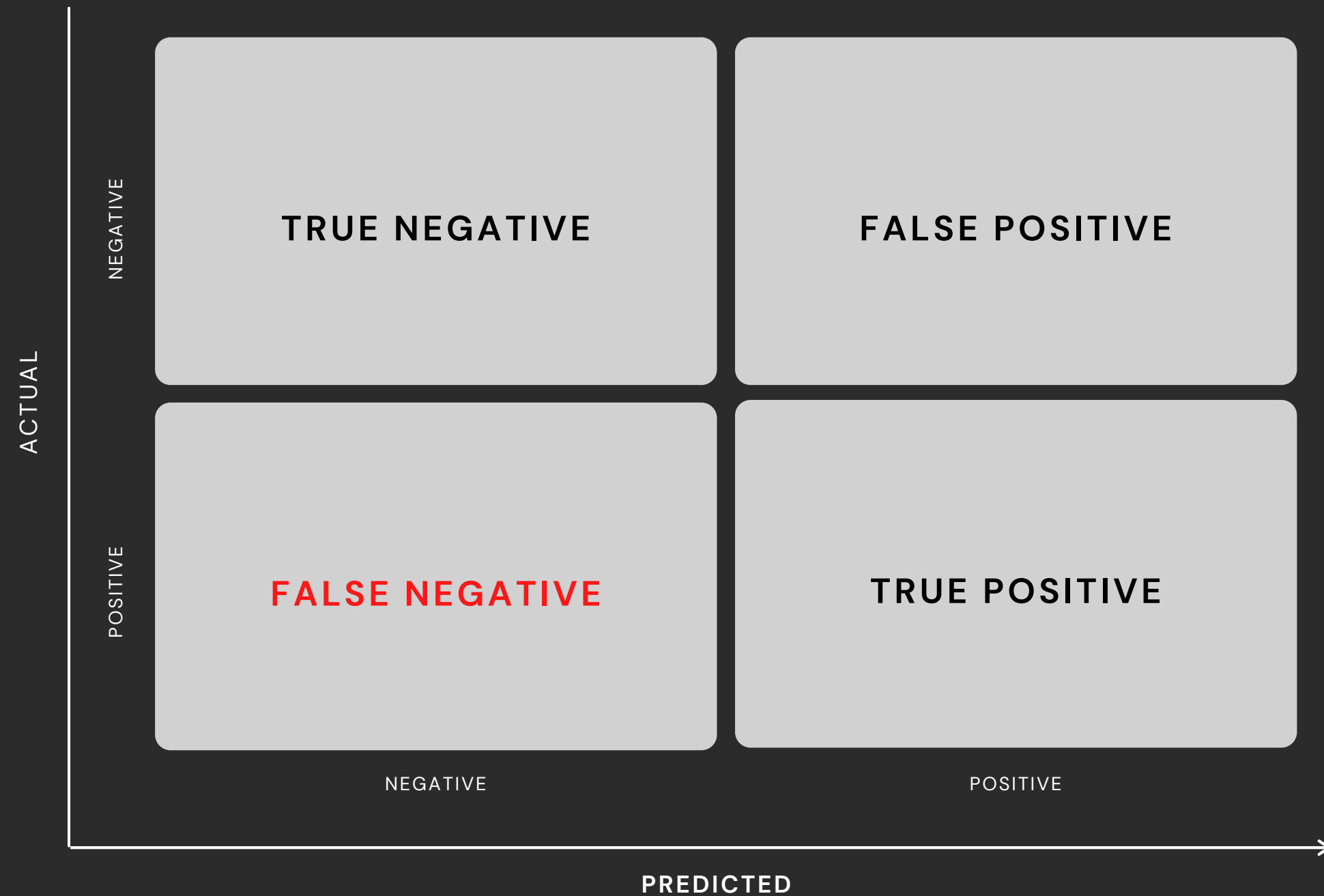


Struggling
Enterprises



