Predict Patient Length of Stay in the Hospital

Nowadays hospital needs to maintain balance in treating each patient's condition even though population is increased. The objective of this system is to predict Length of stay of patient accurately using supervised machine learning techniques. The working of this system is divided in 3 main parts 1) Pre-processing of data 2) ML model 3) Testing of model. The pre-processing step involves data analysis and visualization to find out missing values & outliers. Label encoding method is used for categorical features and scaling to reduce effect of outliers on prediction. Next step is ML model training where we tried machine learning classification algorithms like adaboost, decision tree, gradient boost and Random Forest Algorithms. The Processor used for this is Intel(R) Core(TM) i3-2350 CPU @ 2.30GHz 2.30GHz and RAM 4.00GB with 64-bit Operating System. This system can be used for efficient use of hospital resources like beds, staff, medical equipment's etc. It also reduces waiting time in hospital, but accuracy improvements are needed for this system.

Advantage:

- Balanced & efficient use of hospital resources
- Reduced waiting time for patient

Disadvantage:

- Accuracy improvements needed
- Large processing time

Contributor:

1. Prajyot Patil
2. Akshay Sirsat
3. Sheetal Jade