IN-HOSPITAL MORTALITY PREDICTION

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INTRODUCTION

Death in heart failure patients admitted to intensive care units is very difficult to predict (ICUs). The purpose is to show the data, examine the factors that influence mortality, and validate a prediction model for all-cause in-hospital mortality in patients with heart failure.

SCOPE

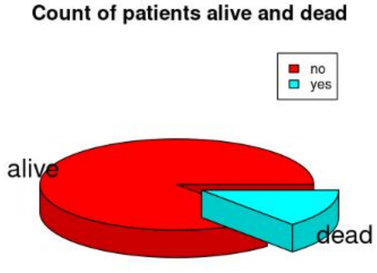
The project uses a variety of classification techniques to predict deaths. The prediction models can calculate the mortality based on the patient's data and medical records. They can also figure out which symptoms are the most common causes of death in individuals. Early detection of these signs will allow doctors to provide better intensive care and therapy to seriously ill patients, as well as follow-up checks. Identifying individuals at high risk of poor outcomes after discharge from the hospital can improve the patients' outcomes.

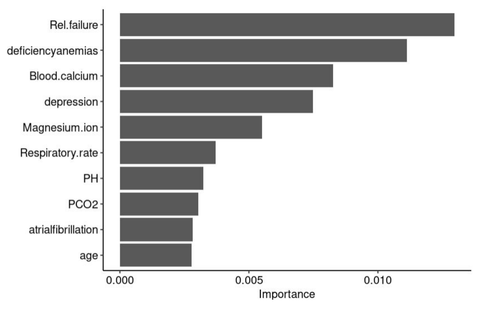
METHODOLOGY

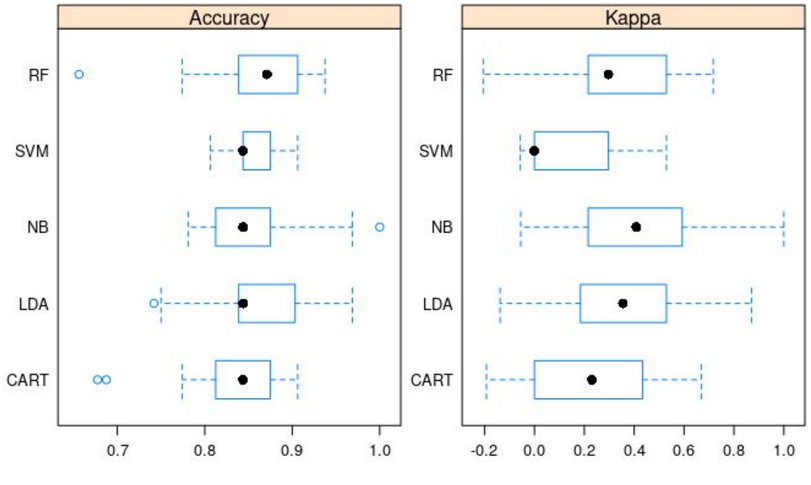
Various classification techniques are used for mortality prediction in patients. The project is dividided into five significant steps for better understanding:

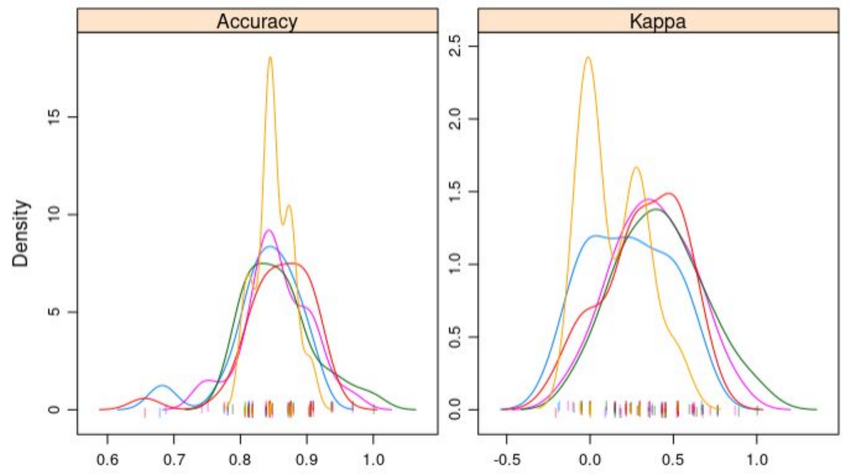
- **Data Extraction:** Patients' data and medical records are accessed from the hospital database.
- **Data Pre-processing:** Missing data is imputed and data is transformed for training of models.
- **Exploratory data analysis:** The data is analyzed further as well as visualized.
- **Training and testing the prediction models:** Five classification models are trained and results are predicted for the testing data.
- **Finding accuracy of each model:** The models are compared and the most accurate model is selected.

RESULT









CONCLUSION

The Linear Discriminant Analysis model has the highest accuracy of 96.875% for mortality prediction. Out of all the factors, renal failure, anemia deficiencies, calcium levels, depression and increasing age are the leading causes of deaths in ICU-admitted patients.

CONTACT

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REFERENCES

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