



10th April quiz

6 out of 6 correct

1. What is a confusion matrix used for?

- ☐ Evaluating regression models
- ☒ Evaluating classification models
- ☐ Evaluating clustering models
- ☐ None of the above

Explanation: A confusion matrix is used to evaluate the performance of a classification model by measuring how well it can predict the correct class label for each instance in a dataset.

2. Which of the following metrics measures the proportion of true positives among all positive predictions?

- ☒ Precision
- ☐ Recall
- ☐ F1 score
- ☐ all the above

Explanation: Precision measures the proportion of true positives among all positive predictions made by the model. It is calculated as $TP / (TP + FP)$.

3. Which of the following metrics measures the proportion of true positives among all actual positives?

- ☐ Precision
- ☒ Recall



- ☐ F1 score
- ☐ all of the above

Explanation: Recall measures the proportion of true positives among all actual positive instances in the dataset. It is calculated as $TP / (TP + FN)$.

4. What is a ROC curve used for?

- ☐ Evaluating regression models
- ☒ Evaluating classification models
- ☐ Evaluating clustering models
- ☐ all the above

Explanation: An ROC (Receiver Operating Characteristic) curve is used to evaluate the performance of a binary classification model. It plots the true positive rate (TPR) against the false positive rate (FPR) for different classification thresholds.

5. Which of the following is a measure of how well a binary classifier can distinguish between positive and negative examples?

- ☐ Precision
- ☐ Recall
- ☒ AUC
- ☐ (a) and (b)

Explanation: AUC (Area Under the Curve) is a measure of how well a binary classifier can distinguish between positive and negative examples. It measures the area under the ROC curve and provides a single score to evaluate the overall performance of a classification model.

6. Which of the following is true for a perfect classifier?

- ☒ Precision = Recall = F1 score = 1.0

- ☐ Precision = Recall = F1 score = 0.0
- ☐ Precision = Recall = F1 score = 0.5
- ☐ none of the above

Explanation: A perfect classifier correctly predicts all positive and negative instances in the dataset, resulting in precision, recall, and F1 score of

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