

Decision Trees:

* Recall score has improved with tuned model compared to untrained model which resulted in overfitting.
* Precision and f1-score value of decision tree also have got improved.
* Based on tuned model (Decision Trees) engagement with the leads is critical.
* Time spent and interaction of leads with website, profile completion are vital factors of conversion.
* Other features of less priority are converse of leads over phone, website and age.

Random Forest:

* Recall score difference between train and test is significantly high thus overfitting.
* Above is applicable for precision and f1-score metric as well.
* Important features are time spent on website, profile completed, first interaction using website and then mobile app.

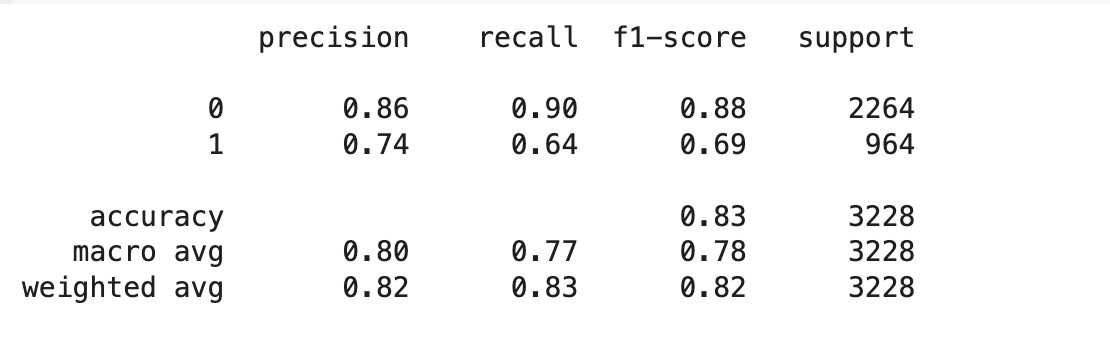
AdaBoost Classifier

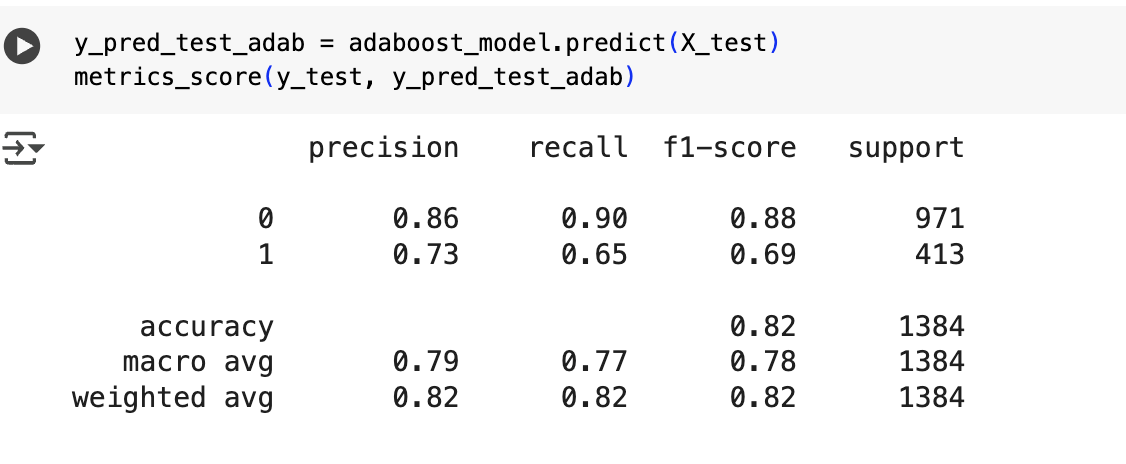
* Performance of the model is good.
* Model is able to generalize better with the recall score.

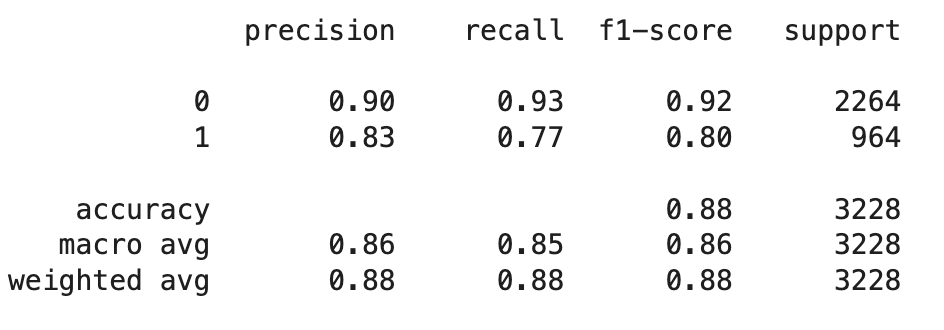
Gradient Boosting

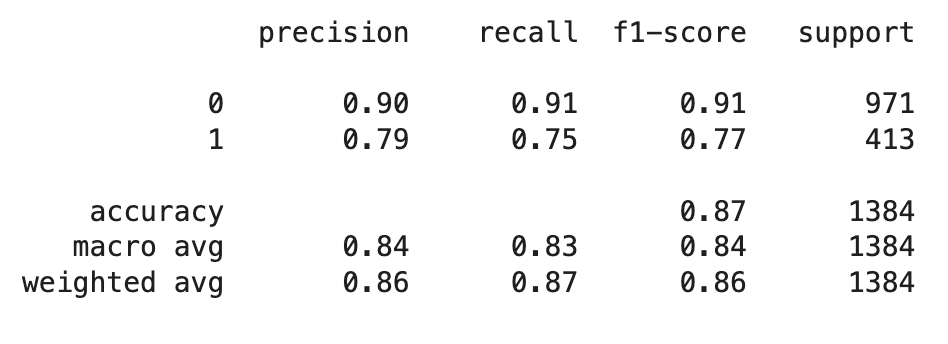
* Gradient Boosting model performance is good.
* Model is able to generalize better with the recall score.

