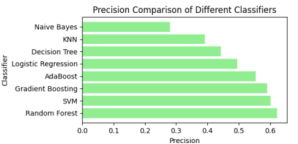


Performance and Final Submission Phase Performance Testing

Date	14 November 2023
Team ID	Team-593068
Project Name	Genetic Classification of Individuals Using Machine Learning
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.	Model Summary	Total params: 101770 Trainable params: 101770 Non-trainable params: 0	<div><table><thead><tr><th>Layer (type)</th><th>Output Shape</th><th>Param #</th></tr></thead><tbody><tr><td>dense_4 (Dense)</td><td>(None, 128)</td><td>100480</td></tr><tr><td>dense_5 (Dense)</td><td>(None, 10)</td><td>1290</td></tr></tbody></table><div>Total params: 101770 (397.54 KB) Trainable params: 101770 (397.54 KB) Non-trainable params: 0 (0.00 Byte)</div></div>	Layer (type)	Output Shape	Param #	dense_4 (Dense)	(None, 128)	100480	dense_5 (Dense)	(None, 10)	1290																																																																																	
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2.	Evaluation Scores	Scores for Random Forest Classifier Accuracy: - 0.79 Precision: - 0.65 Recall: - 0.37 F1 Score: - 0.42	<div><div><p>Accuracy Comparison of Different Classifiers</p><table><thead><tr><th>Classifier</th><th>Accuracy</th></tr></thead><tbody><tr><td>Naive Bayes</td><td>0.37</td></tr><tr><td>KNN</td><td>0.70</td></tr><tr><td>Decision Tree</td><td>0.72</td></tr><tr><td>Logistic Regression</td><td>0.73</td></tr><tr><td>SVM</td><td>0.74</td></tr><tr><td>AdaBoost</td><td>0.75</td></tr><tr><td>Gradient Boosting</td><td>0.76</td></tr><tr><td>Random Forest</td><td>0.79</td></tr></tbody></table></div><div><p>Precision Comparison of Different Classifiers</p><table><thead><tr><th>Classifier</th><th>Precision</th></tr></thead><tbody><tr><td>Naive Bayes</td><td>0.25</td></tr><tr><td>KNN</td><td>0.35</td></tr><tr><td>Decision Tree</td><td>0.40</td></tr><tr><td>Logistic Regression</td><td>0.45</td></tr><tr><td>AdaBoost</td><td>0.50</td></tr><tr><td>Gradient Boosting</td><td>0.55</td></tr><tr><td>SVM</td><td>0.60</td></tr><tr><td>Random Forest</td><td>0.65</td></tr></tbody></table></div><div><p>Recall Comparison of Different Classifiers</p><table><thead><tr><th>Classifier</th><th>Recall</th></tr></thead><tbody><tr><td>SVM</td><td>0.05</td></tr><tr><td>Logistic Regression</td><td>0.08</td></tr><tr><td>KNN</td><td>0.15</td></tr><tr><td>AdaBoost</td><td>0.20</td></tr><tr><td>Gradient Boosting</td><td>0.25</td></tr><tr><td>Random Forest</td><td>0.30</td></tr><tr><td>Decision Tree</td><td>0.35</td></tr><tr><td>Naive Bayes</td><td>0.37</td></tr></tbody></table></div><div><p>F1 Score Comparison of Different Classifiers</p><table><thead><tr><th>Classifier</th><th>F1 Score</th></tr></thead><tbody><tr><td>SVM</td><td>0.10</td></tr><tr><td>Logistic Regression</td><td>0.15</td></tr><tr><td>KNN</td><td>0.20</td></tr><tr><td>AdaBoost</td><td>0.25</td></tr><tr><td>Gradient Boosting</td><td>0.30</td></tr><tr><td>Naive Bayes</td><td>0.35</td></tr><tr><td>Decision Tree</td><td>0.40</td></tr><tr><td>Random Forest</td><td>0.42</td></tr></tbody></table></div><div><p>Combined Performance Comparison of Different Classifiers</p><table><thead><tr><th>Classifier</th><th>Combined Performance</th></tr></thead><tbody><tr><td>Naive Bayes</td><td>0.18</td></tr><tr><td>KNN</td><td>0.30</td></tr><tr><td>Decision Tree</td><td>0.42</td></tr><tr><td>Logistic Regression</td><td>0.45</td></tr><tr><td>SVM</td><td>0.48</td></tr><tr><td>AdaBoost</td><td>0.52</td></tr><tr><td>Gradient Boosting</td><td>0.55</td></tr><tr><td>Random Forest</td><td>0.70</td></tr></tbody></table></div></div>	Classifier	Accuracy	Naive Bayes	0.37	KNN	0.70	Decision Tree	0.72	Logistic Regression	0.73	SVM	0.74	AdaBoost	0.75	Gradient Boosting	0.76	Random Forest	0.79	Classifier	Precision	Naive Bayes	0.25	KNN	0.35	Decision Tree	0.40	Logistic Regression	0.45	AdaBoost	0.50	Gradient Boosting	0.55	SVM	0.60	Random Forest	0.65	Classifier	Recall	SVM	0.05	Logistic Regression	0.08	KNN	0.15	AdaBoost	0.20	Gradient Boosting	0.25	Random Forest	0.30	Decision Tree	0.35	Naive Bayes	0.37	Classifier	F1 Score	SVM	0.10	Logistic Regression	0.15	KNN	0.20	AdaBoost	0.25	Gradient Boosting	0.30	Naive Bayes	0.35	Decision Tree	0.40	Random Forest	0.42	Classifier	Combined Performance	Naive Bayes	0.18	KNN	0.30	Decision Tree	0.42	Logistic Regression	0.45	SVM	0.48	AdaBoost	0.52	Gradient Boosting	0.55	Random Forest	0.70
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Model Summary



Model: "sequential_2"

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Accuracy

