

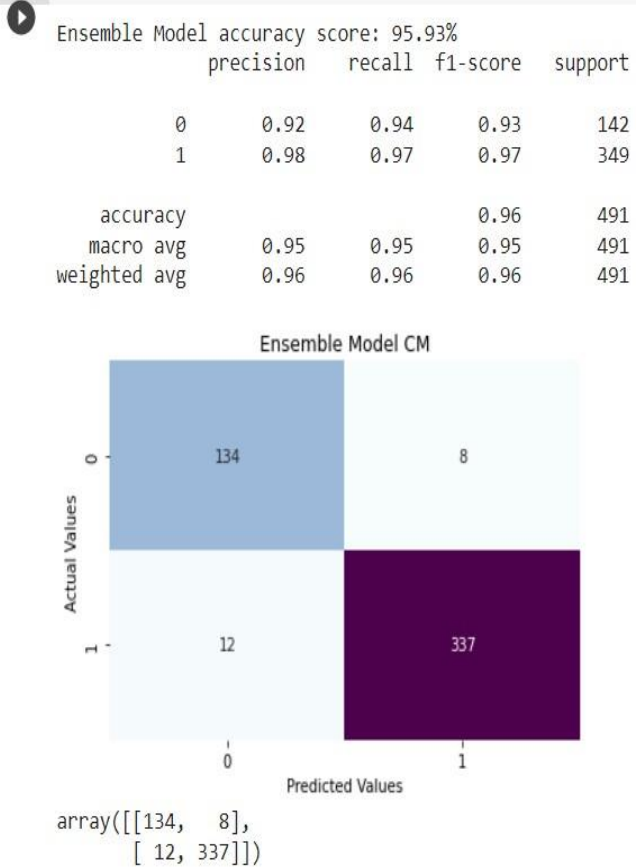
Project Development Phase

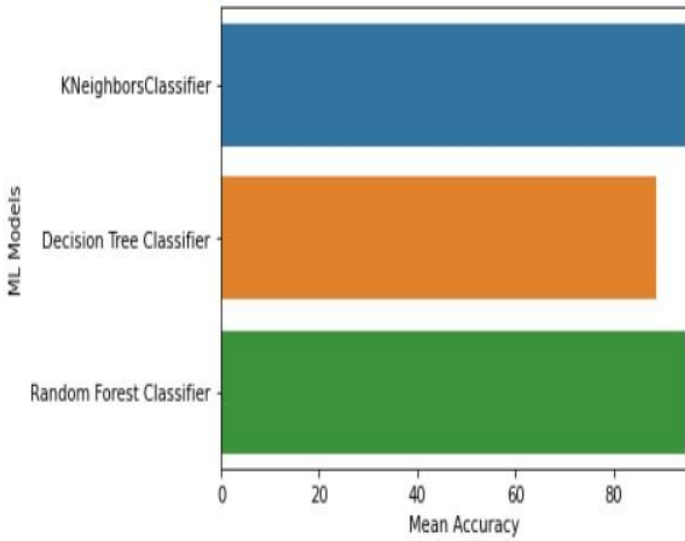
Mode Performance Test

Team ID	PNT2022TMID06378
Project Name	Project - Statistical Machine Learning Approaches to Liver Disease Prediction.
Maximum Marks	10 Marks

Model Performance Testing :

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

S. No	Parameter	Value	Screenshot
1.	Metrics	Classification Model : Ensembl Model (Voting Classifier) KNN(K-Nearest Neighbour, Decision Tree, Random Forest Confusion Matrix, Accuracy Score = 95.93% & Classification Report	 <pre> Ensemble Model accuracy score: 95.93% precision recall f1-score support 0 0.92 0.94 0.93 142 1 0.98 0.97 0.97 349 accuracy 0.96 491 macro avg 0.95 0.95 0.95 491 weighted avg 0.96 0.96 0.96 491 Ensemble Model CM Actual Values \ Predicted Values 0 134 8 1 12 337 array([[134, 8], [12, 337]]) </pre>

2.	Tune the Model	Hyperparameter Tuning – Grid SearchCV, Finding best estimators for each algorithm in ensemble model validation Method – cross Validation	<div><p>Cross Validation Scores</p><table><tr><th>ML Models</th><th>Mean Accuracy</th></tr><tr><td>KNeighborsClassifier</td><td>94.58428680396644</td></tr><tr><td>Decision Tree Classifier</td><td>88.55835240274601</td></tr><tr><td>Random Forest Classifier</td><td>94.49885583524026</td></tr></table></div> <div><p>Fitting 10 folds for each of 40 candidates, totalling 400 fits</p><p>94.58428680396644</p><p>Fitting 10 folds for each of 250 candidates, totalling 2500 fits</p><p>88.55835240274601</p><p>Fitting 10 folds for each of 54 candidates, totalling 540 fits</p><p>94.49885583524026</p></div>	ML Models	Mean Accuracy	KNeighborsClassifier	94.58428680396644	Decision Tree Classifier	88.55835240274601	Random Forest Classifier	94.49885583524026
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