

Breast Cancer Survival Prediction System

Our Team

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Introduction

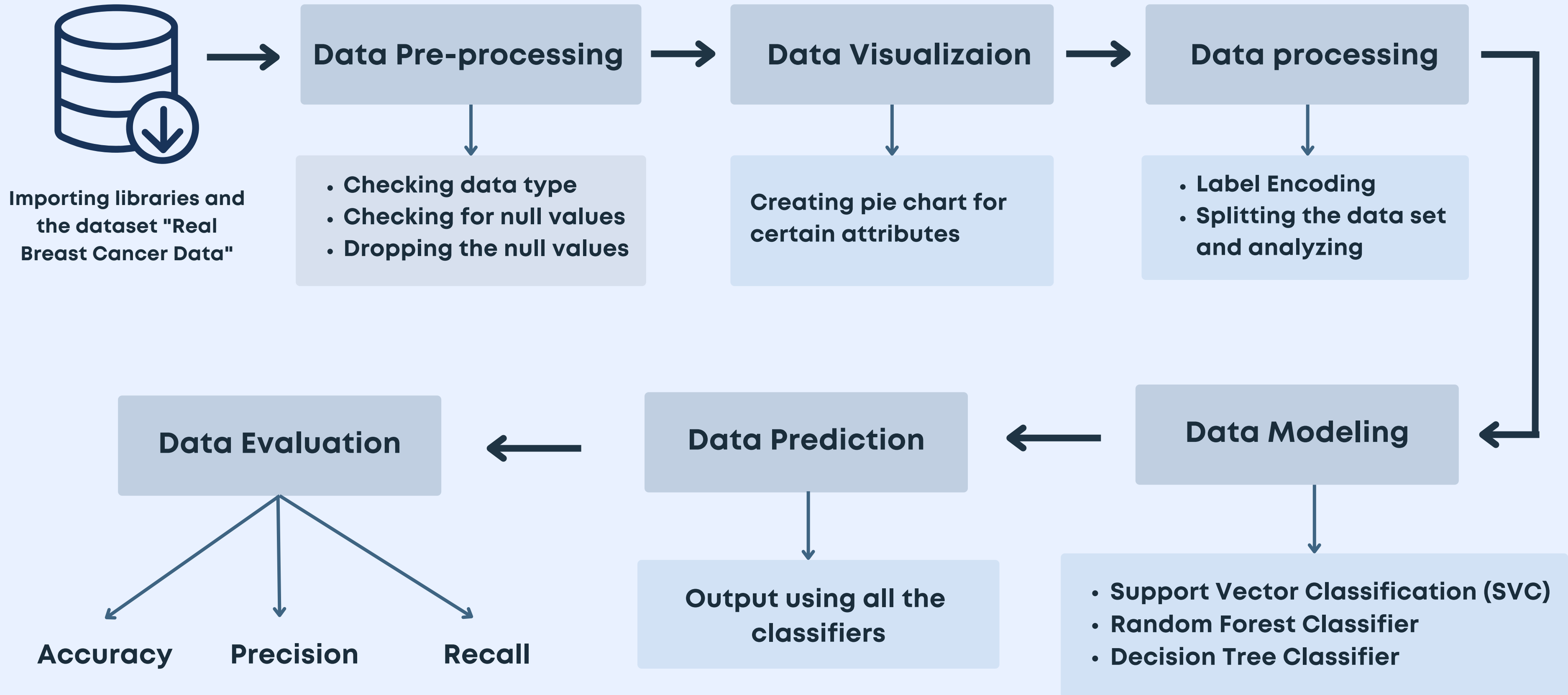
- According to the WHO, breast cancer is the most common cancer among women worldwide, accounting for 25% of all cancer cases
- Machine learning can be used to predict whether a patient will survive a deadly disease like breast cancer or not.



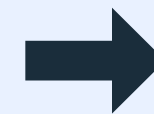
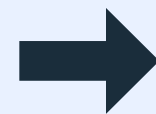
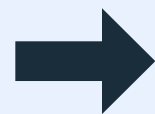
Problem Statement

To design a system that will predict the survival chances for breast cancer patient using Support Vector Classification (SVC), Decision tree Classifier and Random forest Classifier algorithm on the dataset.