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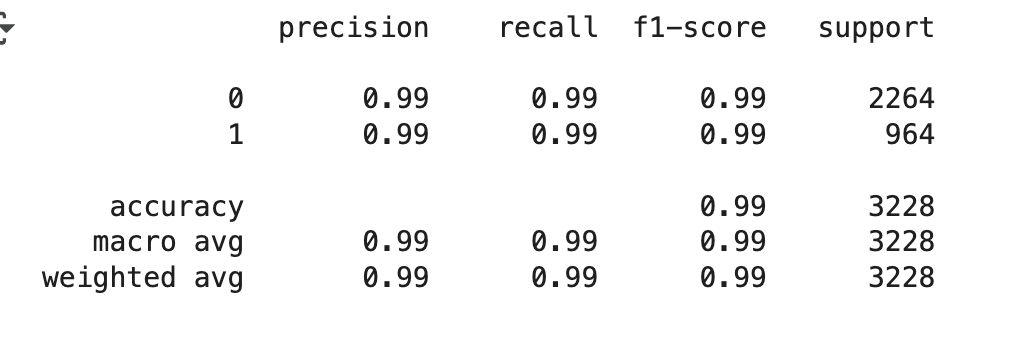


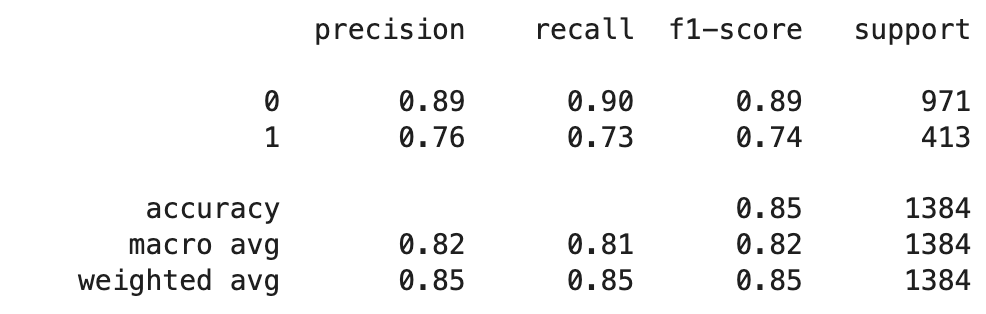






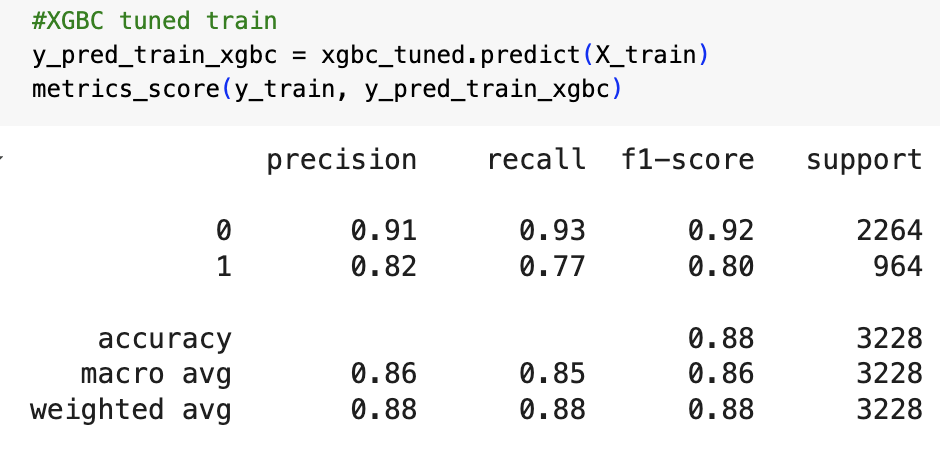
XGBoost

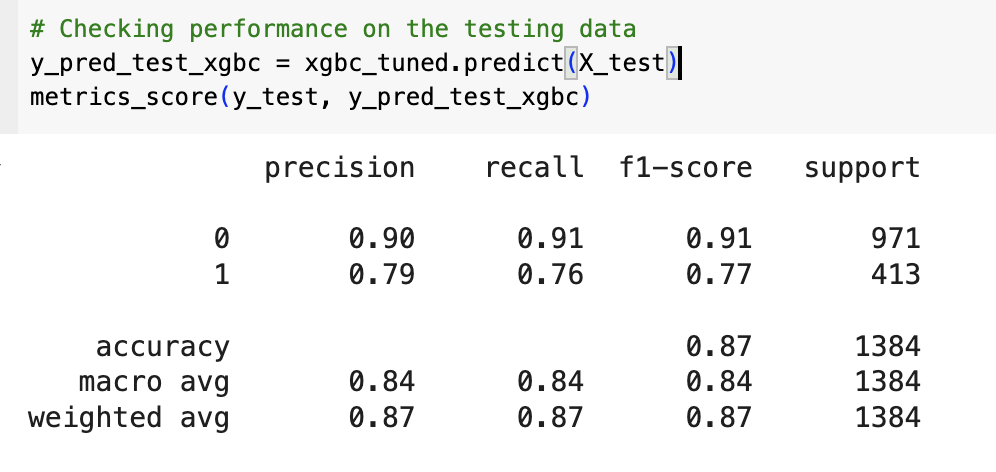




Observations:

Model is overfitting in training compared to testing.





Top 5 feature importance

first\_interaction

last\_activity

profile\_completion

current\_occupation

time\_spent