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Calibration of Probabilistic Model Output: Introduction and Online Tool

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Abstract

Many machine learning algorithms provide probabilistic predictions as their outputs. Analysis techniques familiar to physicians (e.g., calculation of sensitivity and specificity and construction of receiver operating characteristics curves) do not allow for the assessment of model calibration and prevent proper evaluation of these models. We reviewed statistical and graphical (shown in Figure 1) methods for calibration analysis and presented a framework for the implementation of these techniques using open-source codes and an online tool.

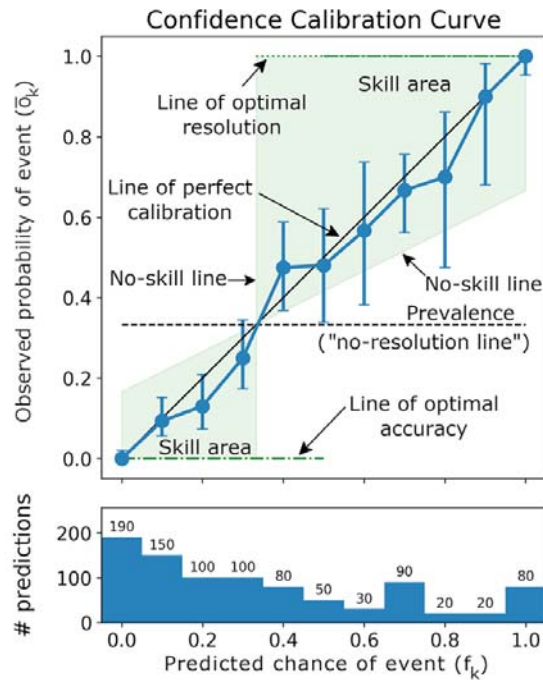


Figure 1. Statistical and graphical methods for calibration analysis and presented a framework for the implementation of these techniques using open-source codes and an online tool