

Do the Dataset presents some insights in simple EDA?

The dataset and its variables were better understood as the exploratory data analysis phase was carried out, and their linkages were depicted. Utilizing data analysis tools like histograms, heatmaps, and a data profiling stage facilitates the compilation of all EDA analysis. We found no missing values, indicating that the dataset was very clean and well-organized.

Does this have any significant impact on predictive Model?

Important characteristics were found using correlation heatmaps, and predictive models were created using these relevant and significant features. Out of the 13 variables, only 5 were ultimately determined to be significant and have a significant impact on our predictive model.

How accurate the Model is?

Random Forest had the greatest accuracy score (96.67% for the prediction) out of the five models we created using training data from our dataset and testing. Out of all the models we examined, the KNN model had the worst accuracy (88.33%).

Will Modification in Hyper parameters will help out?

If we can modify the hyperparameters using cross-validation on our dataset, there is greater possibility for advancement. Additionally, I think the $n = 299$ data sample may be a little too small. Our predictive model might be a lot more precise with a larger sample size, and we might even be able to comprehend and choose new features to include in our model. In general, depending on the provided health indicators, I think we can reliably forecast survival from heart failure disease using the Random Forest Model.