Evaluation Approach / Metric	Appropriate Data Types	Mathematic Definition (if applicable)
Confusion Matrix	Binary/Categorical	N/A
Accuracy	Binary/Categorical	Accuracy (all correct / all) = TP + TN / TP + TN + FP + FN
Precision	Binary/Categorical	Precision = (True Positive)/(True Positive + False Positive)
Recall	Binary/Categorical	Recall = (True Positive)/(True Positive + False Negative)
True Positives	Binary/Categorical	Predicts there is an object; correct
False Position	Binary/Categorical	Predicts there is an object; incorrect
Receiver Operator Characteristic (ROC) Curve and Area Under the Curve	Binary/Categorical	N/A (integral)
R-squared	Continuous	R^2 = 1 - (∑(yi - y_hati)^2) / ∑(yi - y_bar)^2
Adjusted R-Squared	Continuous	Adj. R^2 = 1 - [(1-R^2)*(n-1)/(n-k-1)]
Root Mean Square Error	Continuous	RMSE = √[(1/n)∑(yi - y_hat)^2]
Mean Absolute Error	Continuous	MAE = ∑(|yi - y_hati|) / n
Residual Standard Error	Continuous	RSE = √[∑(y - y_hat)^2 / DoF]
Akaike's Information Criterion (AIC)	Continuous	AIC = − 2max(log L) + 2np
Bayesian Information Criterion (BIC)	Continuous	BIC = -2 * loglikelihood + d * log(N),

ArcPy function (if applicable)

arcpy.gp.ComputeConfusionMatrix(in_accuracy_assessment_points, out_confusion_matrix)

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

How to do in python	What metrics is this approach similar / different to?	Source1
sklearn.metrics.confusion_matrix(actual, predicted)	Utilized for calculating precision, recall, accuracy, true po	https://www.w
sklearn.metrics.accuracy_score(y_true, y_pred)	Examining both diagonal and total elements within a con	https://towarc
sklearn.metrics.precision_score(y_true, y_pred)	Equation based on true and false positive and confusion	https://pro.arc
sklearn.metrics.recall_score(y_true, y_pred)	Formula derived from true positives, false positives, and	https://pro.arc
confusion_matrix[1, 1]	Associated with cells in the Confusion Matrix.	https://pro.arc
confusion_matrix[0, 1]	Linked to specific cells within the Confusion Matrix.	https://pro.arc
sklearn.metrics.roc_curve(y_true, y_score)	True / False Positive	https://scikit-le
sklearn.metrics.r2_score(y_true, y_pred)	Utilized in computing RMSE, MAE, and RSE	https://www.n
1 - (1-model.score(X, y))*(len(y)-1)/(len(y)-X.shape[1]-1)	R Squared	https://www.s
sqrt(sklearn.metrics.mean_squared_error(y_true, y_pred,))	R Squared	CHATGPT
sklearn.metrics.mean_absolute_error(y_true, y_pred)	R Squared	https://gisgeog
numpy.sqrt(sklearn.metrics.mean_squared_error())	R Squared	https://www.s
statsmodels.tools.eval_measures.aic(llf, nobs, df_modelwc)	Connected to RMSE, MSE, and MAE	https://www.s
statsmodels.tools.eval_measures.bic(llf, nobs, df_modelwc)	Connected to RMSE, MSE, and MAE	https://stanfor

Source2	Source3
https://pro.arcgis.com/en/pro-app/latest/tool-reference/spatial-analyst/compute-confusion-matrix.htm	
https://scikit-learn.org/stable/modules/generated/sklearn.metrics.accuracy_score.html	
https://scikit-learn.org/stable/modules/generated/sklearn.metrics.precision_score.html	
https://scikit-learn.org/stable/modules/generated/sklearn.metrics.recall_score.html	
CHATGPT	
CHATGPT	
earn.org/stable/modules/generated/sklearn.metrics.roc_curve.html	
https://scikit-learn.org/stable/modules/generated/sklearn.metrics.r2_score.html	
https://www.statology.org/adjusted-r-squared-in-python/	
https://www.s	https://scikit-learn.org/stable/modules/generated/sklearn.metrics.mean_squared_error.html
CHATGPT	https://scikit-learn.org/stable/modules/generated/sklearn.metrics.mean_absolute_error.html
https://www.s	https://campus.datacamp.com/courses/introduction-to-regression-with-statsmodels-in-python/assessing-model-fit-e78
https://www.statsmodels.org/stable/generated/statsmodels.tools.eval_measures.aic.html	
https://www.statsmodels.org/dev/generated/statsmodels.tools.eval_measures.bic.html	

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