Methodology



Methodology



Step 1

Importing libraries
and datasets

Step 2

Data Preprocessing

Step 3

Data visualization

Step 4

Data processing

Step 5

Data modeling

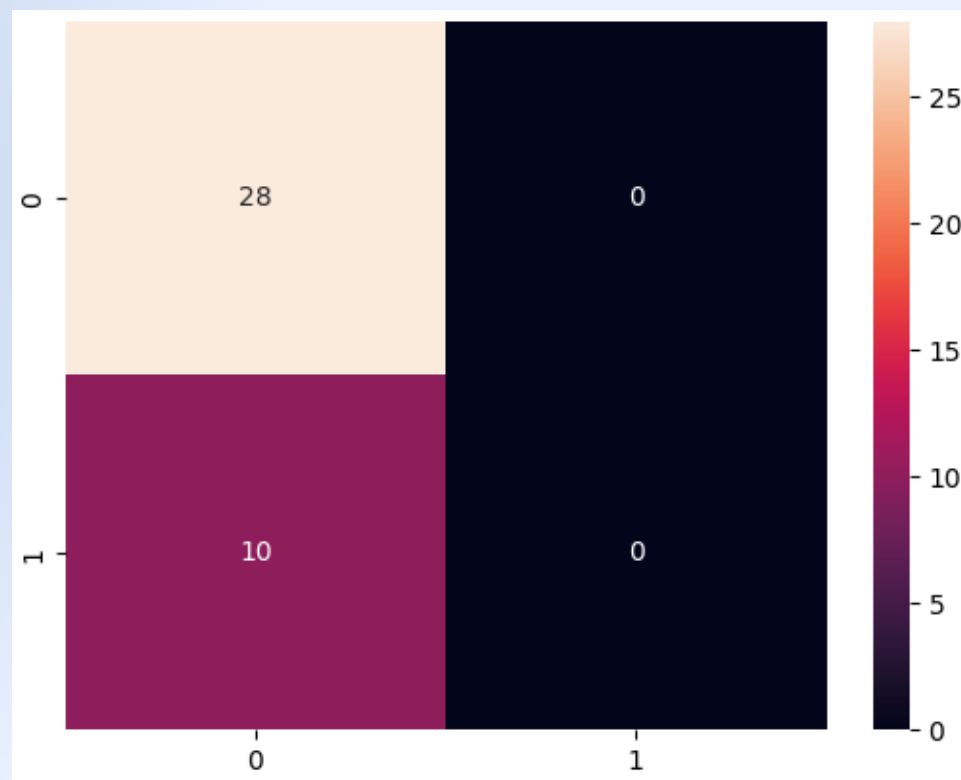
Implementation



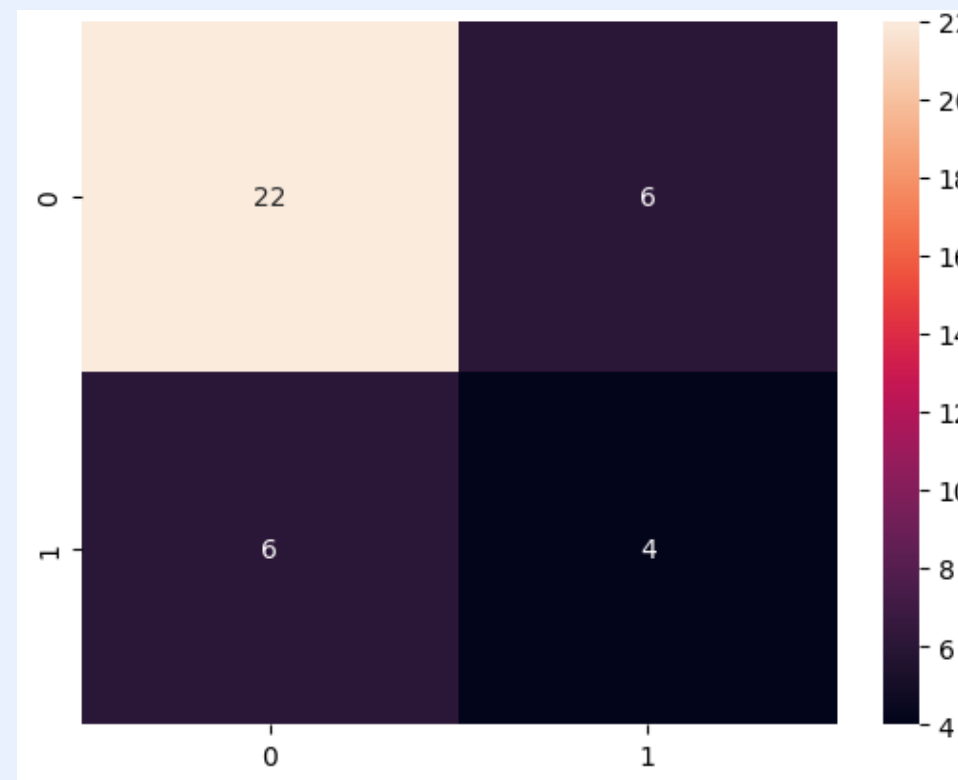
DataSet: "Real Breast Cancer Data" from Kaggle



