**MACHINE LEARNING NOTES**

* **Sensitivity(Recall), Specificity and Precision:-**

1. Sensitivity(Recall):-

* Sensitivity, also known as recall or true positive rate (TPR), measures the ability of a model to correctly identify positive instances out of all actual positive instances.
* It is calculated as the ratio of true positive predictions to the sum of true positives and false negatives:
* Sensitivity (Recall) = True Positives/(True Positives + False Negatives)

1. Specificity:-

* Specificity measures the ability of a model to correctly identify negative instances out of all actual negative instances.
* It is sometimes referred to as the true negative rate (TNR).
* Specificity is calculated as the ratio of true negative predictions to the sum of true negatives and false positives:
* Specificity=True Negatives / (True Negatives+False Positives)

1. Precision:-

* Precision, as described earlier, measures the accuracy of positive predictions made by the model.
* It is calculated as the ratio of true positive predictions to the sum of true positives and false positives:
* Precision= True Positives/(True Positives+False Positives)

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* Precision indicates the proportion of positive predictions made by the model that were actually correct.
* **Logistic Regression:-**

1. **When is Logistic Regression suitable??**
   * + For Binary Classification.
     + If you need probabilistic results.
     + When we need linear decision boundary.
     + If you want to understand the impact of the features.