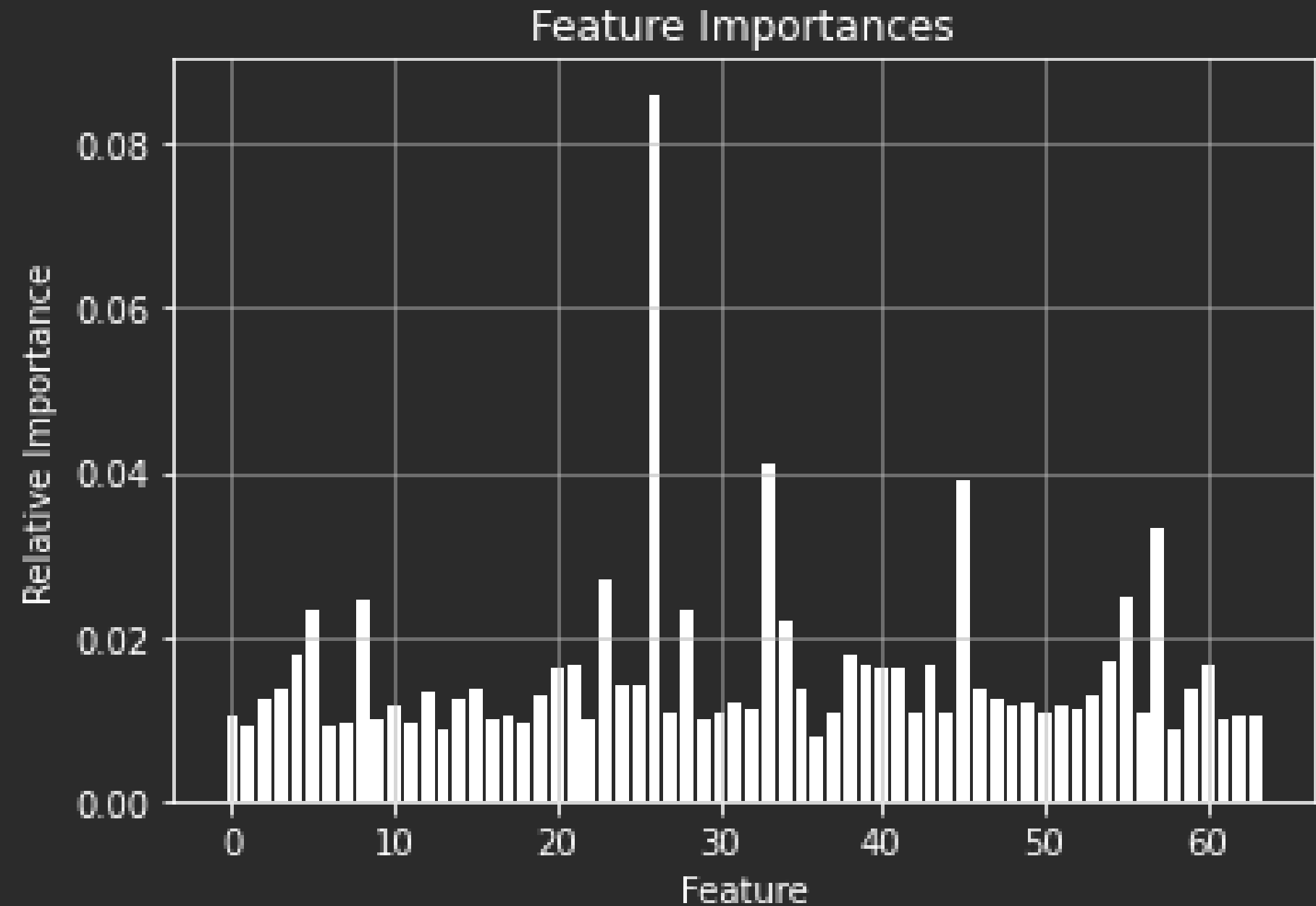
Outside
Investors

Business Utility

