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Classification report and confusion matrix sklearn

sklearn.metrics.confusion_matrix(y_true, y_pred, *, labels=Noe, sample_weight=Noe, normalze=Noe)[source] Computes the confusion matrix to evaluate the accuracy of a classification. By definition a matrix of confusion \(C\) is such that \(C_{i, j}\) is equal to the number of observations known to be in the group \(i\) and predicted to be in the group \(j\). Thus in the binary classification, the count of the true negatives is \(C_{0,0}\), the false negatives is \(C_{1,0}\), the true positives is \(C_{1,1}\) and the false positives is \(C_{0,1}\). Read more in the User Guide. y_truearray-like parameters of form (n_samples,)Ground truth (correct) target values. y_predarray-like form (n_samples,)Estimate objectives as returned by a rankingr. tagsarray-like form (n_classes), default=NoteList labels to index the matrix. This can be used to reorder or select a subset of labels. If no one is given, those appearing at least once in y_true or y_pred are used in order order. sample_weightarray-like form (n_samples,), default=No sample weightarray-like. normalize {'true', 'pred', 'all'}, default=NoneNormalizes matrix confusion over real conditions (rows), predicted (column) or all population. If no one, the matrix of confusion will not be normalized. Cndarray of form (n_classes, n_classes)Matrix of confusion whose line i-th and column voice j-th indicates the number of samples with real label being the i-th class and the predicted label is j-th class. See alsoThe confusion matrix gave an estimation, data and label. ConfusionMatrixDisplay.da_predictions Trama the confusion matrix given the true and predictable labels. ConfusionMatrixDisplayConfusion Viewing matrix. References 1 Wikipedia for Confusion matrix (Wikipedia and other references can use a different convention for axes). Examples > from sklearn. (b) the "electronics" In the binary case, we can extract the true positives, etc. as follows: > > tn, fp, fn, tp = confusion_matrix([0, 1, 0, 1], [1, 1, 1, 0]).ravel() > > > (tn, fp, fn, tp) (0, 2, 1, 1) Example of face recognition using eigenfaces and SVM Propagation typs active learning © 2007 - 2020, scikit-learn developers (BSD language). Show this page source sklearn.metrics.classification_report(y_true, y_pred, *, labels=Noe, target_names=Noe, sample_weight=None, types=2, output_dict=False, zero_division='warn')[source] Build a text report showing the main classificationRead more in the User Guide. y_true1d array-like parameters, or array label indicator / poor matrixGround truth (correct) target values. y_pred1d array-like, or label indicator array/matrix radiates estimated targets as returned by a rankingr. tagsarray-like form (n_labels,), default=NoneOptional list of label indexes to be included in the report. target_nameslist of str form (n_labels,), default=Not optional display names corresponding to the labels (same order). sample_weightarray-like form (n_samples,), default=No sample weightarray-like. digitsint, default=2Number of digits for formatting floating point values of output. When output_dict is True, this will be ignored and the returned values will not be rounded. output_dictbool, default=FalseIf It's true, the output of return as a dict. zero_division"warn", 0 or 1, default="warn"Sets the value to return when there is a zero division. If set to "hot", this acts as 0, but alerts are also raised. Returns reporttring / dictText accuracy summary, recall, F1 score for each class. Returned dictionary if output_dict is True. The dictionary has the following structure: {'label 1': {'precision':0.5, 'recall':1.0, 'f1-score':0.67, 'support':1}, 'label 2': { ... }, ... } The average reported include the macro average (average of the medium not weighted by label), weighted media (media of the weighted support by label), and average sample Micro media (by means of the true total, falseand false positives) is shown only for multi-label or multi-class with a subset of classes, because it corresponds to accuracy otherwise and would be the same for all metrics. for more details on the average, see also the precision_recall_fscore_support support. Note that in binary classification, the positive class recall is also known as "sensitivity"; the call of the negative class is "specificity". examples > from sklearn. > > >