

LITERATURE SURVEY

A Review Of Liver Patient Anaysis Method Using Machine Learning.

Literature Study:

- Reshul Dani et al says that this paper aims to improve diagnosis of liver diseases by exploring 2 methods of identification-patient parameters and genome expression. It proposes methods to improve the efficiency of these algorithms.
- Yao-chin et al says that We aimed to develop a machine learning model to predict FLD that could assist physicians in classifying high-risk patients and make a novel diagnosis, prevent and manage FLD.
- Rayyan et al says that we investigate the potential of CAD system for malignant liver detection and treatment. CAD systems can act as a second opinion tool to determine prognostic factors.
- Aziz et al says that the purpose of this research is to assess the efficacy of various Machine Learning (ML) algorithms to lower the high cost of liver disease diagnosis through prediction.
- Arif et al says that the diagnosis of liver disease is expensive and sophisticated, numerous researches have been performed using Machine Learning (ML) methods for classifying liver disorder cases. After comparing experimental results, we have found that boosting on ET provides the highest accuracy of 92.19%.

- Ajitha et al says that for early detection of liver disease, an automated program is needed to build with more accuracy and reliability. Specific machine learning models are developed for this purpose to predict the disease.
- Ketan et al says that the algorithms used here for predicting liver patients are Logistic regression, Decision Tree, Random Forest, KNNNeighbor, Gradient Boosting, Extreme Gradient Boosting, LightGB. Based on the analysis and result calculations, it was found that these algorithm has obtained good accuracy after feature selection.
- Vyshali et al says that Medical systems contain wealth of data which require a dominant analysis tool for determining concealed association and drift in data. MATLAB2016 is used in this paper for implementing classification algorithm on the dataset. Linear Discriminant algorithm showed the highest prediction accuracy 95.8% and ROC is 0.93.
- Satish et al says that in this paper, we will discuss the diagnosis of liver disease through various data mining algorithms such as Artificial Neural Network (ANN), Logistic Regression, K-Nearest Neighbor's, SVC, Gaussian NB, Decision Tree, Random Forest, LR-SGD Classifier, Passive-Aggressive, Ada Boost and Voting Classifier. Each model has been implemented with and without Linear Discriminant Analysis (LDA), and different evaluating metrics have been calculated. The best algorithm for detection of liver disease was found to be of Decision Tree with an accuracy of 99.96%.
- Sally M et al says that liver diseases have produced a big data such as metabolomics analyses, electronic health records, and report including patient medical information, and disorders. The performance of these classifier

techniques are evaluated with accuracy, sensitivity, specificity.

Reference:

- Sontakke, Sumedh, Jay Lohokare, and Reshul Dani. "Diagnosis of liver diseases using machine learning." *2017 International Conference on Emerging Trends & Innovation in ICT (ICEI)*. IEEE, 2017.
- Wu, Chieh-Chen, et al. "Prediction of fatty liver disease using machine learning algorithms." *Computer methods and programs in biomedicine* 170 (2019): 23-29.
- Khan, Rayyan Azam, Yigang Luo, and Fang-Xiang Wu. "Machine learning based liver disease diagnosis: A systematic review." *Neurocomputing* 468 (2022): 492-509.
- Ghazal, Taher M., et al. "Intelligent Model to Predict Early Liver Disease using Machine Learning Technique." *2022 International Conference on Business Analytics for Technology and Security (ICBATS)*. IEEE, 2022.
- Rabbi, Md Fazle, et al. "Prediction of liver disorders using machine learning algorithms: a comparative study." *2020 2nd International Conference on Advanced Information and Communication Technology (ICAICT)*. IEEE, 2020.
- Sivasangari, A., et al. "Diagnosis of liver disease using machine learning models." *2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC)*. IEEE, 2020.
- Gupta, Ketan, et al. "Liver Disease Prediction using Machine learning Classification Techniques." *2022 IEEE 11th International Conference on Communication Systems and Network Technologies (CSNT)*. IEEE, 2022.

- Gogi, Vyshali J., and M. N. Vijayalakshmi. "Prognosis of liver disease: Using Machine Learning algorithms." *2018 International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE)*. IEEE, 2018.
- Dutta, Kritika, Satish Chandra, and Mahendra Kumar Gourisaria. "Early-Stage detection of liver disease through machine learning algorithms." *Advances in Data and Information Sciences: Proceedings of ICDIS 2021*. Singapore: Springer Singapore, 2022. 155-166.
- El-Shafeiy, Engy A., Ali I. El-Desouky, and Sally M. Elghamrawy. "Prediction of liver diseases based on machine learning technique for big data." *The International conference on advanced machine learning technologies and applications (AMLTA2018)*. Springer International Publishing, 2018.