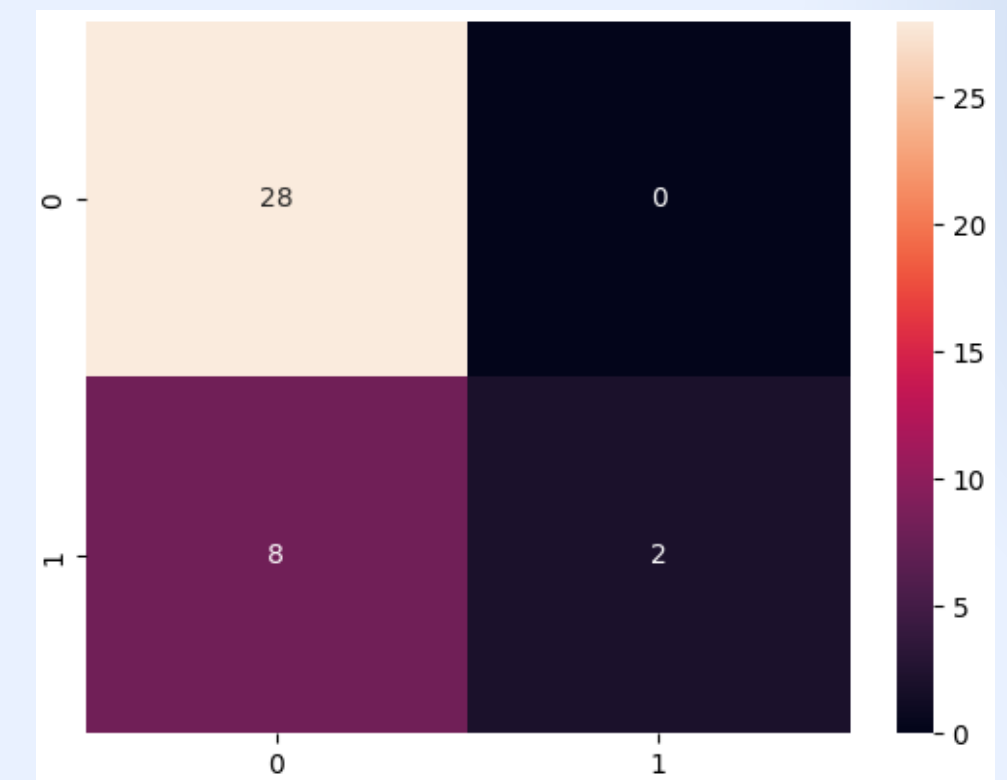
Performance Metrics:



Support Vector Classification (SVC)

