Literature Survey

Bendi et al. [1] authors used two different input dataset and evaluate that the AP datasets has better than UCLA dataset for all the different selected algorithms. Based on performance on their classification KNN, Backward propagation and SVM are giving better results. The AP data set is better than UCLA for the entire selected algorithm. And found out Naïve Bayes, C4.5, KNN, Backward propagation and SVM has 95.07, 96.27, 96.93, 97.47, & 97.07% accuracy respectively.

• Bendi et al. [2] proposed a paper based on Modified Rotation Forest, used two dataset as an input UCI liver dataset and Indian liver dataset. And results show that MLP algorithm with random subset gives better accuracy of 94.78% for UCI dataset than CFS achieved accuracy of 73.07% for Indian liver dataset. • Yugal Kuma & G. Sahoo [3] proposed a paper based on different classification technique and used north east area of Andhra Pradesh (India) liver dataset. And the results shows that Decision tree(DT) algorithm has better than other algorithm and provide accuracy of 98.46%.

• S.Dhamodharan [4] proposed a paper based on two classification technique naïve Bayes and FT tree and used WEKA (Waikato Environment for Knowledge and Analysis) dataset. Naïve Bayes is 75.54% accuracy and FT Tree is 72.6624% accuracy and concluded Naïve Bayes gas better algorithm compare to other algorithms.

• Han Ma et al. [9] in this paper 11 different classification are evaluated and Demonstrated in China Zhejiang University, College of medicine and concluded Bayesian network accuracy of 83%, specificity 83%, sensitivity of 0.878 and F-measure of 0.655.

• Heba Ayeldeen et al. [5] propose a paper for prediction of liver fibrosis stages using decision tree technique and used Cario university data set and result shows that decision tree classifier accuracy is 93.7%.

• D.Sindhuja & R. Jemina Priyadarsini [6] survey a paper for classification of liver disease. In this survey different classification techniques of data mining are study and used dataset of dataset of AP liver has better than Dataset of UCLA, and concluded C4.5 achieved better results than other algorithms.

Somaya Hashem et al. [8] presented a paper for diagnosis of liver disease. In this paper they used two algorithms, SVM & Backpropagation and used UCI machine repository dataset. And concluded SVM has accuracy 71% better result than Backpropagation accuracy 73.2%.

• Joel Jacob et al. [10] proposed a paper to diagnosis of liver disease by using three different algorithms, Logistic regression, K-NN, SVM, and ANN and used Indian Liver Patient Dataset comprised of 10 different attributes of 583 patients. And concluded Logistic regression, KNN, SVM,& ANN has 73.23, 72.05, 75.04 & 92.8% accuracy respectively.

• Sivakumar D et al. [11] proposed a paper for prediction of chronic liver disease by using two different techniques K-means and C4.5. UCI repository.

• Mehtaj Banu H [12] in this paper authors study different machine learning technique, Supervised, unsupervised & reinforcement and also analysis UCI dataset database and concluded that KNN and SVM improved better performance and exactness of liver disease prediction.

• Vasan Durai et al. [13] proposed a paper based on liver disease prediction by using three different techniques, SVM, NB & J48 using UCI repository dataset and concluded that J48 algorithm has better performance in terms of Feature selection and has accuracy of 95.04%.

Sl no	Authors	Year	Disease	Machine learning algorithm	Dataset input	Remarks	Conclusion
1	Bendi Venkata Ramana et al. [1]	2011	Liver disease	Naïve Bayes, C4.5, Backward propagation, KNN and SVM	AP liver dataset and UCLA liver dataset	Naïve Bayes, C4.5 KNN, Backward propagation and SVM has 95.07, 96.27, 96.93, 97.47, & 97.07% accuracy respectively	KNN, Backward propagation and SVM are giving more better results. AP data set are better than UCLA for all the selected algorithm

2	Bendi Venkata Ramana and M.Surendra Prasad Babu [2]	2012	Liver disease	Modified Rotation Forest	UCI liver dataset and Indian dataset	MLP algorithm with random subset gives better accuracy 74.78% than NN with CFS of accuracy 73.07%	MLP algorithm with UCI liver dataset has better accuracy than NN with Indian liver dataset
3	Yugal KUMA & G. Sahoo [3]	2013	Liver disease	DT, SVM, NB and ANN	north east area of Andhra Pradesh (India) liver dataset	Decision tree(DT) has better accuracy of 98.46%	Rule based classification with DT algorithm has better accuracy
4	S.Dhamodharan [4]	2014	Liver cancer, Cirrhosis and Hepatitis	Naïve-Bayes, FT Tree	WEKA (Waikato Environment for Knowledge and Analysis) dataset	Naïve Bayes is 75.54% accuracy and FT Tree is 72.6624% accuracy	Naïve Bayes algorithm has better compare to other algorithms
5	Heba Ayeldeen et al. [5]	2015	Liver fibrosis	Decision tree	department of Medical Biochemistry and Molecular Biology, Faculty of Medicine, Cairo University.		decision tree classifier accuracy is 93.7%
6	D Sindhuja & R jemina Priyadarsini [6]	2016	Liver disease disorder	C4.5,Naïve Bayes, SVM, BPNN ,Regression and DT Data	AP has better dataset result than UCLA	Survey paper suggest C4.5 has better results than others	C4.5 has better accuracy result than other algorithms
7	Somaya Hashem et al [8]	2016	Liver fibrosis	PSO, GA, MReg & ADT	Egyptian national committee for control of viral hepatitis database	PSO, GA, MReg & ADT are 66.4, 69.6.69.1, & 84.4% accuracy respectively	ADT has more accuracy result than other algorithms
8	Sumedh Sontakke et al	2017	Liver disease	SVM & Backpropagation	(UCI)Machine Learning Repository	SVM (accuracy 71%))& Backpropagation(accuracy 73.2%)	More accuracy result in Back propagation
9	Han ma et al	2018	Nonalcoholic fatty liver disease	Using 11 classification algorithms	First Affiliated Hospital, Zhejiang University China, College of medicine First Affiliated	Bayesian network accuracy 83%	Concluded Bayesian network has best performance than other algorithms
10	Joel Jacob et al [10]	2018	Liver disease	Logistic regression, K-NN, SVM,&ANN	Indian Liver Patient Dataset comprised of 10 different attributes of 583 patients.	Logistic regression, K-NN, SVM,& ANN has 73.23, 72.05, 75.04 & 92.8% accuracy respectively	ANN has higher accuracy than others
11	Sivakumar D et al [11]	2019	Liver disease	K-means & C4.5 algorithms	UCI Repository	C4.5 algorithm has 94.36% precision.	C4.5 has better accuracy than K-means algorithms
12	Mehtaj Banu H [12]	2019	Liver disease	Supervised ,unsupervised & reinforcement	UCI repository databases.	Note: Only explaining not implementing practically	KNN and AVM has improved prediction performance accuracy
13	Vasan Durai et al [13]	2019	Liver disease	SVM,NB & J48	UCI repository	J48 algorithm has better feature selection with 95.04% accuracy	J48 algorithm is accuracy rate of 95.04%.