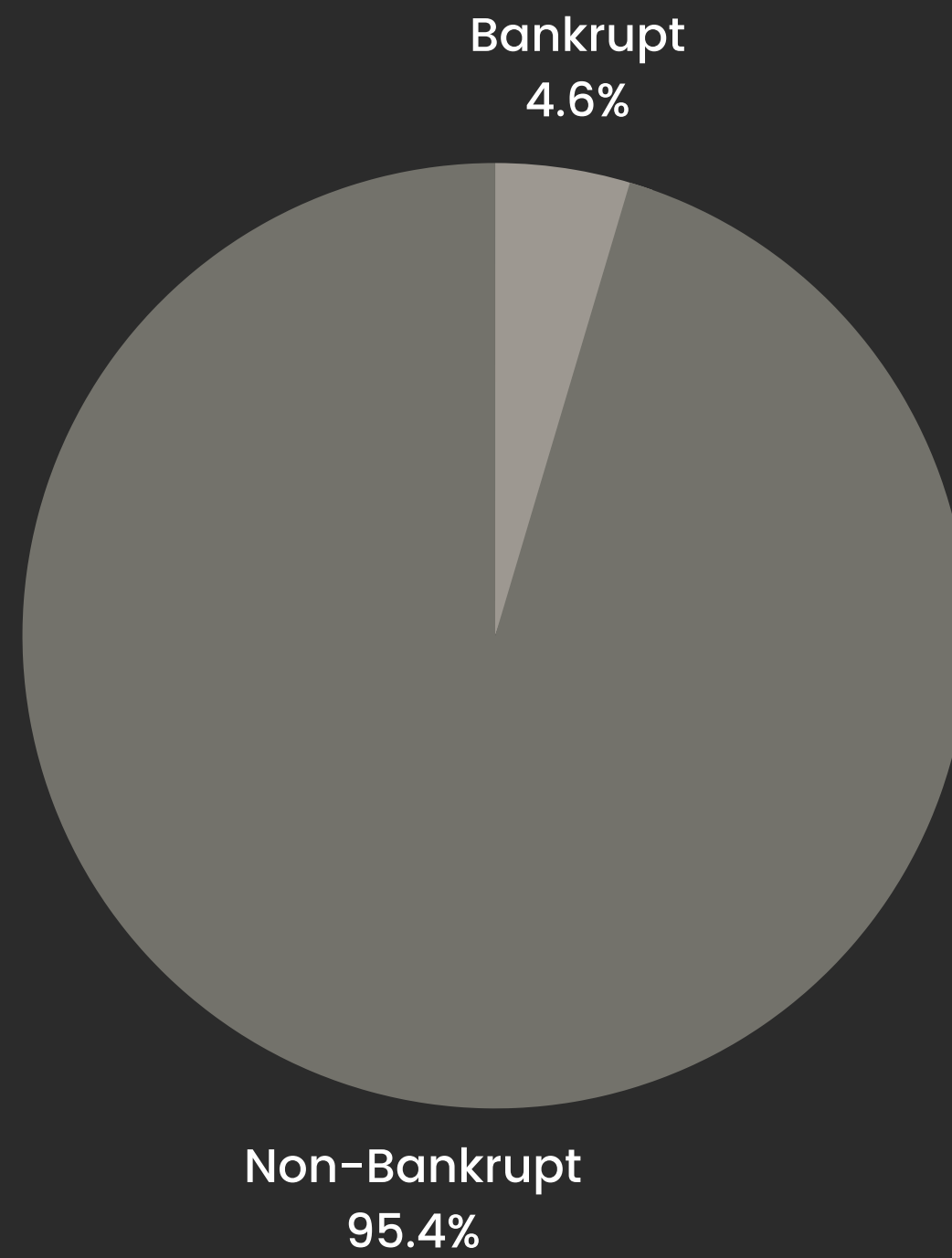


Evaluating Features