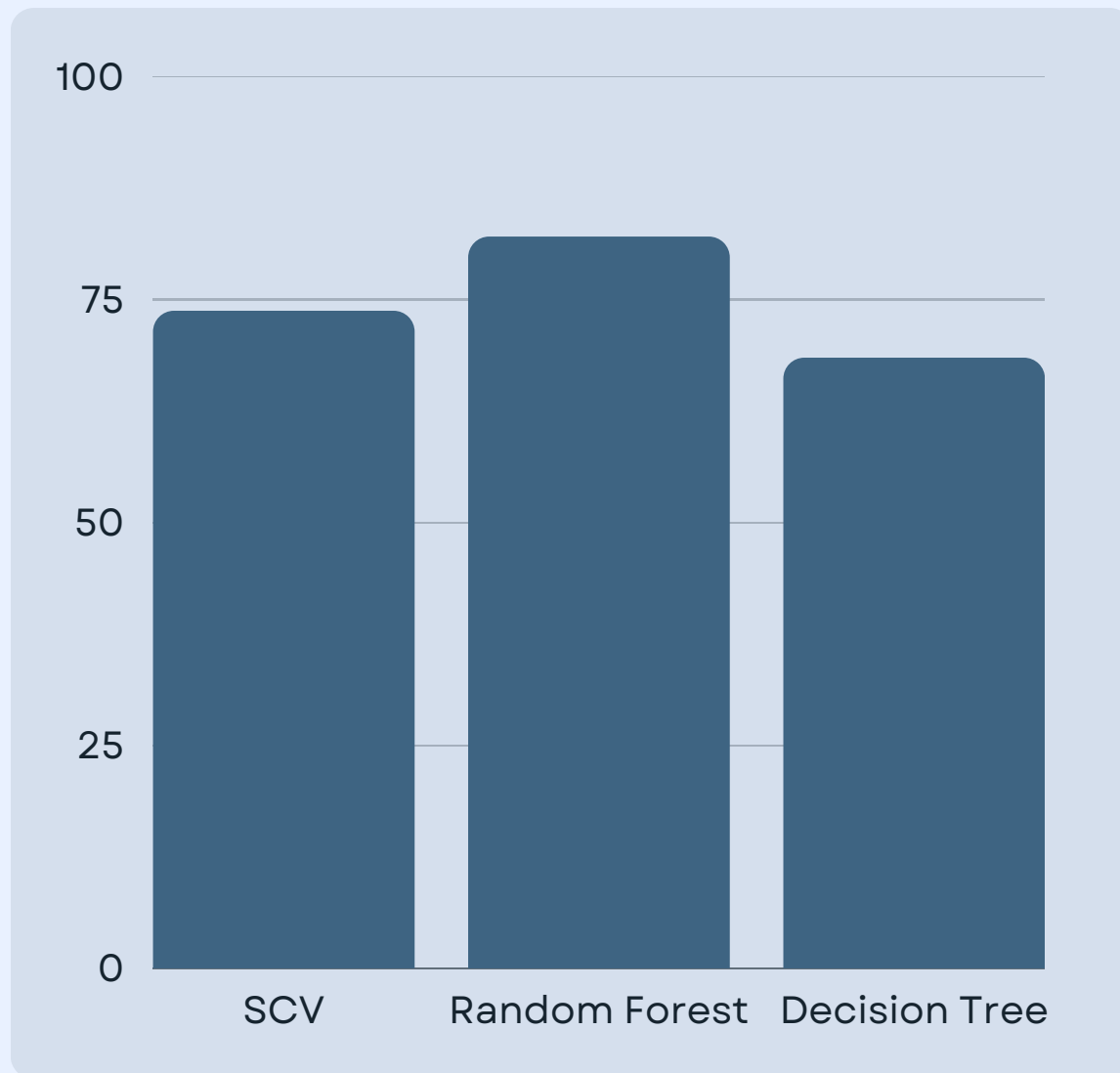


Decision Tree Classifier

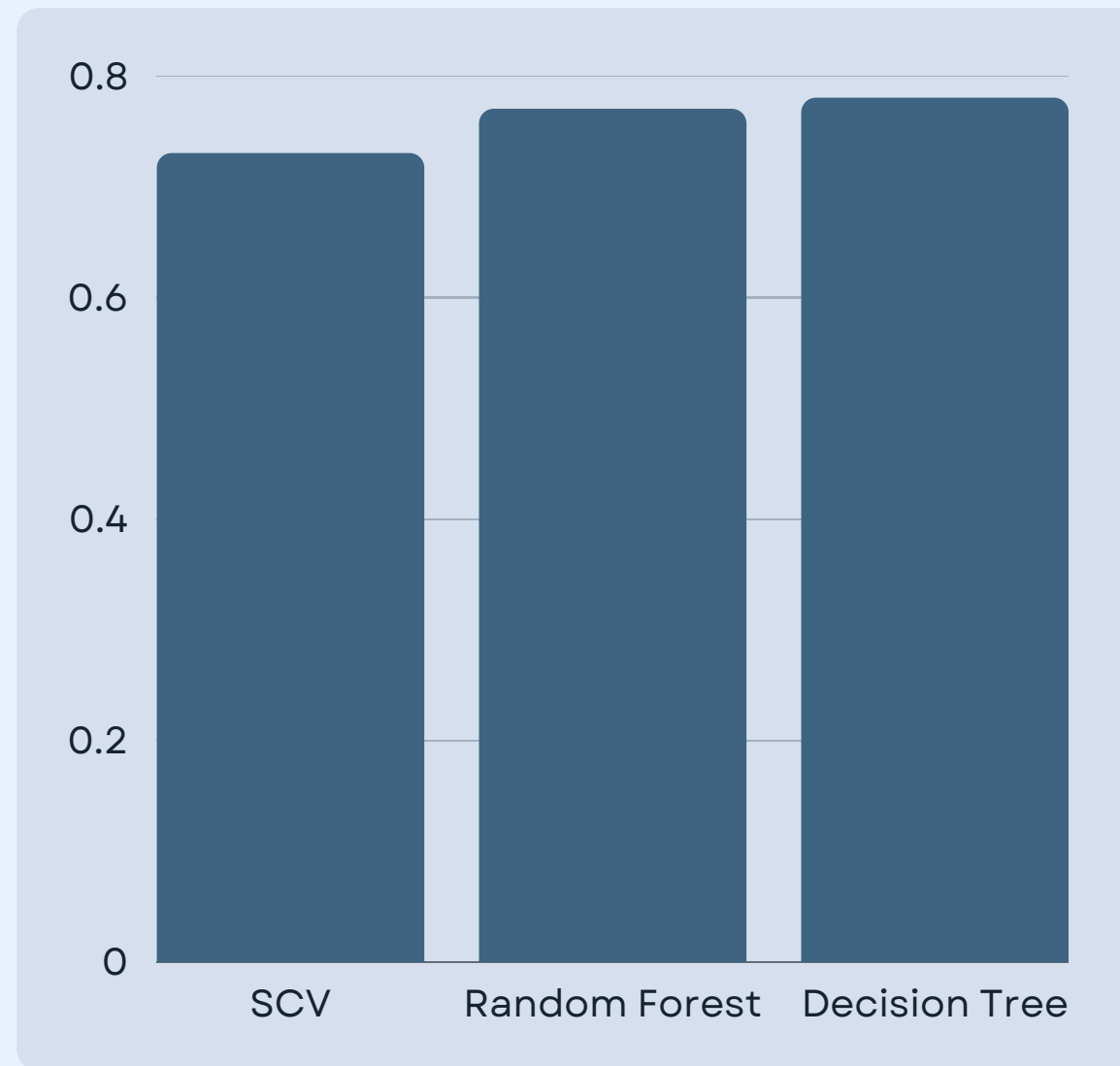


Random Forest Classifier

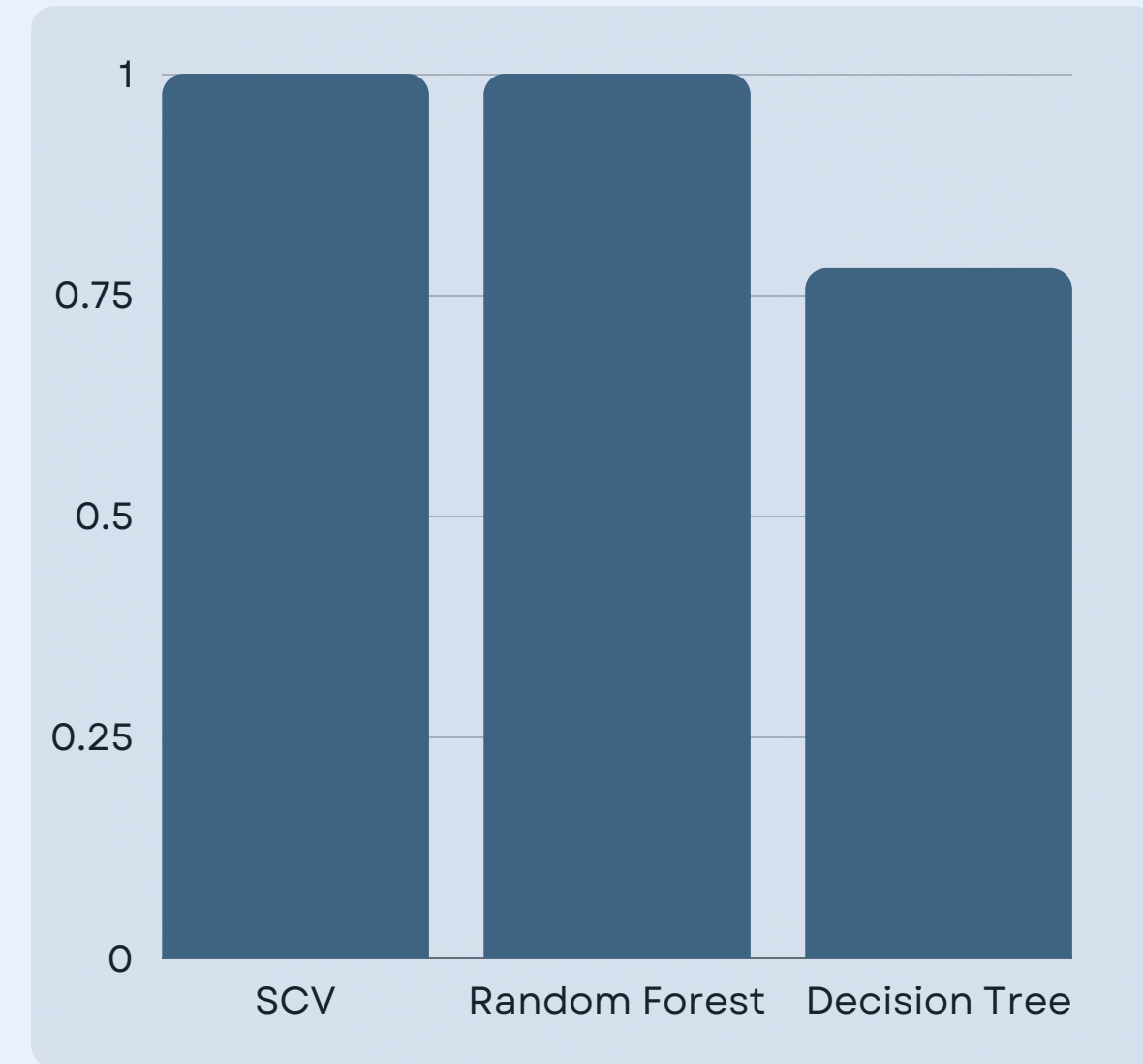
Results and Discussions



Accuracy

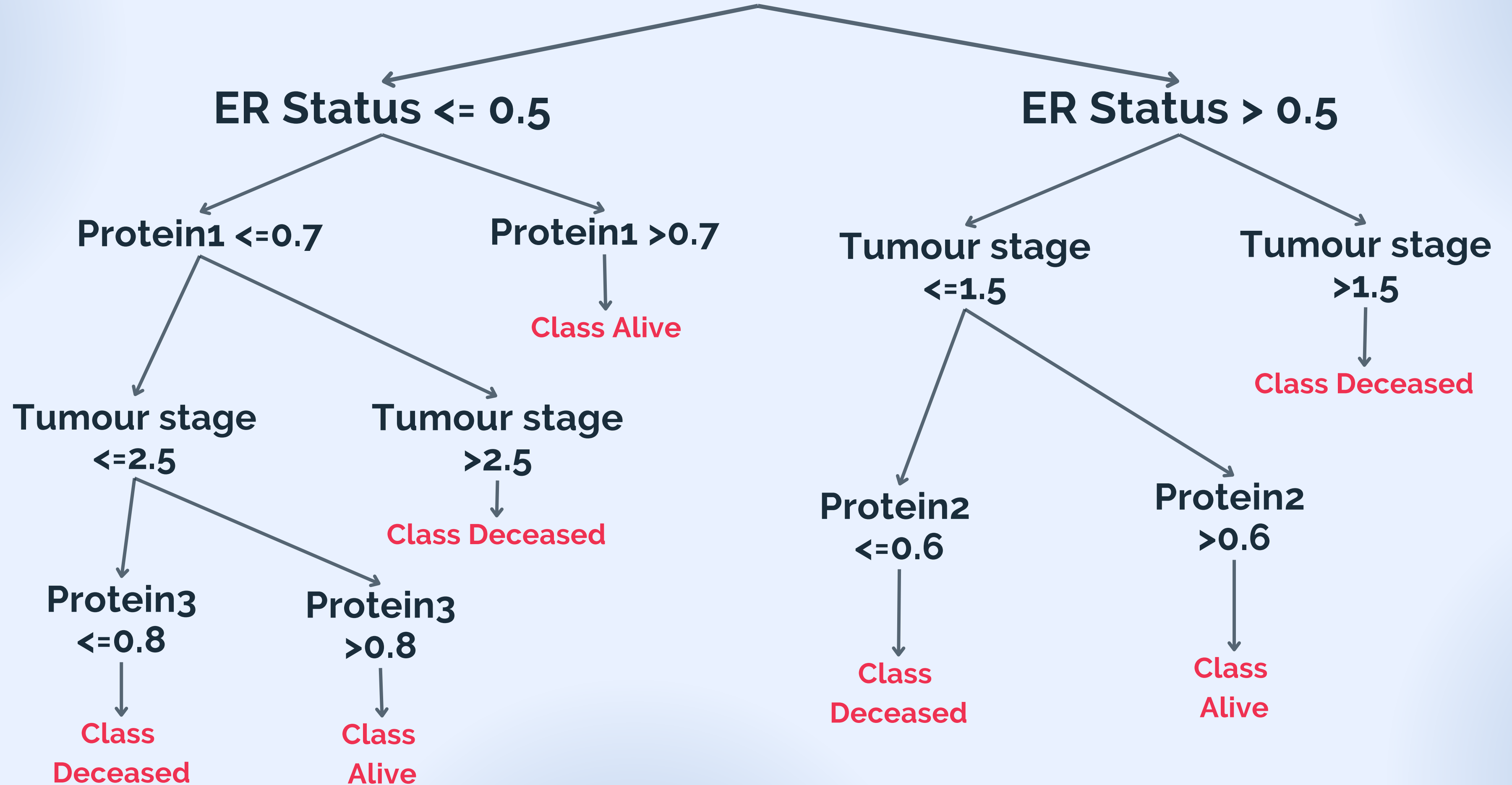


Precision



Recall

ER Status



Conclusion

- The Breast Cancer Survival Prediction model was successfully developed.
- Algorithms used were Support Vector Classification (SVC), Decision tree Classifier and Random forest Classifier.
- Random forest Classifier provides the best accuracy on training as well as testing dataset and hence it can be used for classification.

References

- [1] "Breast Cancer Survival Prediction Using Machine Learning Techniques" by R. Atoum et al, published in the 2018 IEEE International Conference on Bioinformatics and Biomedicine (BIBM).
- [2] "Survival Prediction of Breast Cancer Patients Using Machine Learning Algorithms" by L. Zhou et al., published in the 2018 IEEE International Conference on Bioinformatics and Biomedicine Workshops (BIBMW)
- [3] "Prediction of Survival Time of Breast Cancer Patients Using Machine Learning Techniques" by M. Ozturk et al., published in the 2016 International Conference on Machine Learning and Data Mining (MLDM).

A dark blue background featuring a stethoscope in the upper right, a spiral-bound notebook in the upper left, and a red awareness ribbon draped across the center. The text "Thank you" is overlaid in white.

Thank you