

Project Development Phase Model Performance Test

Date	18 November 2022
Team ID	PNT2022TMID29453
Project Name	Project – Web Phishing Detection
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot																																																												
1.	Metrics	<p>Regression Model: MAE – 0.145 MSE – 0.1646 RMSE – 0.3818 R2 score – 0.704</p> <p>Classification Model: Confusion Matrix – array([[961,53], [20, 117]], dtype=int64)</p> <p>Accuracy Score – 96.69%</p> <p>Classification Report –</p> <table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>-1</td><td>0.93</td><td>0.89</td><td>0.91</td><td>1014</td></tr><tr><td>1</td><td>0.91</td><td>0.94</td><td>0.93</td><td>1197</td></tr><tr><td>accuracy</td><td>0.92</td><td>0.92</td><td>0.92</td><td>2211</td></tr><tr><td>macro avg</td><td>0.92</td><td>0.92</td><td>0.92</td><td>2211</td></tr><tr><td>weighted avg</td><td>0.92</td><td>0.92</td><td>0.92</td><td>2211</td></tr></tbody></table>		precision	recall	f1-score	support	-1	0.93	0.89	0.91	1014	1	0.91	0.94	0.93	1197	accuracy	0.92	0.92	0.92	2211	macro avg	0.92	0.92	0.92	2211	weighted avg	0.92	0.92	0.92	2211	<div><pre>import sklearn.metrics as metrics #MSE metrics.mean_absolute_error(y_test,lr_test_pred) 0.16463138851198553 #MSE metrics.mean_absolute_error(y_train,lr_train_pred) 0.1454093170511081 # RMSE np.sqrt(metrics.mean_absolute_error(y_test,lr_test_pred)) 0.40574793716294544 np.sqrt(metrics.mean_absolute_error(y_train,lr_train_pred)) 0.3813257361510079 #R2 score metrics.r2_score(y_test,lr_test_pred) 0.6684660368870895 metrics.r2_score(y_train,lr_train_pred) 0.7048119248529949</pre></div> <div><pre>pd.crosstab(y_test, lr_test_pred) col_0 -1 1 row_0 -1 902 112 1 70 1127</pre></div> <div><pre>print(classification_report(y_test, lr_test_pred))</pre><table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>-1</td><td>0.93</td><td>0.89</td><td>0.91</td><td>1014</td></tr><tr><td>1</td><td>0.91</td><td>0.94</td><td>0.93</td><td>1197</td></tr><tr><td>accuracy</td><td>0.92</td><td>0.92</td><td>0.92</td><td>2211</td></tr><tr><td>macro avg</td><td>0.92</td><td>0.92</td><td>0.92</td><td>2211</td></tr><tr><td>weighted avg</td><td>0.92</td><td>0.92</td><td>0.92</td><td>2211</td></tr></tbody></table></div>		precision	recall	f1-score	support	-1	0.93	0.89	0.91	1014	1	0.91	0.94	0.93	1197	accuracy	0.92	0.92	0.92	2211	macro avg	0.92	0.92	0.92	2211	weighted avg	0.92	0.92	0.92	2211
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		<pre>weighted avg 0.92 0.92 0.92 2 211 Training accuracy: 0.92 Testing accuracy:0.91</pre>	<pre>print('Training accuracy: ',accuracy_score(y_train,lr_train_pred)) print('Testing accuracy: ',accuracy_score(y_test,lr_test_pred)) Training accuracy: 0.9272953414744459 Testing accuracy: 0.9176843057440073</pre>
2.	Tune the Model	Hyperparameter Tuning - GridSearchCV Validation Method	