



Model Performance Report



Description of data

This report incorporates a detailed analysis of a key data set used to predict the risk of corporate customer defection. The data set excludes direct corporate identifiers, focusing predictive modeling on significant operational variables. These variables include the monthly and annual activity of the client, which reflects the level of recent and sustained interaction, as well as the size of the client, represented by the number of employees. These metrics are essential to feed the machine learning model, whose objective is to anticipate the termination of contracts. By accurately forecasting churn risk, account managers can strategically prioritize customer retention. The dynamic approach to this analysis ensures that the model stays up-to-date in the face of changing market trends, allowing the company to minimize customer churn and maximize revenue retention.



Ingested Files Information:

dataset1.csv: - Ingestion date: 05/02/2024 19:49:32

dataset2.csv: - Ingestion date: 05/02/2024 19:49:32

Dataframe statistics:

Statistic	Mean	Median	StdDev
26.0	26.0	26.0	26.0
165.65384615384616	1502.923076923077	26.884615384615383	0.5769230769230769
284.0332293669446	2192.6449584568304	31.35388578543581	0.5038314736557788
0.0	18.0	1.0	0.0
16.75	406.25	7.25	0.0
73.0	955.0	14.0	1.0
100.75	1615.5	34.5	1.0
1090.0	10983.0	103.0	1.0

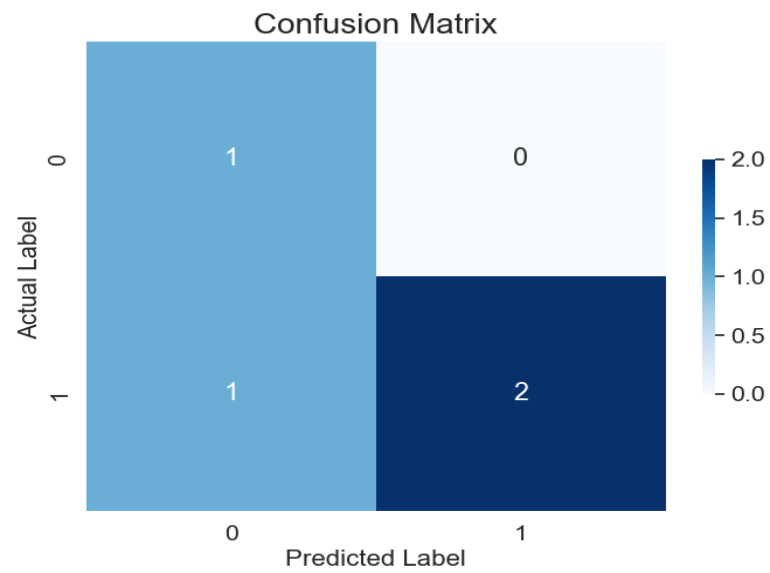
F1 Score Interpretation and Current Value:

The F1 score is the harmonic mean of precision and recall, providing a balance between them. It is a good measure to use if you need to seek a balance between precision and recall and there is an uneven class distribution (large number of actual negatives).

The actual F1 score is 0.8



Confusion Matrix:





Previous Run Times:

Data Ingestion Time (seconds)	Model Training Time (seconds)
0.49539449999999996	42.241368
0.50184120000000001	42.6331844
0.60410229999999999	44.7371179
0.4977117	42.2124315
0.5063838	42.058130000000006
0.53196360000000001	43.637258399999999
0.50531490000000001	41.8649879

Data Ingestion and Model Training Times Graph:

