**Data Set Information:**

Predicting the age of abalone from physical measurements. From the original data examples with missing values were removed (the majority having the predicted value missing), and the ranges of the continuous values have been scaled for use with an ANN (by dividing by 200).

**Attribute Information: (9 attributes):**

Given is the attribute name, attribute type, the measurement unit and a brief description. The number of rings is the value to predict: either as a continuous value or as a classification problem.   
  
Name / Data Type / Measurement Unit / Description   
-----------------------------   
Sex / nominal / -- / M, F, and I (infant)   
Length / continuous / mm / Longest shell measurement   
Diameter / continuous / mm / perpendicular to length   
Height / continuous / mm / with meat in shell   
Whole weight / continuous / grams / whole abalone   
Shucked weight / continuous / grams / weight of meat   
Viscera weight / continuous / grams / gut weight (after bleeding)   
Shell weight / continuous / grams / after being dried   
Rings / integer / -- / +1.5 gives the age in years

**Selected Classifiers:**

Here 5 classifiers have been chosen to compare them based on their ability to predict the age of abalone.

1. REPTree
2. Naïve Bayes
3. Lazy LWL (Locally weighted learning)
4. Iterative Classifier Optimizer
5. Jrip

ROC Graph plot:

Here using WEKA v3.8 tool,

REPTree can correctly classify 78.7886 % instances.

TPR= 0.788

FPR= 0.101

Naïve Bayes (NB) can correctly classify 78.8365 % instances.

TPR= 0.788

FPR=0.104

Lazy LWL (Locally weighted learning) can correctly classify 86.4496 % instances.

TPR=0.864

FPR=0.072

Iterative Classifier Optimizer can correctly classify 78.7886 % instances.

TPR=0.533

FPR=0.254

Jrip Classifier Optimizer can correctly classify 52.3582% instances.

TPR=0.524

FPR =0.266

According to our ROC graph, it can clearly be seen that Lazy LWL (Locally weighted learning) classifier is the closest to the best Possible classifier unlike others.