**Assignment 3**

1. Use ID3 decision tree, Naïve Bayes, and SVM classifier to predict liver disease. Compare performance of the algorithms in terms of Accuracy, Precision, recall, F1-score, and specificity.
2. Compare performance of Linear Regression and SVR in stock price prediction.
   * Collect/download daily trading of at least 5 different companies’ from Nepal Stock Exchange. Choose two banking stocks, one insurance stock, one hydro stock, one development bank stock.
   * Arrange data in chronological order of date.
   * Only Keep Low, High, Open, Close, and Volume attributes. Remove other attributes.
   * Generate ‘next days close price’ which is simple close price shifted back by one position.
   * Handle missing data. Replace missing value by average of previous and next value.
   * Split data into training, and test sets in 8:2 ratio.
   * Normalize data using standard scalar.
   * Predict next day’s close price.
   * Perform inverse transformation of predicted price and close price of test data.
   * Plot curve of predicted and actual close prices of test data.
   * Plot training and validation loss and accuracy curves.
   * Compute RMSE, MAE, and R2 coefficient of predicted and actual stock prices.
   * Compare performance of LR and SVR on the basis of above measures.