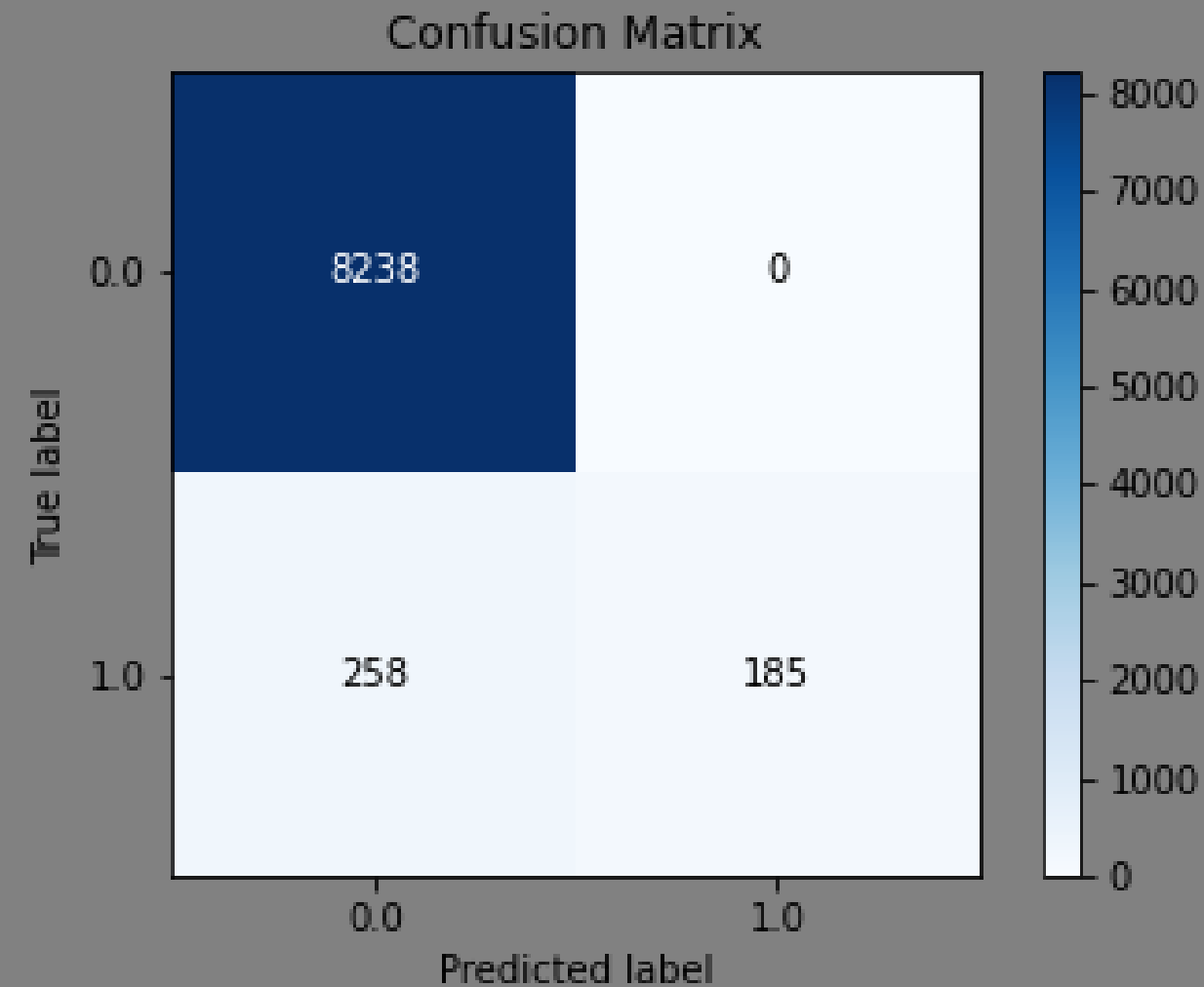
Using `sklearn.ensemble` and `matplotlib`



