



HEALTHCARE SERVICE APPLICATION

TEAM MENTOR
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Heart and Kidney are vital organs human body. These are most vulnerable to diseases. Early detection of the disease is one of the ways to prevent further damage to organs. The use of machine learning techniques can be used to offer solution to the detection of heart and kidney diseases. In this study the accuracy of prediction of some tools of machine learning has been carried out.

Attributes that are considered for model evaluation

HEART

- Age.
- Sex.
- Chest Pain type (CP).
- resting bps (on admission to the hospital, resting blood pressure in mm Hg.).
- Serum Cholesterol in mg/dl.
- Restecg (resting electrocardiographic results: assesses the heart's activity.).
- Thalach (attained maximum heart rate).
- Exang (Angina caused by exercise is a common complaint of cardiac patients, particularly when exercising in the cold).
- Oldpeak (Exercise-induced ST depression compared to rest).
- Slope (the curve of the ST segment of the peak activity).
- Ca (flourosopy coloration of a lot of major vessels (0-3)).
- Thal (normal, fixed defect, reversable defect).
- Num (the predicted attribute).

KIDNEY

- Age.
- Bp (Diastolic Blood Pressure)
- Chest Pain type (CP).
- Albumin (Al)
- Glucose (Su)
- White Blood Cell Count (Wbcc)
- Potassium (Pot - mmol/L)
- Hypertension (Htn)
- Red Blood Cell Count (Rbcc)
- Serum Creatinine (Sc - mg/dL)
- Blood Urea (Bu - mmol/L)
- Specific Gravity (Sg)
- Hemoglobin (Hemo - gm/dL)

MEDICAL DATA

HANDLE MISSING VALUE

LEARN PARAMETERS

HANDLE MISSING VALUE

RANDOM SHUFFLING

DISEASE PREDICTION

Algorithm AND Technology Used:

- Random Forest Algorithm,
- Python, Django, Numpy, Panda,

CONCLUSION

The use of above algorithm techniques can be applied to the detection of heart-health status but different degrees of accuracy can be obtained. The model has shown the prediction accuracy to predict the presence or absence of heart or kidney disease.

Model Accuracies:

- Heart Disease Model: 85.25%
- Kidney Disease Model: 99%

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