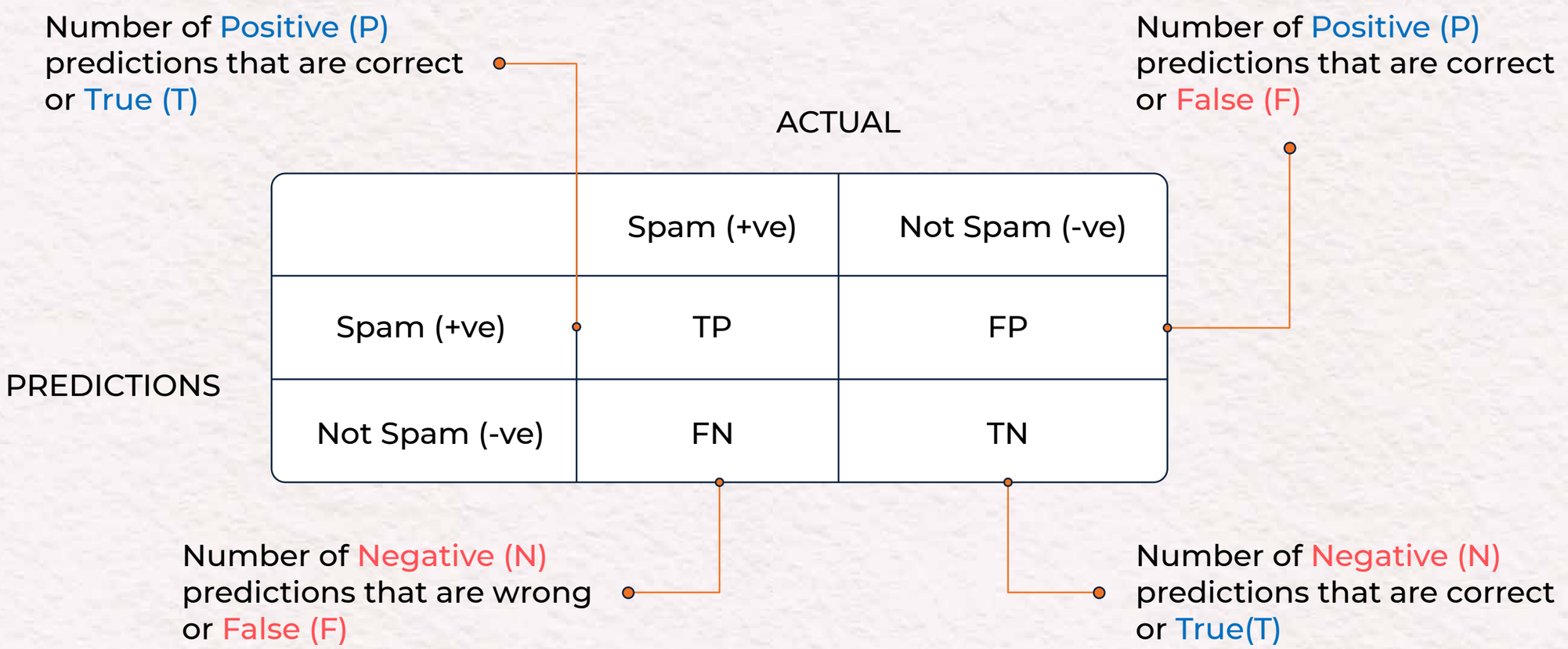
#MathCo.DictionAIry

WORD OF THE DAY

Confusion Matrix

/con·fu·sion mat·rix/

It is a performance metric for ML classification problems with two or more output categories. It compares and offers a simple and concise approach to evaluate the performance of a classification algorithm and can be used to enhance the model for assured reliability and precision.



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WORD OF THE DAY - CONFUSION MATRIX

Where have you seen Confusion Matrix ?

Suppose you're running a digital advertising campaign to drive visitors to your website and earn leads. A confusion matrix can be used by you to measure the efficacy of the campaign by comparing the expected results (i.e., the number of clicks or conversions) to the actual results.

		PREDICTIONS			
		Positive (PP)	Negative (PN)		
ACTUAL	Positive (P)	TP hit	FN (Type II Error) miss	True Positive Rate, Sensitivity, Recall TPR=TP/P	False Negative Rate FNR=FN/P
	Negative (N)	TP (Type I Error) fasle alarm	TN reject	True Negative Rate, Specificity TNR=TN/N	False Positive Rate FPR=FP/N
		Postitve Predictive Value PPV=TP/PP	Negative Predictive Value NPV=TN/PN	Accuracy Accuracy= (TP+TN)/(PN)	Prevalance Prevalance=P/(P+N)

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How does Confusion Matrix work ?

A confusion matrix is a table that displays a classification problem's multiple outcomes. It projects possible outcomes and results. Each table comprises four cells - True Positive, True Negative, False Positive, and False Negative. They represent a unique combination of expected and actual values.