Imbalanced Outcomes



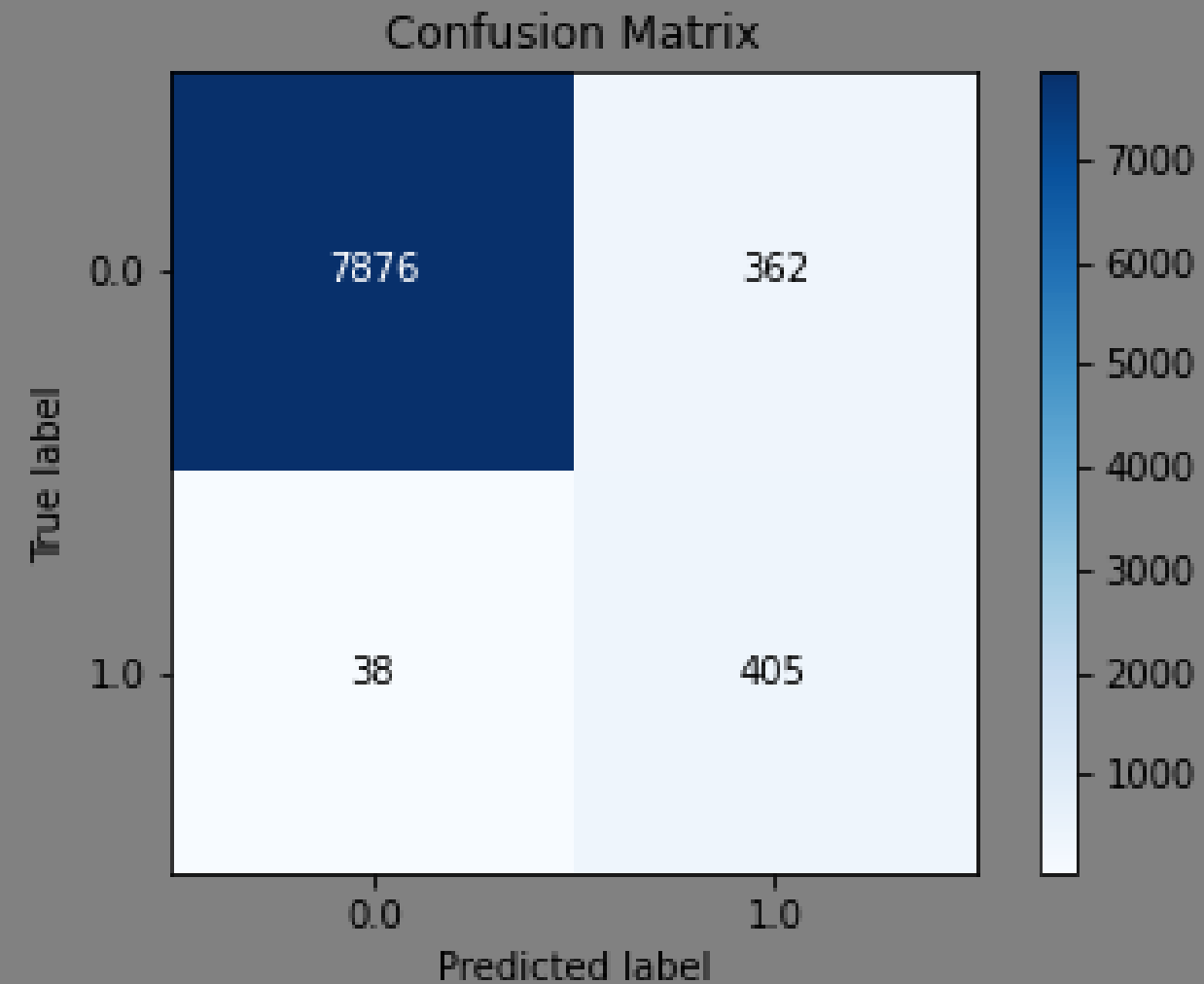
Correcting Class Imbalances



NO CLASS BALANCING

MEAN ROC (AUC): 0.916

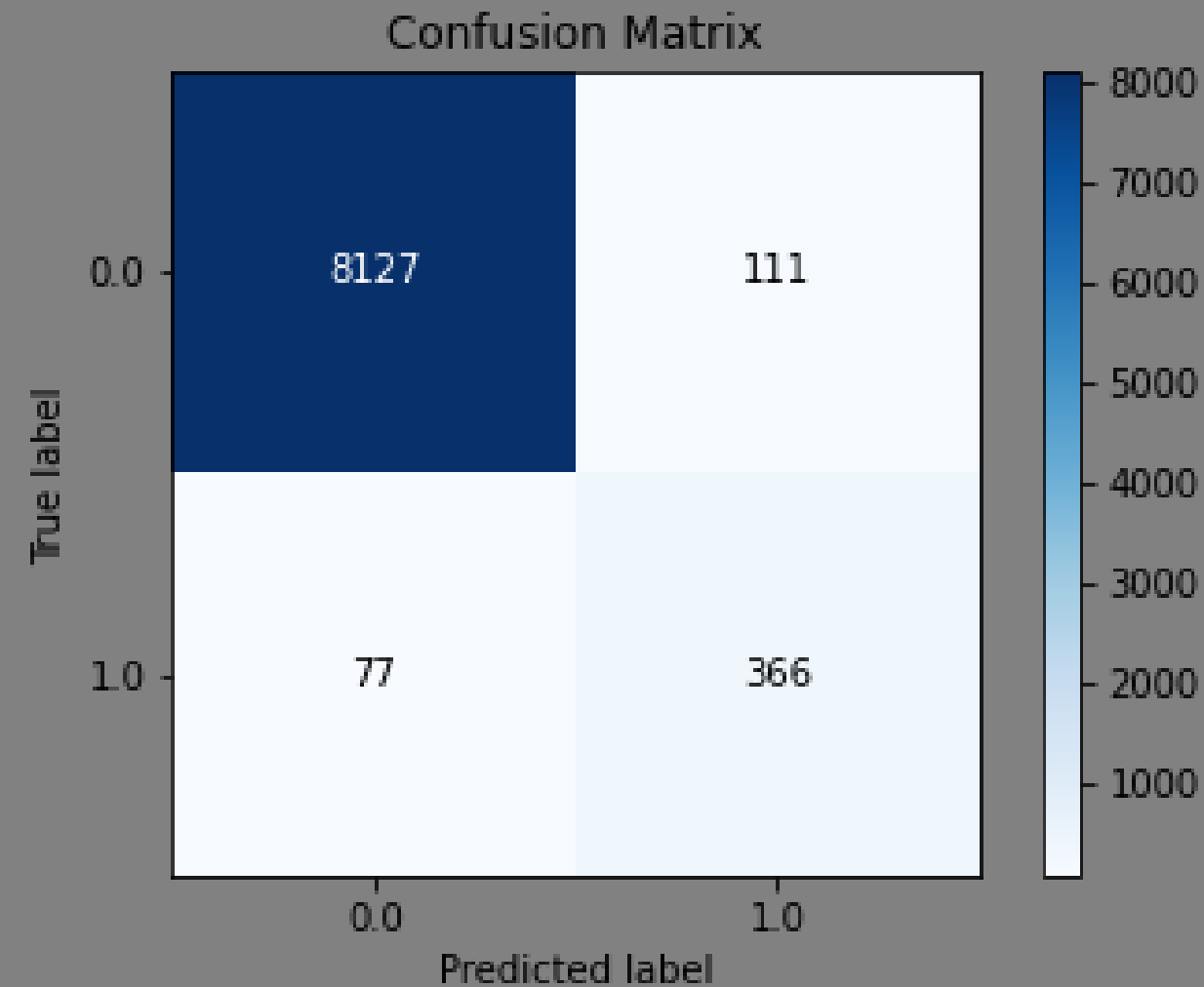
Correcting Class Imbalances



CLASS_WEIGHTING = BALANCED

