

Liver Cirrhosis Prediction with XGboost & EDA

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Abstract:

This research addresses the growing concern of liver cirrhosis in North America, predominantly linked to alcohol consumption. Leveraging advanced machine learning techniques, we aim to develop a comprehensive predictive model by integrating lifestyle factors (such as alcohol consumption, dietary habits, and exercise) and health indicators (including viral hepatitis status and liver function tests). The model seeks to accurately assess an individual's risk of developing liver cirrhosis, facilitating early diagnosis and targeted interventions. The outcomes of this study hold the potential to significantly impact public health by providing healthcare professionals with an effective tool for proactive cirrhosis risk assessment, ultimately leading to improved patient outcomes and informed preventive measures.

Index Terms:

Liver Cirrhosis, Predictive Modelling, Risk Assessment, Alcohol Consumption, Lifestyle Factors, Health Indicators, Machine Learning, Early Diagnosis, Intervention Strategies, Viral Hepatitis, Liver Function Tests, Public Health, Preventive Measures, Patient Outcomes

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