



Model Optimization and Tuning Phase Report

Date	21 June 2024
Team ID	739685
Project Title	Startup Prophet
Maximum Marks	10 Marks

Model Optimization and Tuning Phase

The Model Optimization and Tuning Phase involves refining machine learning models for peak performance. It includes optimized model code, fine-tuning hyperparameters, comparing performance metrics and justifying the final model selection for enhanced predictive accuracy and efficiency.

Hyperparameter Tuning Documentation (6 Marks):

Model	Tuned Hyperparameters	Optimal Values
Logistic Regression Model	-	_





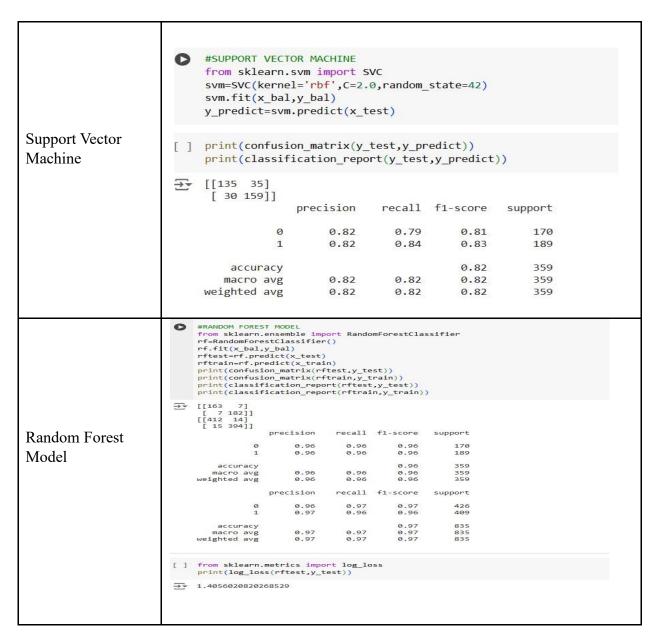
Support Vector Machine	-	-
Random Forest Model	-	-

Performance Metrics Comparison Report (2 Marks):

Model	Optimized Metric	
Logistic Regression Model	[] #LOGISTIC REGRESSION from sklearn.linear_model import LogisticRegression lr=LogisticRegression() lr.fit(x_bal,y_bal) y_pred=lr.predict(x_test) from sklearn.metrics import confusion_matrix,accuracy_score,classification_report print(confusion_matrix(y_test,y_pred)) print(classification_report(y_test,y_pred)) [[136 34] [56 133]]	







Final Model Selection Justification (2 Marks):

Final Model	Reasoning





Random I Model	Forest	The Random Forest Model was selected for its superior performance, exhibiting high accuracy. Its ability to handle complex relationships, minimize overfitting, and optimize predictive accuracy aligns with project objectives, justifying its selection as the final model.
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