MEAN ROC (AUC): 0.912

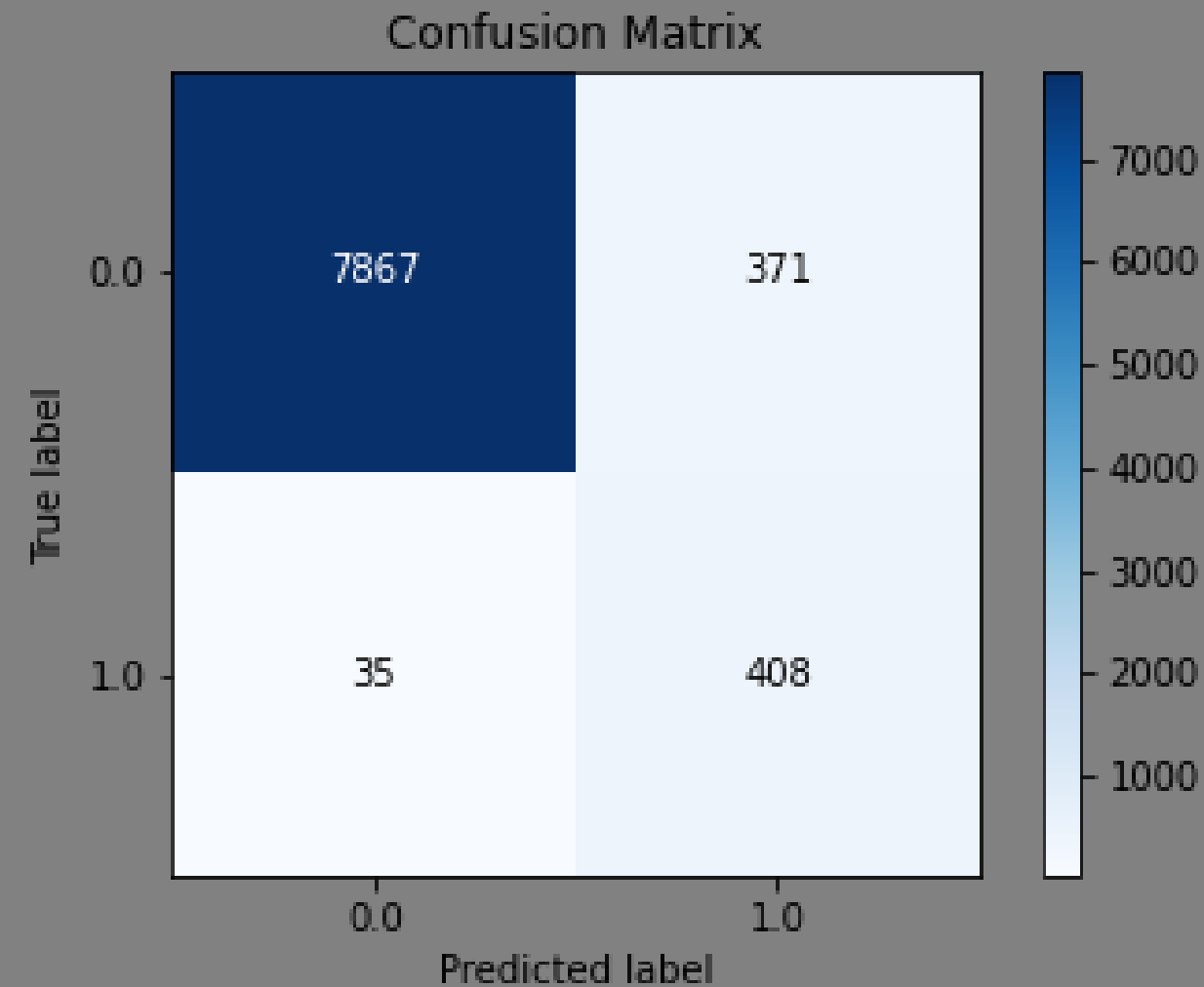
Correcting Class Imbalances



CLASS_WEIGHTING = 0:1, 1:10

MEAN ROC (AUC): 0.922

Correcting Class Imbalances



CLASS_WEIGHTING = 0:1,1:20

MEAN ROC (AUC): 0.903

References

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IBANKRUPTCY DATA SET

**EMERGING MARKETS INFORMATION SERVICE
VIA THE UCI MACHINE LEARNING REPOSITORY**

<https://archive.ics.uci.edu/ml/datasets/Polish+companies+bankruptcy+data>

